

**CHAPTER 5223**  
**DEPARTMENT OF LABOR AND INDUSTRY**  
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### **5223.0010 WORKERS' COMPENSATION PERMANENT PARTIAL DISABILITY SCHEDULES.**

Subpart 1. **Purpose of schedules.** Minnesota Statutes, section 176.105, subdivision 4, requires the commissioner of labor and industry to adopt rules assigning specific percentages of disability of the whole body for specific permanent partial disabilities. This chapter assigns percentages of disability of the whole body for permanent partial disabilities.

Subp. 2. **Interpretation of schedules.** Only the categories in the schedules in this chapter may be used when rating the extent of a disability. Where a category represents the disabling condition, the disability determination shall not be based on the cumulation of lesser included categories. If more than one category may apply to a condition, the category most closely representing the condition shall be selected. Where more than one category is necessary to represent the disabling condition, categories shall be selected to avoid

double compensation for any part of a condition. The percentages of disability to the whole body as set forth in two or more categories shall not be averaged, prorated, or otherwise deviated from, unless specifically provided in the schedule. Unless provided otherwise, where an impairment must be rated under more than one category, the ratings must be combined using the  $A + B(1-A)$  formula as provided in Minnesota Statutes, section 176.105, subdivision 4, paragraph (c). With respect to the musculoskeletal schedule, the percent of whole body disability for motor or sensory loss of a member shall not exceed the percent of whole body disability for amputation of that member.

Subp. 3. **Disabilities not part of schedules.** A category not found within this chapter shall not be used to determine permanent partial disability.

Subp. 4. **Rules of construction.** The technical terms in this chapter are defined in either part 5223.0020, or by the documents incorporated by reference in this chapter. Documents are incorporated by reference only to the extent necessary for definition or to the extent specifically referenced in a schedule. The documents incorporated by reference are not subject to frequent change, although new editions occasionally may be published. These documents are common medical references and are conveniently available to the public as noted in items A to K. These documents are as follows:

A. Guides to the Evaluation of Permanent Impairment, published by the American Medical Association, Committee on Rating of Mental and Physical Impairment, second edition 1984. This document is also known as the A.M.A. Guides. Available at the University of Minnesota, Biomedical Library.

B. Snellen Charts, published by American Medical Association Committee for Eye Injuries and designated Industrial Vision Test Charts. These charts are also known and referred to as A.M.A. charts. Available at the Minnesota State Law Library.

C. American Medical Association Rating Reading Card of 1932, published by the American Medical Association Committee for Eye Injuries. This document is also known as the A.M.A. Card. Available at the Minnesota State Law Library.

D. S3.1-1977 Criteria for Permissible Ambient Noise during Audiometric Testing and S3.6-1969 (R1973) Specification for Audiometers, published by the American National Standard Institutes, Inc. in 1973 and 1977, respectively. Available at the Minnesota State Law Library.

E. Metropolitan Life Insurance Company Height and Weight Tables, published by the Metropolitan Life Insurance Company, 1983. Available at the Minnesota State Law Library.

F. The Revised Kenny Self-Care Evaluation: A Numerical Measure of Independence in Activities of Daily Living, published by Sister Kenny Institute, 1973. Available at the Minnesota State Law Library.

G. Dorland's Illustrated Medical Dictionary, 26th edition, published by W.B. Saunders Company, 1981. This document is also known as Dorland's. Available at the University of Minnesota Biomedical Library.

H. D.S.M. III, Diagnostic and Statistical Manual of Mental Disorders, published by American Psychiatric Association, 1980. This document is also known as D.S.M. III. Available at the University of Minnesota Biomedical Library.

I. Fractures, Charles A. Rockwood and David Green, published by Lippencott, 1975. Available at the University of Minnesota Biomedical Library.

J. Textbook on Anatomy, William Henry Hollinshead, published by Harper & Row, 1985. Available at the University of Minnesota Biomedical Library.

K. "The Estimation of Areas of Burns," in Surgery, Gynecology and Obstetrics, by Lund and Browder, pages 352-358, volume 79, published by Surgical Publishing Company of Chicago, 1944. This document is referred to as Lund and Browder. Available at the Minnesota State Law Library.

Subp. 5. **Severability.** If any provision of this chapter is held to conflict with a governing statute, applicable provisions of the Minnesota Administrative Procedure Act, or other relevant law; to exceed the statutory authority conferred; to lack a reasonable relationship to statutory purposes or to be unconstitutional, arbitrary, or unreasonable; or to be invalid for any other reason; the validity and enforceability of the remaining provisions of the rule shall in no manner be affected.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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#### 5223.0020 DEFINITIONS.

Subpart 1. **Scope.** For the purpose of this chapter the terms defined in this part have the meanings given them unless the context clearly indicates otherwise. Terms not defined in this part are defined in Dorland's or other documents incorporated by reference. If the definition in a document incorporated by reference conflicts with or differs from the definition in this chapter, the specific definitions in this chapter shall govern.

Subp. 2. **Acromio clavicular grade 1.** "Acromio clavicular grade 1" means an undisplaced acromio clavicular joint.

Subp. 3. **Acromio clavicular grade 2.** "Acromio clavicular grade 2" means a 50 percent displacement of the clavicle in relationship to the acromion at the acromio clavicular joint.

Subp. 4. **Acromio clavicular grade 3.** "Acromio clavicular grade 3" means a completely disrupted acromio clavicular joint.

Subp. 5. **Activities of daily living.** "Activities of daily living" means the ability to perform self cares, to perform housework and related tasks, to ride in or operate a motor vehicle, and to perform vocational tasks not requiring physical labor.

Subp. 6. **Ankylosis.** "Ankylosis" means the stiffening or fixation of a joint.

Subp. 7. **ANSI.** "ANSI" means the American National Standards Institute.

Subp. 8. **Banding.** "Banding" means a thick, rope like cord of hypertrophic scarring resulting from burns.

Subp. 9. **Category.** "Category" means a permanent partial disability as described in this chapter and the corresponding percent of disability to the whole body for that permanent partial disability.

Subp. 10. **Chronic.** "Chronic" means the repeated or continuous occurrence of a specific condition or symptom.

Subp. 11. **Demonstrable degenerative changes.** "Demonstrable degenerative changes" means radiographic findings demonstrating the presence of degeneration of intervertebral disc or facet joints.

Examples of demonstrable degenerative changes are disc space narrowing, small osteophytes, and facet joint hypertrophic changes.

Subp. 12. **Desirable level of weight.** "Desirable level of weight" means preferred weights in the tables created by the Metropolitan Life Insurance Company.

Subp. 13. **Disarticulation.** "Disarticulation" means an amputation occurring through a joint.

Subp. 14. **Distance vision.** "Distance vision" means the ability to distinguish letters at a distance of 20 feet according to the Snellen and A.M.A. Charts.

Subp. 15. **Family member.** "Family member" means cohabitants and is not limited to those related by blood or marriage. In cases of institutionalization or similar nonhome environment, family member may include staff members who care for the individual on a regular basis.

Subp. 16. **Forequarter.** "Forequarter" means the amputation of the upper extremity involving the scapula, clavicle, and muscles that attach to the chest.

Subp. 17. **Fusion.** "Fusion" means the surgical uniting of one vertebral segment to an adjoining vertebral segment.

Subp. 18. **Gastrostomy.** "Gastrostomy" means a surgical creation of a gastric fistula through the abdominal wall for the purpose of introducing food into the stomach.

Subp. 19. **Glossopharyngeal.** "Glossopharyngeal" means the ninth cranial nerve with sensory fibers to the tongue and pharynx. It affects taste and swallowing.

Subp. 20. **Gross motor weakness.** "Gross motor weakness" means total or partial loss as described in part 5223.0160.

Subp. 21. **Hypertrophic scar.** "Hypertrophic scar" means an elevated irregularly shaped mass of scar tissue.

Subp. 22. **Hypoglossal.** "Hypoglossal" means the motor nerve to the tongue. It is the 12th cranial nerve and carries impulses from the brain to the tongue, including movement of muscles and secretion of glands and motor movement.

Subp. 23. **Kenny scale.** "Kenny scale" means the Kenny self-care evaluation system in The Revised Kenny Self-Care Evaluation: A Numerical Measure of Independence of Activities of Daily Living.

Subp. 24. **Laminectomy.** "Laminectomy" means the removal of part or all of the lamina of one vertebral segment, usually with associated disc excision.

Subp. 25. **Lethargy.** "Lethargy" means, in relation to a nervous system injury to the brain, that an individual is drowsy, but can be aroused.

Subp. 26. **Moderate referred shoulder and arm pain.** "Moderate referred shoulder and arm pain" means pain of an intensity necessitating decreased activity in order to avoid the pain. This pain is demonstrated in a dermatomal distribution into the shoulder and upper extremity.

Subp. 27. **Moderate partial dislocation.** "Moderate partial dislocation" means a loss of normal vertebral alignment of up to 50 percent of the vertebral body on the adjacent vertebral body associated with vertebral fractures.

Subp. 28. **Near vision.** "Near vision" means clearness of vision at the distance of 14 inches.

Subp. 29. **Nonpreferred extremity.** "Nonpreferred extremity" means the arm or leg not used dominantly, as for example, the left hand of a right-handed writer.

Subp. 30. **Objective clinical findings.** "Objective clinical findings" as used in part 5223.0070 means examination results which are reproducible and consistent. Examples of objective clinical findings are involuntary muscle spasms, consistent postural abnormalities, and changes in deep tendon reflexes.

Subp. 31. **Postural abnormality.** "Postural abnormality" means a deviation from normal posture, as found on anterior/posterior or lateral X-rays, that involves the spine and pelvis or segments of the spine or pelvis, such as kyphosis, lordosis, or scoliosis.

Subp. 32. **Preferred extremity.** "Preferred extremity" means the dominant leg or arm, as for example, the right arm of a right-handed person.

Subp. 33. **Presbycusis.** "Presbycusis" means a decline in hearing acuity that occurs with the aging process.

Subp. 34. **Pseudophakia.** "Pseudophakia" means that the crystalline lens of the eye has been replaced with a surgically implanted lens.

Subp. 35. **Self cares.** "Self cares" means bed activities, transfers, locomotion, dressing, personal hygiene, bowel and bladder, and feeding as described in The Revised Kenny Self-Care Evaluation: A Numerical Measure of Independence in Activities of Daily Living, pages 10-24.

Subp. 36. **Spinal stenosis.** "Spinal stenosis" means the narrowing of the spinal canal.

Subp. 37. **Spondylolisthesis.** "Spondylolisthesis" means the forward movement of one vertebral body of one of the lower lumbar vertebrae on the vertebrae below it or upon the sacrum.

Subp. 38. **Spondylolisthesis grade 1.** "Spondylolisthesis grade 1" means forward movement from zero to 25 percent of the vertebral body.

Subp. 39. **Spondylolisthesis grade 2.** "Spondylolisthesis grade 2" means forward movement from 25 to 50 percent of the vertebral body.

Subp. 40. **Spondylolisthesis grade 3.** "Spondylolisthesis grade 3" means movement from 50 to 75 percent of the vertebral body.

Subp. 41. **Spondylolisthesis grade 4.** "Spondylolisthesis grade 4" means forward movement from 75 to 100 percent of the vertebral body.

Subp. 42. **Stupor.** "Stupor" means, in relation to a nervous system injury to the brain, that a strong stimulus or pain is needed to arouse consciousness or response.

Subp. 43. **Tinnitus.** "Tinnitus" means a subjective sense of noises in the head or ringing in the ear for which there is no observable external cause.

Subp. 44. **Trigeminal.** "Trigeminal" means the mixed nerve with sensory fibers to the face, cornea, anterior scalp, nasal and oral cavities, tongue and supertentorial dura matter. It also has motor fibers to the muscles of mastication. It is the fifth cranial nerve.

Subp. 45. **Vertigo.** "Vertigo" means a sensation of moving around in space or having objects move about the person. It is the result of a disturbance of the equilibratory apparatus.

Subp. 46. **Vestibular.** "Vestibular" means the main division of the auditory nerve. It is the eighth cranial nerve and deals with equilibrium.

Subp. 47. **Wrinkling.** "Wrinkling" means small ridges on the skin formed by shrinking or contraction as a result of burns.

Subp. 48. **14/14.** "14/14" is a term used in the measurement of near vision. It is the clearness of vision at a distance of 14 inches. The numerator is the test distance in inches. The denominator is the distance at which the smallest letter on the A.M.A. card can be seen.

Subp. 49. **20/20 Snellen or A.M.A. Chart.** "20/20 Snellen or A.M.A. Chart" refers to a chart imprinted with block letters or numbers in gradually decreasing sizes, identified according to distances at which they are ordinarily visible. It is used in testing visual acuity. The numerator is the test distance in feet. The denominator is the distance at which the smallest letter discriminated by a patient would subtend five minutes of arc.

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### **5223.0030 EYE SCHEDULE.**

Subpart 1. **Complete loss of vision.** For complete loss of vision in both eyes, disability of the whole body is 85 percent. For complete loss of vision in one eye, disability of the whole body is 24 percent. In determining the degree of vision impairment and of whole body disability, subparts 2 to 6 shall be used.

Subp. 2. **Examination.** Disability shall not be determined until all medically acceptable attempts to correct the defect have been made. Prior to the final examination on which disability is to be determined, at least six months shall elapse after all visible inflammation has disappeared. In cases of disturbance of extrinsic ocular muscles, optic nerve atrophy, injury of the retina, sympathetic ophthalmia, and traumatic cataract, at least 12 months shall elapse before the final examination is made. Testing shall be conducted with corrective lenses applied, unless indicated otherwise in this part.

Subp. 3. **Maximum and minimum limits of primary coordinate factors of vision.** The primary coordinate factors of vision are central visual acuity, visual field efficiency, and ocular motility.

A. The maximum limit for each coordinate function is established in subitems (1) to (3):

(1) The maximum limit of central visual acuity is the ability to recognize letters or characters which subtend an angle of five minutes, each unit part of which subtends a one-minute angle at the distance viewed. A 20/20 Snellen or A.M.A. chart is 100 percent (maximum) central visual acuity for distance vision. 14/14 A.M.A. card is 100 percent (maximum) central visual acuity for near vision.

(2) The maximum visual field is defined as 500 degrees. It is the sum of the degrees in the eight principal meridians from the point of fixation to the outermost limits of visual perception and defines the area in which a three millimeter white target is visible at 33 centimeters. One hundred percent visual field efficiency is that visual field which extends from the point of fixation outward 85 degrees, down 65 degrees, down and in 50 degrees, inward 60 degrees, in and up 55 degrees, upward 45 degrees, and up and out 55 degrees.

(3) Maximum ocular motility is present if there is absence of diplopia in all parts of the field of binocular fixation, and if normal binocular motor coordination is present.

B. The minimum limit for each coordinate function is established in subitems (1) to (3):

- (1) The minimum limit of central visual acuity is:
  - (a) for distance vision, 20/800 Snellen or A.M.A. chart; and
  - (b) for near vision, 14/560 A.M.A. card.

(2) The minimum limit for field vision is established as a concentric central contraction of the visual field to five degrees. Five degrees of contraction of the visual field reduces the visual efficiency of the eye to zero.

(3) The minimum limit for ocular motility is established by the presence of diplopia in all parts of the field of binocular fixation or by absence of binocular motor coordination. The minimum limit is 50 percent ocular motility efficiency.

**Subp. 4. Measurement of coordinate factors of vision and computation of partial loss.**

A. Central visual acuity shall be measured both for distance vision and for near vision, each eye being measured separately, both with and without correction. A Snellen or A.M.A. chart shall be used for distance vision and an A.M.A. card shall be used for near vision. Illumination shall be at least five footcandles.

(1) Table 1 shows the percentage of visual efficiency corresponding to the notations for distance vision and for near vision. For test readings between those listed on the chart, round up from the midpoint to the nearest reading, and round down from below the midpoint.

Where distance vision is less than 20/200 and the A.M.A. chart is used, readings are at ten feet. The test reading is translated to the corresponding distance reading in Table 1 by multiplying both the numerator and the denominator of the test reading by two.

Table 1

Central Visual Acuity

A.M.A. Chart or Snellen Reading for Distance	A.M.A. Card Reading for Near	Percentage of Central Visual Acuity Efficiency
20/20	14/14	100.00
20/25	14/17.5	95.7
20/25.7	.....	95.0
20/30	14/21	91.5
20/32.1	.....	90.0
20/35	14/24.5	87.5
20/38.4	.....	85.0
20/40	14/28	83.6
20/44.9	14/31.5	80.0



20/50	14/35	76.5
20/52.1	....	75.0
20/60	14/42	69.9
20/60.2	.....	70.0
20/68.2	.....	65.0
20/70	14/49	64.0
20/77.5	.....	60.0
20/80	14/56	58.5
20/86.8	.....	55.0
20/90	14/63	53.4
20/97.5	.....	50.0
20/100	14/70	48.9
20/109.4	.....	45.0
20/120	14/84	40.9
.....	14/89	38.4
20/122.5	.....	40.0
20/137.3	.....	35.0
20/140	14/98	34.2
20/155	.....	30.0
20/160	14/112	28.6
20/175	.....	25.0
20/180	14/126	23.9
20/200	14/140	20.0
20/220	14/154	16.7
20/240	14/168	14.0
....	14/178	12.3
20/260	14/182	11.7
20/280	14/196	9.7

20/300	14/210	8.2
20/320	14/224	6.8
20/340	14/238	5.7
20/360	14/252	4.8
20/380	14/266	4.0
20/400	14/280	3.3
20/450	14/315	2.1
20/500	14/350	1.4
20/600	14/420	0.6
20/700	14/490	0.3
20/800	14/560	0.1

(2) The percentage of central visual acuity efficiency of the eye for distance vision is that percentage in Table 1 which corresponds to the test reading for distance vision for that eye.

(3) The percentage of central visual acuity efficiency of the eye for near vision is that percentage in Table 1 which corresponds to the test reading for near vision for that eye.

(4) The percentage of central visual acuity efficiency of the eye in question is determined as follows:

(a) Multiply by two the value determined for corrected near vision in subitem (3).

(b) Add the product obtained in unit (a) to the value determined for corrected distance vision in subitem (2).

(c) Divide the sum obtained in unit (b) by three.

The following is an example of this calculation. If the central visual acuity efficiency for distance is 70 percent, and that for near is 25 percent, the percentage of central visual acuity efficiency for the eye is:

$$\frac{70\% + (2 \times 25)}{3} = 40\% \text{ central visual acuity efficiency}$$

(5) For traumatic aphakia, the corrected central visual acuity efficiency of the eye is 50 percent of the central visual acuity efficiency determined in subitem (4). This subitem shall not apply if an adjustment for glasses or contact lenses pursuant to subpart 5, item B, subitem (2) or (3) results in a lower visual efficiency than would be given by application of this subitem.

(6) For traumatic pseudophakia, the corrected central visual acuity efficiency of the eye is 80 percent of the central visual acuity efficiency determined in subitem (4). This subitem shall not apply if an adjustment for glasses or contact lenses pursuant to subpart 5, item B, subitem (2) or (3) results in a lower visual efficiency than would be given by application of this subitem.

B. For each eye, the extent of the field of vision shall be determined by perimetric test methods. A three millimeter white disk which subtends a 0.5-degree angle under illumination of not less than seven footcandles shall be used. For aphakia, a six millimeter white disk shall be used. The result shall be plotted on the visual field chart as illustrated in the A.M.A. Guides, page 144.

(1) The amount of radial contraction in the eight principal meridians shall be determined. The sum of the degrees of field vision remaining on these meridians, divided by 500, is the visual field efficiency of one eye, expressed as a percentage. If the eye has a concentric central contraction of the field to a diameter of five degrees, the visual efficiency is zero.

(2) When the impairment of field is irregular and not fairly disclosed by the eight radii, the determination shall be based on a number of radii greater than eight and the divisor in subitem (1) shall be changed accordingly.

(3) Where there is a loss of a quadrant or a half-field, the degrees of field vision remaining in each meridian are added to one-half the sum of the two boundary meridians.

C. Ocular motility shall be measured in all parts of the motor field with any useful correction applied.

(1) All directions of gaze shall be tested with use of a test light and without the addition of colored lenses or correcting prisms. The extent of diplopia is determined on the perimeter at 330 millimeters or on a tangent screen at a distance of one meter from the eye.

(2) Plot the test results on a motility chart as illustrated in the A.M.A. Guides, page 147.

(3) Determine the percentage loss of ocular motility from the motility chart. This percentage is assigned to the injured eye or, if both eyes are injured, to the eye with the greatest impairment of central visual acuity and field vision. The eye with the greatest impairment means the eye for which the product of central visual acuity efficiency and visual field efficiency is the least. For the purpose of calculation, a value of zero percent is deemed to be one percent. For the other eye, the percentage loss of ocular motility is zero.

(4) The percentage loss of ocular motility is subtracted from 100 percent to obtain the ocular motility efficiency. The minimum ocular motility efficiency of one eye is 50 percent.

Subp. 5. **Visual efficiency.** The visual efficiency of one eye is the product of the efficiency values of central visual acuity, of visual field, and of ocular motility. For the purpose of this calculation, these values shall be expressed as decimals and not as percentages; a value of zero percent is deemed to be one percent.

A. For example, if central visual acuity efficiency is 50 percent, visual field efficiency is 80 percent, and ocular motility efficiency is 100 percent, the visual efficiency of the eye is .50 times .80 times 1.00, equals 40 percent. If ocular motility efficiency is changed to 50 percent, the visual efficiency is .50 times .80 times .50, equals 20 percent.

B. Visual efficiency shall be adjusted as set in this item. Visual efficiency may not be less than zero percent. No adjustment for glasses or contacts shall be made in cases of aphakia or pseudophakia where the central visual efficiency was adjusted pursuant to subpart 4, item A, subitem (5) or (6).

(1) Visual efficiency shall be decreased by subtracting two percent for any of the following conditions which are present due to the injury: loss of color vision; loss of adaptation to light and dark; metamorphosis; entropion or ectropion uncorrected by surgery; lagophthalmos; epiphora; and muscle disturbances such as ocular ticks not included under diplopia.

(2) If glasses are required as a result of the injury, or if as a result of the injury the refractive error increases by at least one diopter of sphere or of cylinder or of both, subtract five percent from the visual efficiency. Where the glasses contain prisms, subtract six percent.

(3) If a noncosmetic contact lens is required in one or both eyes as a result of the injury, subtract seven percent from the visual efficiency.

Subp. 6. **Procedure for determining whole body disability due to vision loss.** For each eye, subtract the percentage of visual efficiency determined in subpart 5 from 100 percent. The difference is the percentage impairment of each eye. The better eye has the lower percentage impairment. The poorer eye has the greater percentage impairment.

- A. Multiply the percentage impairment of the better eye by three.
- B. Add the percentage impairment of the poorer eye to the product obtained in item A.
- C. Divide the sum obtained in item B by four.
- D. The quotient obtained in item C is the percentage impairment of the visual system. Fractions shall be rounded to the nearest whole number percentage as provided in subpart 4, item A, subitem (1).
- E. The percentage impairment of the visual system is translated to the percentage disability of the whole body by Table 2.

Table 2

Eye Schedule

Impairment of Visual System, Percent	Disability of Whole Body, Percent
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	8
10	9
11	10
12	11
13	12

14	13
15	14
16	15
17	16
18	17
19	18
20	19
21	20
22	21
23	22
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90 - 100	85

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124; 17 SR 1279*

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#### **5223.0040 EAR SCHEDULE.**

Subpart 1. **General.** For hearing loss, the maximum disability of the whole body is 35 percent. The procedures in subparts 2 to 7 shall be used to determine the extent of binaural hearing loss and of whole body disability.

Subp. 2. **Medical diagnosis.** Otological evaluation shall be the method for determining the degree of permanent partial hearing loss. The medical diagnosis shall include the following:

- A. A complete history of occupational, military, and recreational noise exposure. This medical history shall include documentation of any previous hearing loss, if that information is available.
- B. A complete physical examination of the ear.
- C. An audiological evaluation which shall include pure tone air conduction and bone conduction testing.

Subp. 3. **Standards for audiometric calibration and test environment.** To ensure accurate measurement of hearing loss, the following standards shall be observed in conducting the tests required in subpart 2:

A. The audiometer used to measure hearing loss shall be calibrated to meet the specifications of ANSI S3.6-1969 (R1973), Specifications for Audiometers. The following are also required:

- (1) biological or electroacoustical calibration checks of the audiometer shall be performed monthly;
- (2) electroacoustical calibration shall be performed annually to certify the audiometer to the ANSI standard in this item; and
- (3) the calibration records shall be preserved and shall be provided upon request.

B. Audiometric test rooms or booths shall meet the specifications of ANSI S3.1-1977, Criteria for Permissible Ambient Noise during Audiometric Testing.

Subp. 4. **Waiting period for final evaluation of hearing loss.** A waiting period of at least three months shall elapse between the date of the occurrence of the noise injury and the final evaluation of the permanent partial hearing loss.

Subp. 5. **Procedure for determining disability of whole body due to hearing loss.** The binaural hearing loss is determined as follows:

A. The calculation for the percent of binaural hearing loss consists of the following steps:

(1) For each ear, test the hearing threshold levels at the four frequencies of 500, 1,000, 2,000, and 3,000 Hertz.

(2) For each ear, determine the average four-frequency hearing level. The average four-frequency hearing level is one-fourth of the sum of the threshold levels at each of the four tested frequencies. The average four-frequency hearing level is expressed in decibels.

(3) For each ear, subtract 25 decibels from the average four-frequency hearing level for that ear. The remainder, expressed in decibels, is the adjusted average four-frequency hearing level.

(4) For each ear, multiply the adjusted average four-frequency hearing level by 1.5 percent. The product is the monaural hearing loss, expressed as a percentage. A product less than zero percent is deemed to be zero. A product greater than 100 percent is deemed to be 100 percent.

(5) Considering both ears, compare the monaural hearing losses as determined in subitem (4). The ear with the smaller monaural hearing loss is the better ear. The ear with the larger monaural hearing loss is the poorer ear.

(6) Multiply the monaural hearing loss of the better ear by five, add this product to the monaural hearing loss of the poorer ear, and divide the sum by six. The quotient is the binaural hearing loss, expressed as a percentage. The formula is:

$$\frac{\begin{matrix} \text{(monaural hearing} & & \text{(monaural hearing loss of} \\ \text{5 x loss of better ear)} & + & \text{poorer ear)} \end{matrix}}{6} = \text{percent binaural hearing loss}$$

B. The calculation of the percent of binaural hearing loss is illustrated by the following examples.

Example 1

	500 Hertz	1,000 Hertz	2,000 Hertz	3,000 Hertz
Right ear	15	25	45	55
Left ear	30	45	60	85

a. Calculation of the average four-frequency hearing level:



$$\begin{aligned} \text{Right ear} &= \frac{15 + 25 + 45 + 55}{4} = \frac{140}{4} = 35 \text{ decibels} \\ \text{Left ear} &= \frac{30 + 45 + 60 + 85}{4} = \frac{220}{4} = 55 \text{ decibels} \end{aligned}$$

b. Calculation of adjusted average four-frequency hearing level:

Right ear = 35 decibels - 25 decibels = 10 decibels;

Left ear = 55 decibels - 25 decibels = 30 decibels;

c. Calculation of monaural hearing loss:

Right ear = 10 x 1.5% = 15%

Left ear = 30 x 1.5% = 45%

d. Calculation of binaural hearing loss:

$$\frac{(15\% \times 5) + 45\%}{6} = 20 \text{ percent binaural hearing loss}$$

### Example 2

	500 Hertz	1,000 Hertz	2,000 Hertz	3,000 Hertz
Right ear	20	25	30	35
Left ear	30	45	60	85

a. Calculation of average four-frequency hearing level.

$$\begin{aligned} \text{Right ear} &= \frac{20 + 25 + 30 + 35}{4} = 25 \text{ decibels} \\ \text{Left ear} &= \frac{30 + 45 + 60 + 85}{4} = 55 \text{ decibels} \end{aligned}$$

b. Calculation of adjusted average four-frequency hearing level.

Right ear = 25 decibels - 25 decibels = 0 decibels

Left ear = 55 decibels - 25 decibels = 30 decibels

c. Calculation of monaural hearing loss:

Right ear = 0 x 1.5 percent = 0

Left ear = 30 x 1.5 percent = 45 percent

d. Calculation of binaural hearing loss:

$$\frac{(0\% \times 5) + 45\%}{6} = 7.5 \text{ percent binaural hearing loss}$$

C. The binaural hearing loss is translated to a percentage of disability of the whole body by the ear schedule set forth below:

Ear Schedule

Binaural Hearing Loss, Percent	Disability of Whole Body, Percent
0 - 1.7	0
1.8 - 4.2	1
4.3 - 7.4	2
7.5 - 9.9	3
10.0 - 13.1	4
13.2 - 15.9	5
16.0 - 18.8	6
18.9 - 21.4	7
21.5 - 24.5	8
24.6 - 27.1	9
27.2 - 30.0	10
30.1 - 32.8	11
32.9 - 35.9	12
36.0 - 38.5	13
38.6 - 41.7	14
41.8 - 44.2	15
44.3 - 47.4	16

47.5 - 49.9	17
50.0 - 53.1	18
53.2 - 55.7	19
55.8 - 58.8	20
58.9 - 61.4	21
61.5 - 64.5	22
64.6 - 67.1	23
67.2 - 70.0	24
70.1 - 72.8	25
72.9 - 75.9	26
76.0 - 78.5	27
78.6 - 81.7	28
81.8 - 84.2	29
84.3 - 87.4	30
87.5 - 89.9	31
90.0 - 93.1	32
93.2 - 95.7	33
95.8 - 98.8	34
98.9 - 100.0	35

Subp. 6. **Presbycusis.** The calculation of the binaural hearing loss shall not include an additional adjustment for presbycusis.

Subp. 7. **Tinnitus.** No additional percentage of permanent partial disability for hearing loss shall be allowed for tinnitus.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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#### **5223.0050 SKULL DEFECTS.**

Subpart 1. **Skull depressions.** For skull defects the percent of disability of the whole body is provided by the following schedule:

	Unfilled Defect Percent	Filled Defect Percent
0 to 1-1/2 square inches	0	0
1-1/2 to 2-1/2 square inches	5	0
2-1/2 to 4 square inches	10	2
4 to 6-1/2 square inches	15	3
6-1/2 or more square inches	20	5

Subp. 2. **Skull fractures.** Skull fractures are:

- A. Basilar skull fracture with persistent spinal fluid leak, 20 percent.
- B. Basilar skull fracture without cerebrospinal fluid leak, 0 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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#### 5223.0060 CENTRAL NERVOUS SYSTEM.

Subpart 1. **General.** For permanent partial disability of the central nervous system the percentage of disability of the whole body is as provided in subparts 2 to 9.

Subp. 2. **Trigeminal nerve.** Permanent partial disability of the trigeminal nerve is a disability of the whole body as follows:

- A. partial unilateral sensory loss, 3 percent;
- B. complete unilateral sensory loss, 5 percent;
- C. partial bilateral sensory loss, 10 percent;
- D. complete bilateral sensory loss, 25 percent;
- E. intractable trigeminal neuralgia, 20 percent;
- F. atypical facial pain, 5 percent;
- G. partial unilateral motor loss, 2 percent;
- H. complete unilateral motor loss, 5 percent;
- I. partial bilateral motor loss, 10 percent; or
- J. complete bilateral motor loss, 30 percent.

Subp. 3. **Facial nerve.** Permanent partial disability of the facial nerve is a disability of the whole body as follows:

- A. total loss of taste, 3 percent;
- B. partial unilateral motor loss, 25 to 75 percent of function lost, 3 percent;
- C. unilateral motor loss, more than 75 percent of function lost, 10 percent;
- D. partial bilateral motor loss, 25 to 75 percent of function lost, 10 percent; or

E. bilateral motor loss, more than 75 percent of function lost, 20 percent.

Subp. 4. **Vestibular loss with vertigo or disequilibrium.** Vestibular loss with vertigo or disequilibrium is a disability of the whole body as follows:

A. a score of 24 to 28 on the Kenny scale, and restricted in activities involving personal or public safety, such as operating a motor vehicle or riding a bicycle, 10 percent;

B. a score of 16 to 28 on the Kenny scale, and ambulation impaired due to equilibrium disturbance, 30 percent;

C. a score of 10 to 16 on the Kenny scale, 40 percent; or

D. a score of 0 to 10 on the Kenny scale, 70 percent.

Subp. 5. **Glossopharyngeal, vagus and spinal accessory nerves.** Permanent partial disability to glossopharyngeal, vagus and spinal accessory nerves is a disability of the whole body as follows:

A. Swallowing impairment caused by disability to any one or more of these nerves:

(1) diet restricted to semisolids, 10 percent;

(2) diet restricted to liquids, 25 percent; or

(3) diet by tube feeding or gastrostomy, 50 percent.

B. Mechanical disturbances of articulation due to disability to any one or more of these nerves:

(1) 95 percent or more of words are understood by those who are not family members and others outside the immediate family, but speech is distorted, 5 percent;

(2) 95 percent or more of words are understood by family members, but speech is distorted and not easily understood by those who are not family members, 10 percent;

(3) 75 percent or more of words are understood by family members, but speech is distorted, 15 percent;

(4) more than 50 percent of words are understood by family members, 20 percent;

(5) less than 50 percent of words are understood by family members, 25 percent; or

(6) 10 percent or less of words are understood by family members, 30 percent.

Subp. 6. **Hypoglossal nerve.** Permanent partial disability of hypoglossal nerve is a disability of the whole body as follows:

A. Bilateral paralysis; swallowing impairment:

(1) diet restricted to semisolids, 10 percent;

(2) diet restricted to liquids, 25 percent; and

(3) diet by tube feeding or gastrostomy, 50 percent.

B. Mechanical disturbances of articulation:

(1) 95 percent or more of words are understood by family members and others outside the immediate family, but speech is distorted, 5 percent;

(2) 95 percent or more of words are understood by family members, but speech is distorted and not easily understood by nonfamily members, 10 percent;

- (3) 75 percent or more of words are understood by family members, but speech is distorted, 15 percent;
- (4) more than 50 percent of words are understood by family members, 20 percent;
- (5) less than 50 percent of words are understood by family members, 25 percent; or
- (6) 10 percent or less of words are understood by family members, 30 percent.

Subp. 7. **Spinal cord.** To rate under this subpart, determine the disability to the lower extremities, upper extremities, respiration, urinary bladder, anorectal, and sexual functions as follows. The percentage of whole body disability under this subpart is determined by combining the disabilities under items A to F in the manner described in Minnesota Statutes, section 176.105, subdivision 4, paragraph (c).

A. A permanent partial disability in the use of lower extremities is a disability of the whole body as follows:

- (1) can rise to a standing position and can walk, but has difficulty walking onto elevations, grades, steps, and distances, 15 percent;
- (2) can stand but can walk only on a level surface, 30 percent;
- (3) can stand but cannot walk, 45 percent; and
- (4) can neither stand nor walk, 65 percent.

B. Permanent partial disability in the use of upper extremities is a disability of the whole body as follows:

Whole Body Disability, Percentages

	Preferred Extremity	Nonpreferred Extremity	Both
score of 24 to 28 on Kenny scale, but some difficulty with digital dexterity	10	5	15
score of 16 to 28 on Kenny scale, but no digital dexterity	20	10	30
score of 10 to 16 on Kenny scale	40	40	50
score of 0 to 10 on Kenny scale	70	70	85

C. Permanent partial disability of the respiratory function is a disability of the whole body as follows:

- (1) difficulty only where extra exertion is required, such as running, climbing stairs, heavy lifting, or carrying loads, 10 percent;
- (2) restricted to limited walking, confined to one's own home, 35 percent;
- (3) restricted to bed, 75 percent; and
- (4) has no spontaneous respiration, 95 percent.

D. Permanent partial disability of the bladder is a disability of the whole body as set forth below. Evaluative procedures to be followed are in part 5223.0220, subpart 2.

- (1) impaired voluntary control evidenced by urgency or hesitancy, but continent without collecting devices, 10 percent;
- (2) impaired voluntary control, incontinent requiring external collecting devices, 20 percent; or
- (3) impaired voluntary control, incontinent requiring internal collecting or continence devices, 30 percent.

E. The permanent partial disability of the anorectal function is a disability of the whole body as follows:

- (1) impaired voluntary control with urgency, 10 percent;
- (2) impaired voluntary control without reflex regulation, 20 percent; or
- (3) impaired voluntary control, incontinent without diversion, 30 percent.

F. Permanent partial disability of sexual function is a disability of the whole body as follows:

- (1) Male: rate under part 5223.0220, subpart 6.
- (2) Female: rate under part 5223.0220, subpart 9.

Subp. 8. **Brain injury.** Supporting objective evidence of structural injury, neurological deficit, or psychomotor findings is required to substantiate the permanent partial disability. Permanent partial disability of the brain is a disability of the whole body as follows:

A. Communications disturbances, expressive:

- (1) mild disturbance of expressive language ability not significantly impairing ability to be understood, such as mild word-finding difficulties, mild degree of paraphasias, or mild dysarthria, 10 percent;
- (2) severe impairment of expressive language ability, but still capable of functional communication with the use of additional methods such as gestures, facial expression, writing, word board, or alphabet board, 35 percent; or
- (3) unable to produce any functional expressive language, 70 percent.

B. Communication disturbances, receptive:

- (1) mild impairment of comprehension of aural speech, but comprehension functional with the addition of visual cues such as gestures, facial expressions, or written material, 40 percent;
- (2) some ability to comprehend language is present, but significant impairment even with use of visual cues such as gestures, facial expressions, and written material, 60 percent; or
- (3) no evidence of functional comprehension of language, 90 percent.

C. Complex integrated cerebral function disturbances must be determined by medical observation and organic dysfunctions supported by psychometric testing. Functional overlay or primary psychiatric disturbances shall not be rated under this part. The permanent partial disabilities are as follows:

(1) mild impairment of higher level cognitive function or memory, but able to live independently and function in the community as evidenced by independence in activities such as shopping and taking a bus, 20 percent;

(2) same as subitem (1), and also requires supporting devices and direction to carry out limited vocational tasks, 30 percent;

(3) moderate impairment of memory, judgment, or other higher level cognitive abilities, can live alone with some supervision such as for money management, some limitation in ability to function independently outside the home in activities such as shopping and traveling, 50 percent;

(4) moderately severe impairment of memory, judgment, or other higher cognitive abilities, unable to live alone and some supervision required at all times, but able to perform self cares independently, 70 percent; or

(5) severe impairment of memory, judgment, or other higher cognitive abilities such that constant supervision and assistance in self cares are required, 95 percent.

D. Emotional disturbances and personality changes must be substantiated by medical observation and by organic dysfunction supported by psychometric testing. Permanent partial disability is a disability of the whole body as follows:

(1) only present under stressful situation such as losing one's job, getting a divorce, or a death in the family, 10 percent;

(2) present at all times but not significantly impairing ability to relate to others, to live with others, or to perform self cares, 30 percent;

(3) present at all times in moderate to severe degree, minimal ability to live with others, some supervision required, 65 percent; or

(4) severe degree of emotional disturbance which, because of danger to self and others, requires continuous supervision, 95 percent.

E. Psychotic disorders, as described in D.S.M. III, not caused by organic dysfunction and substantiated by medical observation:

(1) only present under stressful situation, such as losing one's job, getting divorced, a death in the family, 10 percent;

(2) present at all times but not significantly impairing ability to relate to others, live with others, or perform self cares, 30 percent;

(3) present at all times in moderate to severe degree significantly affecting ability to live with others, and requiring some supervision, 65 percent; or

(4) severe degree of emotional disturbance which, because of danger to self or others, requires continuous supervision, 95 percent.

F. Consciousness disturbances; permanent partial disability of the whole body is as follows:

(1) mild or intermittent decreased level of consciousness manifested by periodic mild confusion or lethargy, a score of 16 to 28 on the Kenny scale, 40 percent;

(2) moderate intermittent or continuous decreased level of consciousness manifested by a moderate level of confusion or lethargy, and a score of 10 to 16 on the Kenny scale, 70 percent;



(3) severe decreased level of consciousness manifested as stupor with inability to function independently, and a score of 0 to 10 on the Kenny scale, 95 percent; or

(4) comatose or persistent vegetative state, 99 percent.

G. Motor dysfunction, movement disorder, paralysis, spasticity, sensory loss, or neglect. Where these impairments are due to brain or brain stem injury, rate as provided in subpart 7, items A and B.

H. Other impairments; impairments of respiration, urinary bladder function, anorectal function, or sexual function due to brain or brain stem injury are rated as provided in subpart 7, items C to F.

I. Epilepsy; permanent partial disability due to epilepsy is a disability of the whole body as follows:

(1) well controlled, on medication for one year or more, able to enter work force but with restrictions preventing operation of motor vehicles or dangerous machinery and climbing above six feet in height, 10 percent;

(2) seizures occurring at least once a year, but not severely limiting ability to live independently, 20 percent;

(3) seizures occurring at least six times per year, some supervision required, 40 percent;

(4) seizures poorly controlled with at least 15 seizures per year, supervision required, protective care required with activities restricted, 75 percent; or

(5) frequency of seizures requires continuous supervision and protective care, activities restricted, unable to perform self cares, 95 percent.

J. Headaches; permanent partial disability due to vascular headaches with nausea or vomiting is a five percent disability of the whole body.

K. Total loss of taste, 3 percent.

L. Traumatic head injury, complete and total loss of smell, supported by objective examination, 3 percent.

**Statutory Authority:** *MS s 176.105*

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### **5223.0070 MUSCULOSKELETAL SCHEDULE; BACK.**

Subpart 1. **Lumbar spine.** The spine rating is inclusive of leg symptoms except for gross motor weakness, bladder or bowel dysfunction, or sexual dysfunction. Permanent partial disability of the lumbar spine is a disability of the whole body as follows:

A. Healed sprain, strain, or contusion:

(1) Subjective symptoms of pain not substantiated by objective clinical findings or demonstrable degenerative changes, 0 percent.

(2) Pain associated with rigidity (loss of motion or postural abnormality) or chronic muscle spasm. The chronic muscle spasm or rigidity is substantiated by objective clinical findings but without associated demonstrable degenerative changes, 3.5 percent.

(3) Pain associated with rigidity (loss of motion or postural abnormality) or chronic muscle spasm. The chronic muscle spasm or rigidity is substantiated by objective clinical findings and is associated with demonstrable degenerative changes:

- (a) single vertebral level, 7 percent; or
- (b) multiple vertebral levels, 10.5 percent.

(4) Pain associated with rigidity (loss of motion or postural abnormality) or chronic muscle spasm. The chronic muscle spasm or rigidity is substantiated by objective clinical findings:

- (a) spondylolisthesis grade I, no surgery, 7 percent;
- (b) spondylolisthesis grade II, no surgery, 14 percent; or
- (c) spondylolisthesis grade III or IV, without fusion, 24.5 percent.

B. Herniated intervertebral disc, single vertebral level:

(1) Condition not surgically treated:

(a) X-ray or computerized axial tomography or myelogram specifically positive for herniated disc; excellent results, with resolution of objective neurologic findings, 9 percent;

(b) back and specific radicular pain present with objective neurologic findings; and X-ray or computerized axial tomography or myelogram specifically positive for herniated disc; and no surgery is performed for treatment, 14 percent;

(2) condition treated by surgery:

(a) surgery or chemonucleolysis with excellent results such as mild low back pain, no leg pain, and no neurologic deficit, 9 percent;

(b) surgery or chemonucleolysis with average results such as mild increase in symptoms with bending or lifting, and mild to moderate restriction of activities related to back and leg pain, 11 percent;

(c) surgery or chemonucleolysis with poor surgical results such as persistent or increased symptoms with bending or lifting, and major restriction of activities because of back and leg pain, 13 percent; or

(d) multiple operations on low back with poor surgical results such as persisting or increased symptoms of back and leg pain, 15 percent;

(3) recurrent herniated intervertebral disc, occurring to same vertebral level previously treated with surgery or chemonucleolysis, add five percent to subitem (2);

(4) herniated intervertebral disc at a new vertebral level other than the previously treated herniated intervertebral disc, calculate rating the same as subitems (1) and (2); or

(5) second herniated disc at adjacent level treated concurrently, add five percent to subitem (1) or (2).

C. Spinal stenosis, central or lateral, proven by computerized axial tomography or myelogram:

(1) mild symptoms such as occasional back pain with athletic activities or repetitive bending or lifting, leg pain with radicular symptoms, one vertebral level and no surgery, 14 percent; or

(2) severe spinal stenosis with bilateral leg pain requiring decompressive laminectomy, single vertebral level, with or without surgery (if multiple vertebral levels, add five percent per vertebral level), 18 percent.

D. Spinal fusion surgery for single vertebral level with or without laminectomy, 17.5 percent. Add five percent for each additional vertebral level.

E. Fractures:

(1) vertebral compression with a decrease of ten percent or less in vertebral height, one or more vertebral segments, no fragmentation, no involvement of posterior elements, no nerve root involvement, 4 percent;

(2) vertebral compression with a decrease of 25 percent or less in vertebral height, one or more vertebral segments, no fragmentation, no involvement posterior elements, no nerve root involvement, 10.5 percent;

(3) vertebral compression fracture, with a decrease of more than 25 percent in vertebral height, one or more vertebral segments, no fragmentation, no involvement posterior elements, no nerve root involvement, 15 percent;

(4) vertebral fracture with involvement of posterior elements with X-ray evidence of moderate partial dislocation:

(a) no nerve root involvement, healed, 10.5 percent;

(b) with persistent radicular pain, 12 percent;

(c) with surgical fusion, healed, no permanent motor or sensory changes, 14 percent;

(5) severe dislocation:

(a) normal reduction with surgical fusion, 12 percent;

(b) poor reduction with fusion, persistent radicular pain, 17.5 percent.

Subp. 2. **Cervical spine.** The spine rating is inclusive of arm symptoms except for gross motor weakness; sensory loss; and bladder, bowel, or sexual dysfunction. Bladder, bowel, or sexual dysfunction must be rated as provided in part 5223.0060, subpart 7. Permanent partial disability of the cervical spine is a disability of the whole body as follows:

A. Healed sprain, strain, or contusion:

(1) Subjective symptoms of pain not substantiated by objective clinical findings or demonstrable degenerative changes, 0 percent.

(2) Pain associated with rigidity (loss of motion or postural abnormality) or chronic muscle spasm. The chronic muscle spasm or rigidity is substantiated by objective clinical findings but without associated demonstrable degenerative changes, 3.5 percent.

(3) Pain associated with rigidity (loss of motion or postural abnormality) or chronic muscle spasm. The chronic muscle spasm or rigidity is substantiated by objective clinical findings and is associated with demonstrable degenerative changes:

(a) single vertebral level, 7 percent; or

(b) multiple vertebral levels, 10.5 percent.

B. Herniated intervertebral disc, single vertebral level:

(1) Condition not surgically treated:

(a) X-ray or computerized axial tomography or myelogram specifically positive for herniated disc; excellent results, with resolution of objective neurologic findings, 9 percent.

(b) Neck and specific radicular pain present with objective neurologic findings; and X-ray or computerized axial tomography or myelogram specifically positive for herniated disc; and no surgery is performed for treatment, 14 percent.

(2) Condition treated by surgery:

(a) Surgery with excellent results such as mild neck pain, no arm pain, and no neurologic deficit, 9 percent.

(b) Surgery with average results such as mild increase in symptoms with neck motion or lifting, and mild to moderate restriction of activities related to neck and arm pain, 11 percent.

(c) Surgery with poor surgical results such as persistent or increased symptoms with neck motion or lifting, and major restriction of activities because of neck and arm pain, 13 percent.

(d) Multiple operations on neck with poor surgical results such as persisting or increased symptoms of neck and arm pain, 15 percent.

(3) Recurrent herniated intervertebral disc, occurring to same vertebral level previously treated with surgery, add five percent to subitem (2).

(4) Herniated intervertebral disc at a new vertebral level other than the previously treated herniated intervertebral disc, calculate rating the same as subitems (1) and (2).

(5) Second herniated disc at adjacent level treated concurrently, add five percent to subitem (1) or (2).

C. Spinal stenosis, proven by computerized axial tomography or myelogram.

(1) With myelopathy verified by objective neurologic findings, no loss of function, 14 percent.

(2) Loss of function: the rate provided in part 5223.0060, subpart 7.

D. Fusion of a single vertebral level with or without a laminectomy, 11.5 percent. Add five percent for each additional vertebral level.

E. Fracture:

(1) vertebral compression with a decrease of ten percent or less in vertebral height, one or more vertebral segments, no fragmentation, no involvement of posterior elements, no nerve root involvement, loss of motion neck and all planes, approximately 75 percent normal range of motion neck with pain, 6 percent;

(2) vertebral compression with a decrease of 25 percent or less in vertebral height, one or more vertebral segments, no fragmentation, no involvement posterior elements, no nerve root involvement, loss of motion in the neck in all planes, approximately 50 percent normal range of motion in neck with pain, 14 percent;

(3) vertebral compression with a decrease of more than 25 percent of vertebral height, one or more vertebral segments, no fragmentation, no involvement posterior elements, no nerve root

involvement, loss of motion in the neck in all planes, approximately 50 percent normal range of motion in neck with pain, 19 percent;

(4) vertebral fracture with involvement of posterior elements with X-ray evidence of moderate partial dislocation:

(a) no nerve root involvement, healed, 10.5 percent;

(b) with persistent pain, 12 percent;

(c) with surgical fusion, healed, no permanent motor or sensory changes, 14 percent;

(5) severe dislocation:

(a) normal reduction with surgical fusion, 12 percent;

(b) poor reduction with fusion, persistent radicular pain, 17.5 percent.

Subp. 3. **Thoracic spine.** The spine rating is inclusive of all symptoms including radicular gross motor weakness and sensory loss, but excluding spinal cord injury. Permanent partial disability of the thoracic spine is a disability of the whole body as follows:

A. Healed sprain, strain, or contusion:

(1) Subjective symptoms of pain not substantiated by objective clinical findings or demonstrable degenerative changes, 0 percent.

(2) Pain associated with chronic muscle spasm. The chronic muscle spasm is substantiated by objective clinical findings and is associated with demonstrable degenerative changes, single or multiple level, 3.5 percent.

B. Herniated intervertebral disc, symptomatic:

(1) Condition not surgically treated:

(a) X-ray or computerized axial tomography or myelogram specifically positive for herniated disc; excellent results, with resolution of objective neurologic findings, 3 percent.

(b) Specific radicular pain present with objective neurologic findings, and X-ray or computerized axial tomography or myelogram specifically positive for herniated disc, and no surgery is performed for treatment, 5 percent.

(2) Condition treated by surgery:

(a) surgery with excellent results such as mild thoracic pain, no radicular pain, and no neurological deficit, 5 percent;

(b) surgery with poor surgical results such as persistence of increased symptoms with lifting, and major restriction of activities, 10 percent.

C. Fractures:

(1) Vertebral compression with a decrease of ten percent or less in vertebral height, one or more vertebral segments, no fragmentation, no involvement of posterior elements, no nerve root involvement, 4 percent.

(2) Vertebral compression with a decrease of 25 percent or less in vertebral height, one or more vertebral segments, no fragmentation, no involvement posterior elements, no nerve root involvement, 10.5 percent.

(3) Vertebral compression fracture, with a decrease of more than 25 percent in vertebral height, one or more vertebral segments, no fragmentation, no involvement posterior elements, no nerve root involvement, 15 percent.

(4) Vertebral fracture with involvement of posterior elements with x-ray evidence of moderate partial dislocation:

(a) no nerve root involvement, healed, 10.5 percent;

(b) with persistent pain, with mild motor and sensory manifestations, 17.5 percent;

(c) with surgical fusion, healed, no permanent motor or sensory changes, 14 percent.

(5) Severe dislocation, normal reduction with surgical fusion:

(a) no residual motor or sensory changes, 12 percent;

(b) poor reduction with fusion, persistent radicular pain, motor involvement, 17.5 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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#### **5223.0080 MUSCULOSKELETAL SCHEDULE; AMPUTATIONS OF UPPER EXTREMITY.**

Permanent partial disability due to amputation of upper extremities is a disability of the whole body as follows:

A. forequarter amputation, 70 percent;

B. disarticulation at shoulder joint, 60 percent;

C. amputation of arm above deltoid insertion, 60 percent;

D. amputation of arm between deltoid insertion and elbow joint, 57 percent;

E. disarticulation at elbow joint, 57 percent;

F. amputation of forearm below elbow joint proximal to insertion of biceps tendon, 57 percent;

G. amputation of forearm below elbow joint distal to insertion of biceps tendon, 54 percent;

H. disarticulation at wrist joint, 54 percent;

I. midcarpal or midmetacarpal amputation of hand, 54 percent;

J. amputation of all fingers except thumb at metacarpophalangeal joints, 32.5 percent;

K. amputation of thumb:

(1) at metacarpophalangeal joint or with resection of metacarpal bone, 21.5 percent;

(2) at interphalangeal joint or through proximal phalanx, 16 percent;

(3) from interphalangeal joint to midportion distal phalanx, 13 percent;

(4) from middistal phalanx, distal, 6 percent;

L. amputation of index finger:

- (1) at metacarpophalangeal joint or with resection of metacarpal bone or through proximal phalanx, 13.5 percent;
  - (2) at proximal interphalangeal joint or through middle phalanx, 11 percent;
  - (3) at distal interphalangeal joint to middistal phalanx, 5 percent;
  - (4) from middistal phalanx, distal, 2.5 percent;
- M. amputation of middle finger:
- (1) at metacarpophalangeal joint or with resection of metacarpal bone or through proximal phalanx, 11 percent;
  - (2) at proximal interphalangeal joint or through middle phalanx, 9 percent;
  - (3) at distal interphalangeal joint to middistal phalanx, 5 percent;
  - (4) from middistal phalanx, distal, 2.5 percent;
- N. amputation of ring finger:
- (1) at metacarpophalangeal joint or with resection of metacarpal bone or through proximal phalanx, 5.5 percent;
  - (2) at proximal interphalangeal joint or through middle phalanx, 4 percent;
  - (3) at distal interphalangeal joint to middistal phalanx, 3 percent;
  - (4) from middistal phalanx, distal, 1.5 percent;
- O. amputation of little finger:
- (1) at metacarpophalangeal joint or with resection of metacarpal bone or through proximal phalanx, 3 percent;
  - (2) at proximal interphalangeal joint or through middle phalanx, 2 percent;
  - (3) at distal interphalangeal joint to middistal phalanx, 1 percent;
  - (4) from middistal phalanx, distal, 0.5 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

**Published Electronically:** *August 16, 2010*

#### **5223.0090 MUSCULOSKELETAL SCHEDULE; SENSORY LOSS, UPPER EXTREMITIES.**

Subpart. 1. **General.** For sensory loss to the upper extremities resulting from nerve injury, the disability of the whole body is set forth in subparts 2 to 4. For the portion of the body described in subpart 2, there must be a total loss of the sensory function. Carpal tunnel syndrome is rated under part 5223.0130, subpart 3, items E and F.

Subp. 2. **Total sensory loss.** Sensory loss, complete:

- A. median function at wrist, 22.5 percent;
- B. ulnar function at wrist, 11 percent;
- C. radial function at wrist, 5.5 percent;

- D. medial antebrachial cutaneous, 3 percent;
- E. medial brachial cutaneous, 3 percent;
- F. loss of thumb, whole, 11 percent;
  - (1) radial digital nerve, 4 percent;
  - (2) ulnar digital nerve, 6.5 percent;
- G. index finger, whole, 5.5 percent;
  - (1) radial digital nerve, whole, 3.5 percent;
  - (2) ulnar digital nerve, 2 percent;
- H. long finger, whole, 5.5 percent;
  - (1) radial digital nerve, 3.5 percent;
  - (2) ulnar digital nerve, 2 percent;
- I. ring finger, whole, 3 percent;
  - (1) radial digital nerve, 2 percent;
  - (2) ulnar digital nerve, 1 percent;
- J. little finger, whole, 3 percent;
  - (1) radial digital nerve, 1 percent;
  - (2) ulnar digital nerve, 2 percent;
- K. sensory loss distal to proximal interphalangeal joint, 50 percent of the value of entire digital nerve as set forth in subpart 2, either radial or ulnar as applicable;
- L. sensory loss distal to one-half distal phalanx, 25 percent of entire digital nerve as set forth in subpart 2.

Subp. 3. **Quality of sensory loss in hand.** The levels of sensory loss and the corresponding disabilities of the whole body are measured as follows:

- A. minimal, 2-point discrimination at 6 millimeters or less, 0 percent;
- B. moderate, 2-point discrimination greater than 6 millimeters, 1/2 of value in subpart 2;
- C. severe, 2-point discrimination at greater than 10 millimeters, 3/4 of value in subpart 2;
- D. total, 2-point discrimination at greater than 15 millimeters, same value as in subpart 2.

Subp. 4. **Causalgia.** When objective medical evidence shows persistent causalgia despite treatment, there is loss of sensory and motor function, loss of joint function, and inability to use the extremity in any useful manner. The permanent partial disability to the member, rating from the most proximal joint involved, and the percentage disability of the whole body is 50 percent of that in part 5223.0080, subpart 1.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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**5223.0100 MUSCULOSKELETAL SCHEDULE; MOTOR LOSS OR MOTOR AND SENSORY LOSS, UPPER EXTREMITIES.**

Subpart 1. **Total or complete loss.** Total or complete loss means that motor function is less than antigravity and there is complete loss of sensation. For loss to the upper extremities resulting from nerve injury, and where there is total loss of function for those particular portions of the body, the disability of the whole body is:

- A. Motor loss, complete:
  - (1) median nerve above mid forearm, 30 percent;
  - (2) median nerve below mid forearm, 19 percent;
  - (3) radial nerve, 19 percent;
  - (4) ulnar nerve above mid forearm, 19 percent;
  - (5) ulnar nerve below mid forearm, 13.5 percent.
- B. Complete motor and sensory loss:
  - (1) median nerve above mid forearm, 40.5 percent;
  - (2) median nerve below mid forearm, 35 percent;
  - (3) radial nerve, 27 percent;
  - (4) ulnar nerve above mid forearm, 21.5 percent;
  - (5) ulnar nerve below mid forearm, 16 percent.
- C. Complete loss of motor function:
  - (1) brachial plexus complete, 60 percent:
    - (a) upper trunk C5-6, 47 percent;
    - (b) mid trunk C7, 23 percent;
    - (c) lower trunk C8-T1, 46 percent;
  - (2) anterior thoracic, 3 percent;
  - (3) axillary nerve, 23 percent;
  - (4) dorsal scapular, 3 percent;
  - (5) long thoracic, 9 percent;
  - (6) musculocutaneous, 17.5 percent;
  - (7) subscapular, 3 percent;
  - (8) suprascapular, 11.5 percent;
  - (9) thoracodorsal, 6 percent.
- D. Complete loss of function, motor and sensory:
  - (1) C-5 root, 11 percent;
  - (2) C-6 root, 12 percent;
  - (3) C-7 root, 11 percent;

(4) C-8 root, 13 percent.

Subp. 2. **Partial loss.** Partial loss means that motor function is less than normal but greater than antigravity, and there is incomplete sensory loss. Partial loss is rated at 25 percent of the percentages assigned at subpart 1.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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### 5223.0110 MUSCULOSKELETAL SCHEDULE; SHOULDER.

Subpart 1. **General.** For permanent partial disability to the shoulder, disability of the whole body is as in subparts 2 and 3.

#### Subp. 2. **Range of motion.**

A. Total ankylosis in optimum position, abduction 60 degrees, flexion ten degrees, rotation, neutral position, 30 percent;

B. Total ankylosis in mal-position, grade upward to 50 percent;

C. Mild limitation of motion: no abduction beyond 90 degrees, rotation no more than 40 degrees with full flexion and extension, 3 percent;

D. Moderate limitation of motion: no abduction beyond 60 degrees, rotation no more than 20 degrees, with flexion and extension limited to 30 degrees, 12 percent;

E. Severe limitation of motion: no abduction beyond 25 degrees, rotation no more than ten degrees, flexion and extension limited to 20 degrees, 30 percent.

#### Subp. 3. **Procedures or conditions.**

A. Acromio clavicular separation of the following severity:

(1) grade 1, 0 percent;

(2) grade 2, 3 percent;

(3) grade 3, 6 percent.

B. Anterior or posterior shoulder dislocation, no surgery, single episode, 3 percent.

C. Recurrent dislocation, at least three times in six months, 10 percent.

D. Repair recurrent shoulder dislocation:

(1) no loss of motion, 6 percent;

(2) if mild limitation of motion, 9 percent;

(3) if moderate or severe limitation of motion, rate as in subpart 2, items D and E.

E. Resection distal end of clavicle, 3 percent.

F. Humeral shaft fracture, normal range of motion both joints, 0 percent.

G. Humeral shaft fracture, open reduction, mild restriction of shoulder and elbow motion, 6 percent. For moderate or severe limitation of motion, rate as in subpart 2, items D and E.

H. Surgical neck fracture, healed, no loss of motion, 0 percent; if loss of motion, rate as in subpart 2.

I. Greater tuberosity fracture, normal range of motion, 0 percent. If loss of motion, rate as in subpart 2.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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### **5223.0120 MUSCULOSKELETAL SCHEDULE; ELBOW.**

Subpart 1. **General.** Permanent partial disability of the elbow is disability of the whole body as in subparts 2 and 3.

Subp. 2. **Range of motion.** Flexion and extension of forearm is 85 percent of the arm. Rotation of the forearm is 15 percent of the arm.

A. Total ankylosis in optimum position approximating midway between 90 degrees flexion and 180 degrees extension, a 45-degree angle, 30 percent.

B. Total ankylosis in malposition, 40 percent.

C. Limitation of motion:

(1) mild, motion limited from ten degrees flexion to 100 degrees of further flexion, 6 percent;

(2) moderate, motion limited from 20 degrees flexion to 75 degrees of further flexion, 12 percent;

(3) severe, motion limited from 45 degrees flexion to 90 degrees of further flexion, 21 percent.

D. Flail elbow, pseudarthrosis above joint line, wide motion but very unstable, 39 percent.

E. Resection head of radius, 9 percent.

Subp. 3. **Procedures or conditions.**

A. Radial or ulnar shaft fracture, full motion, 0 percent;

B. Radial or ulnar fracture, open reduction, mild limitation of motion as defined in subpart 2, item C, 9 percent;

C. Olecranon fracture, no loss of motion, 0 percent;

D. Olecranon fracture, open reduction internal fixation, mild limitation of motion as defined in subpart 2, item C, 6 percent;

E. Epicondylar fracture, no loss of motion, 0 percent;

F. Epicondylar fracture, mild loss of motion as defined in subpart 2, item C, 6 percent;

G. Release medial or lateral epicondyle, 2 percent;

H. Ulnar nerve transposition, 2 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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### **5223.0130 MUSCULOSKELETAL SCHEDULE; WRIST.**

Subpart 1. **General.** Permanent partial disability of wrist is disability of the whole body as set in subparts 2 and 3.

#### Subp. 2. **Range of motion.**

A. Excision distal end of ulna, flexion and extension credited with 75 percent of hand, and rotation 25 percent of hand, 5 percent;

B. Total ankylosis in optimum position, 19 percent;

C. Total ankylosis in malposition of extreme flexion or extension, 25 percent;

D. Limitation of motion:

(1) mild, rotation normal, loss of 15 degrees palmar flexion and loss of 20 degrees dorsiflexion, 5 percent;

(2) moderate, rotation limited to 60 degrees in pronation-supination, loss of 25 degrees palmar flexion, loss of 30 degrees dorsiflexion, 10 percent; or

(3) severe, rotation limited to 30 degrees in pronation-supination, palmer flexion less than 25 degrees, dorsiflexion less than 30 degrees, 15 percent.

#### Subp. 3. **Procedure or conditions.**

A. Colles/Smith, extra-articular:

(1) no loss of motion, 0 percent;

(2) mild loss of motion as defined in subpart 2, item D, subitem (1), 3 percent.

B. Colles/Smith/Barton, intra-articular:

(1) no loss of motion, 0 percent;

(2) mild loss of motion as defined in subpart 2, item D, subitem (1), 6 percent;

(3) moderate loss of motion as defined in subpart 2, item D, subitem (2), 10 percent.

C. Carpal bone fracture, no loss of motion, 3 percent.

D. Carpal dislocation, mild loss of motion as defined in subpart 2, item D, subitem (1), 6 percent.

E. Carpal tunnel release, 0.5 percent.

F. Carpal tunnel release with moderate paresthesias, 3 percent.

G. DeQuervain's release, 0 percent.

H. Ganglion excision, 0 percent.

I. Scaphoid graft, 3 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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**5223.0140 MUSCULOSKELETAL SCHEDULE; FINGERS.**

Subpart 1. **General.** Permanent partial disability of fingers is a disability of the whole body as set in subpart 2.

Subp. 2. **Ankylosis of joints.**

A. Thumb.

- (1) Total ankylosis interphalangeal joint:
  - (a) optimum position, 0 to 15 degrees, 8 percent;
  - (b) malposition, flexion greater than 15 degrees, 14 percent.
- (2) Total ankylosis metacarpophalangeal joint:
  - (a) optimum position, up to 25 degree flexion, 10.5 percent;
  - (b) malposition, flexion greater than 25 degrees, 14 percent.
- (3) Total ankylosis both interphalangeal and metacarpophalangeal joints:
  - (a) optimum position, 16 percent;
  - (b) malposition, 18 percent.
- (4) Total ankylosis carpometacarpal joint alone:
  - (a) optimum position, 4 percent;
  - (b) malposition, 8 percent.
- (5) Total ankylosis interphalangeal, metacarpophalangeal, and carpometacarpophalangeal joints:
  - (a) optimum position, 19 percent;
  - (b) malposition, 21 percent.
- (6) Limitation of motion, thumb:
  - (a) mild, total closing motion tip of digit, can flex to touch palm, and extend to 15 degrees flexion, strength of grip normal, 3 percent;
  - (b) moderate, total closing motion, tip of digit, lacks 1/2 inch of touching palm and can extend to 30 degrees flexion, 6 percent;
  - (c) severe, total closing motion tip of digit lacks one inch of touching palm and can extend to 45 degrees flexion, 9 percent.

B. Digits other than thumb.

- (1) To rate any digit excluding the thumb, find the appropriate descriptive category in item A, then multiply the rating by the following factor for the involved digit:
  - (a) index finger, multiply by 0.6;

- (b) middle finger, multiply by 0.5;
- (c) ring finger, multiply by 0.25;
- (d) little finger, multiply by 0.125.

(2) Total ankylosis of distal interphalangeal joint, multiply rating in unit (a) or (b) by multiplier for involved digit in subitem (1):

- (a) optimum position, 5.5 percent;
- (b) malposition, flexed 35 degrees or more, 8 percent.

C. Soft tissue loss, isolated soft tissue loss of the end of digit greater than one centimeter, 20 percent of the disability to the whole body for amputation of that digit as set forth at part 5223.0080.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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#### **5223.0150 MUSCULOSKELETAL SCHEDULE; AMPUTATIONS OF LOWER EXTREMITIES.**

For permanent partial disability due to amputation of lower extremities the disability of the whole body is:

- A. hemipelvectomy, 50 percent;
- B. disarticulation at hip joint, 40 percent;
- C. amputation above knee joint with short thigh stump, 3 inch or less below tuberosity of ischium, 40 percent;
- D. amputation above knee joint with functional stump, 36 percent;
- E. disarticulation at knee joint, 36 percent;
- F. amputation below knee joint with short stump, 3 inch or less below intercondylar notch, 36 percent;
- G. amputation below knee joint with functional stump, 28 percent;
- H. amputation at ankle, Syme type, 28 percent;
- I. partial amputation of foot, Chopart's type, 21 percent;
- J. midmetatarsal amputation, 14 percent;
- K. amputation of all toes at metatarsophalangeal joints, 8 percent;
- L. amputation of great toe:
  - (1) with resection of metatarsal bone, 8 percent;
  - (2) at metatarsophalangeal joint, 5 percent;
  - (3) at interphalangeal joint, 4 percent;
- M. amputation of lesser toe, 2nd-5th:
  - (1) with resection of metatarsal bone, 2 percent;

- (2) at metatarsophalangeal joint, 1 percent;
- (3) at proximal interphalangeal joint, 0 percent;
- (4) at distal interphalangeal joint, 0 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

**Published Electronically:** *August 16, 2010*

**5223.0160 MUSCULOSKELETAL SCHEDULE; NERVE INJURY OR MOTOR AND SENSORY LOSS, LOWER EXTREMITIES.**

Subpart 1. **Total loss.** Total loss means that motor function is less than antigravity and there is complete loss of sensation. For loss to the lower extremities resulting from nerve injury, and where there is total loss of function for those particular portions of the body, the disability of the whole body is:

- A. femoral, anterior crural, 13 percent;
- B. femoral, anterior crural, below iliacus nerve, 11 percent;
- C. genitofemoral, genito crural, 2 percent;
- D. inferior gluteal, 9 percent;
- E. lateral femoral cutaneous, 3 percent;
- F. posterior cutaneous of thigh, 2 percent;
- G. superior gluteal, 7 percent;
- H. sciatic, above hamstring innervation, 31 percent;
- I. common peroneal, lateral, or external popliteal, 13 percent;
- J. deep peroneal, above midshin, 9 percent;
- K. deep peroneal, below midshin, anterior tibial, 2 percent;
- L. superficial peroneal, 5 percent;
- M. tibial nerve, medial, or internal popliteal:
  - (1) above knee, 15 percent;
  - (2) posterior tibial, midcalf and knee, 11 percent;
  - (3) below midcalf, 9 percent;
  - (4) lateral plantar branch, 3 percent; or
  - (5) medial plantar branch, 3 percent;
- N. sural, external saphenous, 1 percent;
- O. L-4 nerve root, 11 percent;
- P. L-5 nerve root, 13 percent;
- Q. S-1 nerve root, 15 percent; or
- R. Lumbosacral plexus, 40 percent.

Subp. 2. **Partial loss.** Partial loss means that motor function is less than normal but greater than antigravity, and there is incomplete sensory loss. Partial loss is rated at 25 percent of the percentages assigned at subpart 1.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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### 5223.0170 MUSCULOSKELETAL SCHEDULE; JOINTS.

Subpart 1. **General.** For permanent partial disability of joints, disability of the whole body is set forth in subparts 2 to 9.

Subp. 2. **Surgical or traumatic shortening of lower extremity.** Surgical or traumatic shortening of lower extremity:

- A. 1/4 inch to 3/4 inch, 3 percent;
- B. 3/4 to 1-1/4 inches, 4.5 percent;
- C. 1-1/4 to 1-3/4 inches, 6 percent; or
- D. 1-3/4 inches and above, 9 percent.

Subp. 3. **Hip.** Hip:

- A. Range of motion:
  - (1) mild, anterior posterior movement from 0 degree to 120 degree flexion, rotation and lateral motion, abduction, adduction free to 50 percent of normal, 6 percent;
  - (2) moderate, anterior posterior motion from 15 degrees flexion deformity to 110 degrees further flexion, rotation, lateral motion, abduction, and adduction free to 25 percent normal, 12 percent;
  - (3) severe, anterior posterior motion from 30 degrees flexion deformity to 90 degrees further flexion, 22 percent.
- B. Procedures or conditions:
  - (1) nonunion proximal femur fracture without reconstruction, 33 percent;
  - (2) arthroplasty, able to stand at work and walk, motion 25 percent to 50 percent of normal, 18 percent;
  - (3) total hip arthroplasty, normal result, 13 percent;
  - (4) femoral endoprosthesis:
    - (a) minimal pain, near normal range of motion, able to walk unsupported, 15 percent;
    - (b) mild to moderate pain with weight bearing, motion 50 percent of normal, 20 percent;
  - (5) hip pinning for fracture:
    - (a) minimal pain, near normal range of motion, able to walk unsupported, 5 percent;
    - (b) mild to moderate pain, motion 50 percent of normal, 10 percent.



Subp. 4. **Femur.** Femur:

- A. shaft fracture, closed, healed, 0 percent;
- B. femoral shaft fracture, open reduction, loss of less than 20 degrees of movement of any one plane of either the hip or the knee, no malalignment, 2 percent.

Subp. 5. **Knee.** Knee:

- A. Range of motion.
  - (1) ankylosis and limited motion, total ankylosis optimum position, 15 degrees flexion, 22 percent;
  - (2) limitation of motion:
    - (a) mild, 0 degrees to at least 110 degrees flexion, 2 percent;
    - (b) moderate, 5 degrees to at least 80 degrees flexion, 7 percent;
    - (c) severe, 5 degrees to at least 60 degrees flexion, 15 percent;
    - (d) extremely severe, limited from 15 degrees flexion deformity with further flexion to 90 degree, 18 percent.
- B. Procedures or conditions:
  - (1) surgical removal of medial or lateral semilunar cartilage, more than 50 percent of cartilage removed, no complications, 3 percent;
  - (2) partial meniscectomy, up to 50 percent of the meniscus removed, 2 percent;
  - (3) surgical removal both cartilages, 9 percent;
  - (4) ruptured cruciate ligament, repaired or unrepaired:
    - (a) mild laxity, 3 percent;
    - (b) moderate laxity, 7 percent;
    - (c) severe laxity, 10 percent;
  - (5) excision of patella, 9 percent;
  - (6) plateau fracture, depressed bone elevated, semilunar excised, 9 percent;
  - (7) plateau fracture, undisplaced, 2 percent;
  - (8) supracondylar or intercondylar fracture, displaced, 7 percent;
  - (9) supracondylar or intercondylar fracture, undisplaced, 2 percent;
  - (10) patella fracture, open reduction or partial patellectomy, displaced, 5 percent;
  - (11) patella fracture, open reduction or partial patellectomy, undisplaced, 2 percent;
  - (12) patellar shaving, 1 percent;
  - (13) arthroscopy, 0 percent;
  - (14) repair collateral ligament, mild laxity, 2 percent;
  - (15) repair collateral ligament, moderate laxity, 4 percent;
  - (16) repair patellar dislocation, 5 percent;

- (17) total knee arthroplasty, flexion to 90 degrees, extension to 0 degrees, 13 percent;
- (18) total knee unicondylar, 7 percent;
- (19) lateral retinacular release, 1 percent;
- (20) proximal tibial osteotomy, flexion to 90 degrees, extension to 0 degrees, 5 percent.

Subp. 6. **Tibia.** Tibia:

- A. tibial shaft fracture, undisplaced, healed, normal motion and alignment, 0 percent;
- B. tibial shaft fracture, open reduction, loss of less than 20 degrees of movement in any one plane in either the knee or the ankle with full knee extension, no malalignment, 5 percent.

Subp. 7. **Ankle and foot.** Ankle and foot:

- A. Range of motion:
  - (1) total ankylosis ankle and foot, pantalar arthrodesis:
    - (a) in 10 degrees plantar flexion, 15 percent;
    - (b) malposition 30 degrees plantar flexion, 20 percent;
  - (2) ankylosis of foot, subtalar or triple arthrodesis tarsal bones, ankle, normal motion, 7.5 percent:
    - (a) decreased motion, subtalar joint, 3.5 percent;
    - (b) ankylosis in malposition, 8 percent;
  - (3) ankylosis of tibia and talus, subtalar joints free, optimum position 15 degrees plantar flexion, 12 percent;
  - (4) limitation of motion in the ankle:
    - (a) mild, motion limited from position of 90 degrees right angle to 20 degrees plantar flexion, 3 percent;
    - (b) moderate, motion limited from position of 10 degrees flexion to 20 degrees plantar flexion, 6 percent;
    - (c) severe, motion limited from position of 20 degrees plantar flexion to 30 degrees plantar flexion, 12 percent.
- B. Procedures or conditions:
  - (1) achilles tendon rupture with treatment surgically or nonsurgically, able to stand on toes, 2 percent;
  - (2) achilles tendon rupture with treatment surgically or nonsurgically, unable to sustain body weight on toes, 4 percent;
  - (3) open reduction ankle:
    - (a) normal range of motion:
      - i. medial malleolus only, 2 percent;
      - ii. lateral malleolus only, 2 percent;
    - (b) normal to mild restriction on range of motion:

- i. medial and lateral malleolus, 4 percent;
    - ii. trimalleolar, 4 percent;
  - (c) for moderate to severe restriction of range of motion in the ankle, rate as in item A, subitem (4);
- (4) ankle, lateral ligament reconstruction, mild laxity, normal range of motion, 2 percent;
- (5) ankle, lateral ligament reconstruction, moderate laxity, at least ten degrees greater widening on the Talar tilt stress test X-ray compared to the uninjured side, 3 percent.

Subp. 8. **Foot.** Foot:

- A. Range of motion:
  - (1) ankylosis of tarsal metatarsal or mild tarsal joints:
    - (a) normal position, 2.5 percent;
    - (b) malposition, 5 percent;
  - (2) limited motion in the foot:
    - (a) mild, limited motion with mild pain with weight bearing, no change in activities, 2.5 percent;
    - (b) moderate, limitation of motion with pain with weight bearing, no reduction in athletic or vigorous activities, 5 percent;
    - (c) severe, limitation of motion with pain with weight bearing, sedentary activities not affected, 10 percent.
- B. Procedures or conditions:
  - (1) calcaneal fracture, extra articular, pain with weight bearing, 6 percent;
  - (2) calcaneal fracture, intra articular:
    - (a) mild limitation of motion as in item A, subitem (2), unit (a), 6 percent;
    - (b) moderate limitation of motion as in item A, subitem (2), unit (b), 12 percent;
    - (c) severe limitation of motion as in item A, subitem (2), unit (c), 18 percent;
  - (3) avascular necrosis talus:
    - (a) mild limitation of motion as in item A, subitem (2), unit (a), 6 percent;
    - (b) moderate limitation of motion as in item A, subitem (2), unit (b), 12 percent;
    - (c) severe limitation of motion as in item A, subitem (2), unit (c) 18 percent;
  - (4) tarsal fractures, healed, mild pain, 3 percent;
  - (5) metatarsal fractures, healed, 0 percent;
  - (6) phalangeal fractures, healed, 0 percent.

Subp. 9. **Toes.** Toes:

- A. complete ankylosis of metatarsophalangeal joint, any toe, 3 percent;
- B. complete ankylosis any toe, interphalangeal joint, optimum position semiflexion, 1 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

**Published Electronically:** *October 3, 2013*

### 5223.0180 RESPIRATORY SYSTEM.

Subpart 1. **Evaluation procedures.** The procedures used in evaluating permanent partial disability of the respiratory system shall include the following:

- A. complete history and physical examination with special reference to cardiopulmonary symptoms and signs;
- B. chest roentgenography (posteroanterior in full inspiration, posteroanterior in full expiration timed, three seconds, lateral);
- C. hematocrit or hemoglobin determination;
- D. electrocardiogram;
- E. performance of the following tests of ventilation:
  - (1) one second forced expiratory volume (FEV1), expressed as a percentage of the normal values set forth in the A.M.A. Guides, pages 69 and 71;
  - (2) forced vital capacity (FVC), expressed as a percentage of the normal values set forth in the A.M.A. Guides, pages 70 and 72;
- F. diffusing capacity studies must be performed when complaints of dyspnea continue unabated in spite of forced spirometric measurement results above the cutoff limits.

Subp. 2. **Measurement of respiratory loss of function.** Table 1 shall be used to calculate the percentage of disability of the whole body due to permanent partial disability of the respiratory system.

TABLE 1

Symptoms	Forced Spirometry Measurements 1/2 (FEV1 + FVC) (Test three times)	Diffusing Capacity*	Percent Disability of Whole Body
When dyspnea occurs, is consistent with the circumstances of activity.	Not less than 85 percent of normal	Not Applicable	0
Dyspnea does not occur at rest and seldom occurs during the performance of the usual activities of daily living.	70 to 85 percent of normal	Not Applicable	15
Dyspnea does not occur at rest but does occur during the usual activities of daily living.	50 to 70 percent of normal	Usually Not Applicable	30

Dyspnea occurs during activities such as climbing one flight of stairs or walking one block on the level.	25 to 50 percent of normal	40 percent or less of normal	60
Confined to bed and oxygen dependent.	Less than 25 percent of normal	20 percent or less of normal	85

\* The diffusing capacity studies must be performed when complaints of dyspnea continue unabated in spite of forced spirometric measurement results above the cutoff limits set forth in Table 1.

Subp. 3. **Asthma.** Asthma which is not medically controllable and which requires at least six hospitalizations in 12 months, 25 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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**5223.0190 ORGANIC HEART DISEASE.**

Subpart 1. **General.** For permanent partial disability due to organic heart disease, the disability of the whole body is set forth in subpart 2.

Subp. 2. **Heart ratings.** The following ratings may be applied only after a compilation of a patient's complete history and a physical examination. Testing must include chest X-ray and electrocardiogram. The testing may include echocardiography, exercise testing, and radionuclide studies.

The following table sets forth symptoms of organic heart disease. The percentage of disability of the whole body is determined by the symptoms present.

Organic Heart Disease Schedule

Percentage Disability of Whole Body	10 percent	30 percent	60 percent	85 percent
Organic Heart Disease	Present	Present	Present	Present
Symptoms	Not present	Not present at rest	Not present at rest	Present at rest
Level of activity causing symptoms	No symptoms from usual activities of daily living, including such activities as stair- or hill-climbing, and walking	No symptoms from usual activities of daily living	Symptoms from a one or more block walk or from climbing stairs. Symptoms also from activities of daily living	Worsening of symptoms with any activity

Level of unusual activity causing symptoms	No symptoms from walking quickly, recreation, hill- or stair-climbing, arm-work, and similar activities	Symptoms from hill- or stair-climbing, walking quickly, arm-work, or recreation	Symptoms from emotional stress, walking quickly, and similar activities	May be present at rest or may awaken patient
Signs of heart failure	No	No	Relieved by therapy	Not usually relieved by therapy
Signs of symptoms of angina	No	With prolonged or severe exertion	With mild exertion	Rest or nocturnal symptoms
Objective tests of functional status	Ischemic S-T segment changes of at least 1 mm at or before stage 3 of a Bruce protocol exercise test, or diagnostic ischemic changes at a level of 7 METS or less in a nuclear isotope exercise study	Ischemic S-T segment changes of at least 1 mm at or before stage 2 of a Bruce protocol exercise test, or diagnostic ischemic changes at a level of 4 METS or less in a nuclear isotope exercise study	Ischemic S-T segment changes of at least 1 mm at or before stage 1 of a Bruce protocol exercise test, or diagnostic ischemic changes at a level of 2 METS or less in a nuclear isotope exercise study	Diagnostic ischemic S-T segment changes of at least 1 mm on resting electro-cardiogram

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

**Published Electronically:** *August 16, 2010*

#### 5223.0200 VASCULAR DISEASE AFFECTING EXTREMITIES.

The following schedule shall be used to determine the percentage of disability of the whole body for permanent partial disability due to vascular disease. Permanent partial disability from vascular disease affecting the extremities must be rated according to the following classifications. The system shall be used only after a complete history and physical examination. The full evaluation shall include imaging examination (X-ray with and without contrast, computer axial tomography scanning, sonography, radionuclide studies) volume studies, or flow studies.

##### A. Vascular disease schedule, lower extremities.

Percentage of Disability of Whole Body

	Intermittent claudication distance	Pain at rest	Physical signs of diagnosis	Edema
0 percent	No	No	None, no ulceration	Rare and transient
10 percent	Approximately one city block	No	Healed, painless stump, or healed ulcer	Persistent, incompletely controlled
30 percent	Approximately 1/4 city block	No	Healed stump but persistent signs of activity, or persistent superficial ulcer	Very severe and only partially controlled
60 percent	Less than 1/4 city block	Sometimes	Amputation above wrist or ankle with continued sign of disease, or widespread deep ulcer	Marked and uncontrollable
90 percent	Constant pain	Constant	Amputation above wrist or ankle in more than one limb, or wide, deep ulceration of more than one limb	Marked and uncontrollable

B. Peripheral vascular disease, upper extremities.

(1) Class 1. The following findings are present: Decreased pulse or pulses; minimal loss of subcutaneous tissue of fingertips; calcification of arteries as detected by radiographic examination or Raynaud's phenomenon that occurs with exposure to temperature lower than zero degrees centigrade (32 degrees Fahrenheit) but is readily controlled by medication; 0 percent.

(2) Class 2. Objective signs of vascular damage as evidenced by findings such as that of a healed, painless stump of an amputated digit showing evidence of persistent vascular disease, or of a healed ulcer; and Raynaud's phenomenon occurs on exposures lower than four degrees centigrade (39 degrees Fahrenheit) but is controlled by medication, 10 percent.

(3) Class 3. Objective signs of vascular damage as evidenced by healed amputation of two or more digits of one extremity, with evidence of persisting vascular disease or superficial ulceration; and Raynaud's phenomenon occurs on exposure to temperatures lower than ten degrees centigrade (50 degrees Fahrenheit) and it is only partially controlled by medication; 30 percent.

(4) Class 4. Objective evidence of vascular damage as evidenced by signs such as amputation of two or more digits of two extremities with evidence of persistent vascular disease, or persistent widespread or deep ulceration involving one extremity; and Raynaud's phenomenon occurs on exposure to temperatures lower than 15 degrees centigrade (59 degrees Fahrenheit) and is only partially controlled by medication; 54 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

**Published Electronically:** *August 16, 2010*

**5223.0210 GASTROINTESTINAL TRACT.**

Subpart 1. **General.** The following schedule is for the evaluation of permanent partial disability of the gastrointestinal tract. The evaluation must include a thorough history and physical examination. Additional studies, such as radiographic, metabolic, absorptive, endoscopic, and biopsy may be necessary to determine the functioning of these organs. Disability shall not be determined until after completion of all medically accepted diagnostic and therapeutic efforts. The percentages indicated in this schedule are the disability of the whole body for the corresponding class.

For evaluative purposes, the digestive tract has been divided into (1) the esophagus, stomach, duodenum, small intestine, and pancreas, (2) the colon and rectum, (3) the anus, and (4) the liver and biliary tract.

**Subp. 2. Upper digestive tract (esophagus, stomach, duodenum, small intestine, and pancreas).****A. Class 1, 2 percent.**

(1) Symptoms or signs of upper digestive tract disease are present and there is anatomic loss or alteration; continuous treatment is not required; and weight can be maintained at the desirable level; or

(2) There are no complications after surgical procedures.

**B. Class 2, 15 percent.** Symptoms and signs of organic upper digestive tract disease are present or there is anatomic loss or alteration; dietary restriction and drugs are required for control of symptoms, signs, or nutritional deficiency; and loss of weight below the desirable weight does not exceed 10 percent.

**C. Class 3, 35 percent.**

(1) symptoms and signs of organic upper digestive tract disease are present or there is anatomic loss or alteration; and dietary restrictions and drugs do not completely control symptoms, signs, or nutritional state; or

(2) there is 10 to 20 percent loss of weight below the desirable weight and the weight loss is ascribable to a disorder of the upper digestive tract.

**D. Class 4, 65 percent.**

(1) symptoms and signs of organic upper digestive tract disease are present or there is anatomic loss or alteration; and symptoms are not controlled by treatment; or

(2) there is greater than a 20 percent loss of weight below the desirable weight and the weight loss is ascribable to a disorder of the upper digestive tract.

**Subp. 3. Colon and rectum.****A. Class 1, 2 percent:**

(1) signs and symptoms of colonic or rectal disease are infrequent;

(2) limitation of activities, special diet, or medication is not required; no systemic manifestations are present and weight and nutritional state can be maintained at a desirable level; or

(3) there are no complications after surgical procedures.

**B. Class 2, 15 percent.** There is objective evidence of colonic or rectal disease and anatomic loss or alteration. There are mild gastrointestinal symptoms with intermittent disturbance of bowel function,



accompanied by periodic or continual pain. Minimal restriction of diet or mild symptomatic therapy may be necessary. No impairment of nutrition results.

C. Class 3, 30 percent. There is objective evidence of colonic or rectal disease and anatomic loss or alteration; there are moderate to severe exacerbations with disturbance of bowel habit, accompanied by periodic or continual pain; restriction of activity, special diet and drugs are required during attacks; and there are constitutional manifestations such as fever, anemia, or weight loss.

D. Class 4, 50 percent. There is objective evidence of colonic and rectal disease or anatomic loss or alteration; there are persistent disturbances of bowel function present at rest with severe persistent pain; complete limitation of activity, continued restriction of diet, and medication do not entirely control the symptoms; there are constitutional manifestations such as fever, weight loss, or anemia present; and there is no prolonged remission.

**Subp. 4. Anus.**

A. Class 1, 2 percent. Signs of organic anal disease are present or there is anatomic loss or alteration; or there is mild incontinence involving gas or liquid stool; or anal symptoms are mild, intermittent, and controlled by treatment.

B. Class 2, 12 percent. Signs of organic anal disease are present or there is anatomic loss or alteration; and moderate but partial fecal incontinence is present requiring continual treatment; or continual anal symptoms are present and incompletely controlled by treatment.

C. Class 3, 22 percent.

(1) signs of organic anal diseases are present and there is anatomic loss or alteration; and complete fecal incontinence is present; or

(2) signs of organic anal disease are present and severe anal symptoms are unresponsive or not amenable to therapy.

**Subp. 5. Liver and biliary tract.**

A. Class 1, 5 percent.

(1) There is objective evidence of persistent liver disease even though no symptoms of liver disease are present; and no history of ascites, jaundice, or bleeding esophageal varices within five years; nutrition and strength are normal; and biochemical studies indicate minimal disturbance of the liver function; or

(2) Primary disorders of bilirubin metabolism are present.

B. Class 2, 20 percent. There is objective evidence of chronic liver disease even though no symptoms of liver disease are present; and no history of ascites, jaundice, or bleeding esophageal varices within five years; nutrition and strength are normal; and biochemical studies indicate more severe liver damage than Class 1.

C. Class 3, 40 percent. There is objective evidence of progressive chronic liver disease, or history of jaundice, ascites, or bleeding esophageal or gastric varices within the past year; nutrition and strength may be affected; and there is intermittent ammonia and meat intoxication.

D. Class 4, 75 percent. There is objective evidence of progressive chronic liver disease, or persistent ascites or persistent jaundice or bleeding esophageal or gastric varices, with central nervous system manifestations or hepatic insufficiency; and nutrition state is below normal.

**Subp. 6. Biliary tract.**

- A. Class 1, 5 percent. There is an occasional episode of biliary tract dysfunction.
- B. Class 2, 20 percent. There is recurrent biliary tract impairment irrespective of treatment.
- C. Class 3, 40 percent. There is irreparable obstruction of the bile tract with recurrent cholangitis.
- D. Class 4, 75 percent. There is persistent jaundice and progressive liver disease due to obstruction of the common bile duct.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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**5223.0220 REPRODUCTIVE AND URINARY TRACT SCHEDULE.**

Subpart 1. **General.** This part sets forth the percentage of disability of the whole body for permanent partial disability of the reproductive and urinary systems. The percentages indicated in this schedule are the disability of the whole body for the corresponding class.

Subp. 2. **Evaluative procedures.** For evaluative purposes the reproductive and urinary systems are divided into the: (1) upper urinary tract, (2) bladder, (3) urethra, (4) male reproductive organs, and (5) female reproductive organs.

Procedures for evaluating permanent partial disability of the genitourinary and reproductive systems shall include:

A. a complete history and physical examination with special reference to genitourinary/reproductive symptoms and signs, including psychological evaluation when indicated by the symptoms;

B. laboratory tests to identify the presence or absence of associated disease. The tests may include multichannel chemistry profile, complete blood count, complete urinalysis, including microscopic examination of centrifuged sediment, chest X-ray, both posterior/anterior and left lateral views, electrocardiogram, performance of a measurement of total renal functions – endogenous creatinine clearance corrected for total body surface area. Other tests may include:

- (1) kidney function tests, such as arterial blood gases and determinations of other chemistries that would reflect the metabolic effects of decreased kidney function;
- (2) special examinations such as cystoscopy, voiding cystograms, cystometrograms;
- (3) a description of the anatomy of the reproduction or urinary system;
- (4) urodynamics, specifically cystometry combined with electromyography of the external urethral sphincter to evaluate for presumed upper or lower motor neuron neurogenic bladder; and
- (5) nocturnal penile tumescence monitoring with paper or computer printout that displays frequency, duration, and, whenever possible, rigidity of erections.

**Subp. 3. Upper urinary tract.**

A. Solitary kidney, 10 percent. This category shall apply only when a solitary kidney is the only upper urinary tract permanent partial disability. When a solitary kidney occurs in combination with any one of the following four classes, the disability rating for that class shall be increased by 10 percent.

B. Class 1, 5 percent. Diminution of kidney function as evidenced by a creatinine clearance of 50 to 70 percent of age and sex adjusted normal values, other underlying causes absent.

C. Class 2, 22 percent. Diminution of the upper urinary tract function as evidenced by a creatinine clearance of 40 to 50 percent of age and sex adjusted normal values, no other underlying disease.

D. Class 3, 47 percent. Diminution of upper urinary tract function, as evidenced by creatinine clearance of 25 to 40 percent of age and sex adjusted normal values.

E. Class 4, 77 percent. Diminution of upper urinary tract function as evidenced by creatinine clearance below 25 percent of age and sex adjusted normal values.

**Subp. 4. Bladder.**

A. Class 1, 5 percent. Symptoms and signs of bladder disorder requiring intermittent treatment, but without evidence of intervening malfunction between periods of treatments or symptomatology.

B. Class 2, 15 percent. Symptoms and signs of bladder disorder requiring continuous treatment, or there is bladder reflex activity but loss of voluntary control.

C. Class 3, 20 percent. Poor reflex activity evidenced by intermittent dribbling, and no voluntary control.

D. Class 4, 30 percent. Continuous dribbling.

**Subp. 5. Urethra.**

A. Class 1, 2 percent. Symptoms and signs of urethral disorder are present which require intermittent therapy for control.

B. Class 2, 15 percent. Symptoms and signs of urethral disorder that cannot be effectively controlled by treatment.

**Subp. 6. Penis.**

A. Class 1, 10 percent. Impaired sexual function but vaginal penetration is possible, with supporting objective evidence of abnormal penile tumescence studies to substantiate impaired tumescence or rigidity.

B. Class 2, 20 percent. Impaired sexual function and vaginal penetration is not possible, with supporting objective evidence of insufficient penile tumescence or rigidity.

C. Psychogenic impotence, 0 percent.

**Subp. 7. Testes, epididymides, and spermatic cords.**

A. Class 1, 5 percent.

(1) symptoms and signs of testicular, epididymal, or spermatic cord disease are present and there is anatomic alteration; and

(2) continuous treatment is not required; and

(3) there are no abnormalities of seminal or hormonal functions; or

(4) solitary teste is present.

B. Class 2, 10 percent.

(1) symptoms and signs of testicular, epididymal or spermatic cord disease are present and there is anatomic alteration; and

(2) frequent or continuous treatment is required; and

(3) there are detectable seminal or hormonal abnormalities.

C. Class 3, 20 percent. Trauma or disease produces bilateral anatomical loss or there is no detectable seminal or hormonal function of testes, epididymides, or spermatic cords.

D. Inguinal hernia, direct or indirect, unilateral or bilateral, recurrent after two or more herniorrhaphies, 5 percent.

**Subp. 8. Prostate and seminal vesicles.**

A. Class 1, 5 percent.

(1) there are symptoms and signs of prostatic or seminal vesicular dysfunction or disease;

(2) anatomic alteration is present; and

(3) continuous treatment is not required.

B. Class 2, 10 percent.

(1) frequent severe symptoms and signs of prostatic or seminal vesicular dysfunction or disease are present; and

(2) anatomic alteration is present; and

(3) continuous treatment is required.

C. Class 3, 20 percent. There has been ablation of the prostate or seminal vesicles.

**Subp. 9. Vulva and vagina.**

A. Class 1, 10 percent. Impaired sexual function but penile containment is possible.

B. Class 2, 20 percent. Impaired sexual function and penile containment is not possible.

**Subp. 10. Cervix and uterus.**

A. Class 1, 5 percent.

(1) symptoms and signs of disease or deformity of the cervix or uterus are present which do not require continuous treatment; or

(2) cervical stenosis, if present, requires no treatment; or

(3) there is anatomic loss of the cervix or uterus in the postmenopausal years.

B. Class 2, 10 percent.

(1) symptoms and signs of disease or deformity of the cervix or uterus are present which require continuous treatment; or

(2) cervical stenosis, if present, requires periodic treatment.

C. Class 3, 20 percent.

- (1) symptoms and signs of disease or deformity of the cervix or uterus are present which are not controlled by treatment; or
- (2) cervical stenosis is complete; or
- (3) anatomic or complete functional loss of the cervix or uterus occurs in premenopausal years.

**Subp. 11. Fallopian tubes and ovaries.**

- A. Class 1, 5 percent.
  - (1) symptoms and signs of disease or deformity of the fallopian tubes or ovaries are present which do not require continuous treatment; or
  - (2) only one fallopian tube or ovary is functioning in the premenopausal years.
- B. Class 2, 10 percent. Symptoms and signs of disease or deformity of the fallopian tubes or ovaries are present which require continuous treatment, but tubal patency persists and ovulation is possible.
- C. Class 3, 20 percent.
  - (1) symptoms and signs of disease or deformity of the fallopian tubes or ovaries are present and there is total loss of tubal patency or total failure to produce ova in the premenopausal years; or
  - (2) bilateral loss of the fallopian tubes or ovaries occurs in the premenopausal years.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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**5223.0230 SKIN DISORDERS.**

Permanent partial disability resulting from skin disorders are a disability of the whole body as set forth in this part. This schedule is based upon the effect of the disorder on the ability to function and perform activities of daily living and the degree of treatment required for the disorder. The schedule is not based upon the location or the percentage of the body affected by a specific skin disorder. Impairment due to burns shall be rated under part 5223.0240 and not under this schedule.

- A. Class 1, 2 percent. Signs or symptoms of skin disorder are present and supported by objective skin findings. With treatment there is no or minimal limitation in the performance of the activities of daily living, although certain physical or chemical agents might temporarily increase the extent of limitation.
- B. Class 2, 10 percent. Signs and symptoms of skin disorder are present and intermittent treatment is required. There is limitation in the performance of some of the activities of daily living.
- C. Class 3, 20 percent. Signs and symptoms of skin disorder are present. Continuous treatment is required. There is limitation in the performance of many of the activities of daily living.
- D. Class 4, 45 percent. Signs and symptoms of skin disorder are present. Continuous treatment is required which may include periodic confinement at home or other domicile. There is limitation in the performance of many of the activities of daily living.

E. Class 5, 70 percent. Signs and symptoms of skin disorder are present. Continuous treatment is required which necessitates confinement at home or other domicile. There is severe limitation in the performance of nearly all of the activities of daily living.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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#### 5223.0240 BURNS.

Subpart 1. **General.** The whole body disability due to burns is not equal to the percent of body surface area which is burned. The percentage of body surface area affected must be determined according to Lund and Browder. The ratings determined under subparts 1 to 4 must be combined as set forth at Minnesota Statutes, section 176.105, subdivision 4, paragraph (c), provided that the maximum disability to the whole body under this schedule must not exceed 70 percent. Loss of motion or body parts except the face must be rated under the musculoskeletal schedules and must not be considered as included in a rating under this part unless specifically provided otherwise.

Subp. 2. **Burns other than electrical conduction.** A rating under this part is the rating assigned by items A to F combined as provided in Minnesota Statutes, section 176.105, subdivision 4, paragraph (c):

- A. Any burn that heals within one month and leaves no hypertrophic scar, 0 percent.
- B. Cold intolerance of the hands, face, or head as evidenced by the wearing of heavy gloves or additional scarves at 35 degrees Fahrenheit; a scar of at least ten square centimeters must be present for an affected member to be rated under this item:
  - (1) dominant hand, 4 percent;
  - (2) nondominant hand, 3 percent;
  - (3) both hands, 6 percent;
  - (4) face, 3 percent; or
  - (5) face and both hands, 10 percent.
- C. Heat intolerance is evidenced by fatigue, malaise, nausea, and an oral temperature of at least 100 degrees Fahrenheit upon exposure to an environmental temperature of 90 degrees Fahrenheit at 60 percent relative humidity, 5 percent.
- D. Sensitivity to sun exposure as evidenced by the need to cover the skin or use sun screen to prevent sunburn; a scar of at least ten square centimeters must be present for an affected member to be rated under this item:
  - (1) dominant hand, 4 percent;
  - (2) nondominant hand, 3 percent;
  - (3) both hands, 6 percent;
  - (4) face, 3 percent; or
  - (5) face and both hands, 10 percent.

E. Sensitivity to dust, chemical, or petroleum exposure; altered sweating; or apocrine gland dysfunction. For one or any combination of these conditions, the whole body disability is:

- (1) If the sensitivity affects less than 5 percent of the body surface area, 0 percent.
- (2) If the sensitivity affects 5 to 20 percent of the body surface area, 2 percent.
- (3) If the sensitivity affects 20 percent or more of the body surface area, 3 percent.

F. Sensory loss due to burns:

(1) Loss of sensation on palmar surface of hands shall be rated as provided by part 5223.0090, subpart 3.

- (2) Sensory loss in less than 5 percent of the body surface area, 0 percent.
- (3) Sensory loss in 5 to 20 percent of the body surface area, 2 percent.
- (4) Sensory loss in more than 20 percent of the body surface area, 5 percent.

**Subp. 3. Electrical conduction injuries.**

A. Associated sensory loss and concomitant thermal injuries must be rated as provided in subpart 1.

B. Peripheral nerve deficits must be rated as provided in the musculoskeletal schedule.

The ratings under items A and B must be combined in the manner set forth at Minnesota Statutes, section 176.105, subdivision 4, paragraph (c).

**Subp. 4. Cosmetic disfigurement.** This part applies to disfigurement on the face, the head, the neck, or the hands due to burns. Where there is surgery, this rating is done after correction by plastic surgery. The final rating under this schedule shall not be done until hypertrophic scarring is matured or more than 24 months after the injury. The ratings under the items of this part must be combined in the manner set forth at Minnesota Statutes, section 176.105, subdivision 4, paragraph (c).

A. The face is the anterior head from the forehead, to and including the chin.

(1) Loss of facial features:

- (a) Deformity of nasal tip or deformity, thinning, or eversion of ala nasi, 5 percent.
- (b) Loss of more than 50 percent of nasal cartilage or of both ala nasi, 25 percent.

(2) Eyes:

- (a) Loss of one eyebrow, 2.5 percent.
- (b) Loss of two eyebrows, 5 percent.
- (c) Ectropion unaccompanied by visual impairment:

i. Lower lid pulled from eye when mouth is opened and neck extended, 5 percent.

ii. Lower lid pulled away with no movement of face or neck, 10 percent.

iii. Cornea unprotected when sleeping, 15 percent.

(d) Epiphora unaccompanied by visual impairment, 10 percent.

(3) Mouth. A rating under this subitem is the arithmetic sum of units (a) to (d).

- percent.
- (a) Noncongenital microstomia or distortion affecting eating and dental hygiene, 10 percent.
  - (b) Eversion of the upper lip, 7.5 percent.
  - (c) Eversion of the lower lip, 7.5 percent.
  - (d) Distortion of vermillion border, 10 percent.
- (4) Ear. Loss of 75 percent or more of one external ear, 5 percent.
- (5) Hypertrophic scarring of face in areas other than those covered in subitems (1) to (4):
- (a) Affecting only forehead above the eyebrows, 10 percent.
  - (b) Affecting the lower face from eyebrows to chin, 25 percent.
  - (c) Affecting both the forehead above the eyebrows and the lower face from the eyebrows to chin, 35 percent.
- (6) Wrinkling of face in areas other than those covered in subitems (1) to (5), one-third of percentages in subitem (5).

B. Head, Alopecia:

- (1) Anterior hairline:
  - (a) Loss of less than 20 percent of hair on anterior hairline, 0 percent.
  - (b) Loss of 20 to 50 percent of hair on anterior hairline, 2 percent.
  - (c) Loss of more than 50 percent of hair on anterior hairline, 3 percent.
- (2) Elsewhere on head and not affecting anterior hairline:
  - (a) Loss of 0 to 15 percent of hair, 0 percent.
  - (b) Loss of 15 to 30 percent of hair, 1 percent.
  - (c) Loss of 20 to 50 percent of hair, 2 percent.
  - (d) Loss of more than 50 percent of hair, 3 percent.

The ratings under subitems (1) and (2) must be combined as set forth in Minnesota Statutes, section 176.105, subdivision 4, paragraph (c).

C. The anterior neck extends from the ear lobule anteriorly to the ear lobule and downward to mid clavicle. Disfigurement on the posterior neck from the ear lobule posteriorly to the ear lobule shall not be rated under this rule. Ratings under subitems (1) and (2) shall be combined as set forth in Minnesota Statutes, section 176.105, subdivision 4, paragraph (c).

- (1) Hypertrophic scarring or banding:
  - (a) Affecting less than 10 percent of the anterior neck, 0 percent.
  - (b) Affecting 10 to 30 percent of the anterior neck, 10 percent.
  - (c) Affecting 30 to 50 percent of the anterior neck, 12 percent.
  - (d) Affecting more than 50 percent of the anterior neck, 15 percent.
- (2) The chin shelf is the area from the chin backwards to the neck.
  - (a) Chin shelf extends less than 2 inches, 3 percent.



(b) Chin shelf extends less than 1 inch, 10 percent.

D. The hand extends from the carpus outward. Loss of body parts and loss of motion are rated in the musculoskeletal schedule.

- (1) Hypertrophic scarring affecting less than 30 percent of dorsum of one hand, 0 percent.
- (2) Hypertrophic scarring affecting 30 to 50 percent of dorsum of one hand, 3 percent.
- (3) Hypertrophic scarring affecting 50 percent or more of dorsum of one hand, 7 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

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### **5223.0250 PREEXISTING IMPAIRMENTS.**

Where a disability is subject to apportionment under Minnesota Statutes, section 176.101, subdivision 4a, the rating for the disabled condition under a category of the schedules of this chapter must be reduced as provided in this part. As used in this part, the term disabled condition includes the preexisting disability.

A. This part applies where the preexisting disability has not been rated and neither item B nor C is applicable.

- (1) The preexisting disability must be rated under a category of the schedules of this chapter.
- (2) The whole body disability rating assigned to the disabled condition of the member by the schedules of this chapter must be reduced by the rating assigned to the preexisting disability of the member in subitem (1).

(3) For example, the medical report establishes a preexisting impairment of amputation of the index finger at the metacarpophalangeal joint. This injury is a 13.5 percent preexisting disability to the body as a whole under part 5223.0080, subpart 1, item L, subitem (1). The disabled condition is amputation of all fingers except the thumb at the metacarpophalangeal joint, a 32.5 percent disability under part 5223.0080, subpart 1, item J, 32.5 percent less 13.5 percent gives the disability (adjusted for the preexisting impairment) of 19 percent. Payment is made for the 19 percent disability at the rate appropriate for a 32.5 percent disability. Thus, if economic recovery benefits are paid, 19 percent is multiplied by 680 weeks; for impairment benefits, 19 percent is multiplied by \$85,000.

B. This item applies where the preexisting disability of a member has been rated in another proceeding or state and the rating represents a percentage of disability to the whole body. The rating of the disabled condition under a category of these schedules shall be reduced by the rating assigned to the preexisting disability of the member.

C. This item applies where the injury producing the preexisting disability occurred prior to January 1, 1984, and the preexisting disability has been rated under Minnesota Statutes, section 176.101, subdivision 3; or where Minnesota Statutes, chapter 176 is inapplicable and the rating represents a percentage of disability of a member.

- (1) From Table 1, determine the maximum whole body disability assignable to the preexisting disability. Use Table 2 where disability to an internal organ is rated as a percentage of disability to the particular organ rather than a percentage of disability to internal organs. Where the preexisting

disability is not listed in Table 1 or Table 2, the maximum whole body disability is the maximum disability assigned to the affected member by the schedules of this chapter.

**Table 1**

<b>Member</b>	<b>Maximum Whole Body Disability (Percent)</b>
Thumb	16
Index finger	11
Middle finger	9
Ring finger	4
Little finger	2
Great toe	5
Lesser toe	1
Hand	54
Hand and wrist	54
Arm	60
Foot	21
Foot and ankle	28
Leg	40
Eye	24
Eyes (both)	85
Hearing loss, (one ear)	6
Hearing loss (both ears)	35
Back	71
Voice	70
Burns and skin impairments, including disfigurement	70
Internal organs, excluding brain	85
Brain	100
Head	20

**Table 2**

<b>Member</b>	<b>Maximum Whole Body Disability (Percent)</b>
Stomach	65
Pancreas	65
Colon	50
Spleen	0
Bladder	30
Sexual organs or function	20
Circulatory system	90
Heart	85
Lungs	85
Liver	75
Solitary kidney	10
Kidney, excluding solitary kidney	77

(2) Multiply the prior rating of the member's preexisting disability by the maximum whole body disability determined in subitem (1). Where a disputed rating has been closed out to a stipulated rating but payments were made on a different rating, the rating for purposes of this part is the closed-out rating.

(3) Subtract the percentage amount determined in subitem (2) from the whole body disability rating assigned to the disabled condition of the member by the schedules of this chapter. The remainder is the amount due for the disabled condition after apportionment for the preexisting disability.

(4) For example, a pre-1984 back injury was rated at 25 percent of the back. The whole body disability attributable to this injury is 25 percent by 71 percent equals 17.75 percent. After 1984, a second back injury is rated at 24.5 percent under this chapter (24.5 percent minus 17.75 percent equals 6.75 percent). Six and three-fourths (6.75) percent is the amount assigned to the disabled condition after apportionment.

D. Where both Minnesota Statutes, sections 176.101, subdivision 4a, and 176.105, subdivision 4, paragraph (c) apply, apportionment must be determined as follows:

(1) For each member, determine the percentage of whole body disability under items A to C, as appropriate.

(2) Combine the percentages obtained in subitem (1) in the manner set forth in Minnesota Statutes, section 176.105, subdivision 4, paragraph (c). Prior to the next application of the formula, the result of an application of the formula must be stated as a decimal, not as a percentage, that is rounded up or down to four decimal places.

**Statutory Authority:** *MS s 176.105*

**History:** *10 SR 1124*

**Published Electronically:** *August 16, 2010*

**DATES OF INJURY ON OR AFTER JULY 1, 1993****5223.0300 WORKERS' COMPENSATION PERMANENT PARTIAL DISABILITY SCHEDULES.**

Subpart 1. **Purpose of schedules.** Minnesota Statutes, section 176.105, subdivision 4, requires the commissioner of labor and industry to adopt rules assigning specific percentages of disability of the whole body for specific permanent partial impairments. Parts 5223.0300 to 5223.0650 assign percentages of disability of the whole body for permanent partial impairment.

Subp. 2. **Applicability.** Unless otherwise specified, parts 5223.0300 to 5223.0650 apply to dates of injury on or after July 1, 1993.

Subp. 3. **Interpretation of schedules.** In applying these schedules, the rules of construction in items A to H apply.

A. Only the categories in the schedules in parts 5223.0300 to 5223.0650 may be used when rating the extent of impairment. If a category applicable to the impairing condition cannot be found in parts 5223.0300 to 5223.0650, then the category most closely resembling the impairment or the percentage of permanent partial disability based on analogy shall be chosen.

B. If a category represents the impairing condition, the disability determination shall not be based on the cumulation of lesser included categories.

C. If more than one category may apply to a condition, the category most closely representing the condition shall be selected.

D. If more than one category is necessary to represent all of the mutually exclusive impairing conditions resulting from an injury, categories shall be selected to avoid double compensation for any part of a condition.

E. The percentages of disability to the whole body as provided in two or more categories shall not be averaged, prorated, or otherwise deviated from, unless specifically provided in the schedule. Unless provided otherwise, if an impairment must be rated under more than one category, the ratings must be combined using the  $A + B(1 - A)$  formula set forth in Minnesota Statutes, section 176.105, subdivision 4, paragraph (f), where A is the rating with the largest percentage and B is the rating with the next largest percentage. If there are more than two impairments, the combination of the largest and next largest percentages becomes the new A and the third largest percentage becomes the new B. This process is continued interactively until all percentages are combined.

F. In certain situations as specifically noted elsewhere in these schedules, the percentages of disability must be added ( $A + B$ ) rather than combined. These summed percentages may then be combined or added with other percentages as appropriate.

G. With respect to the musculoskeletal schedule, the percent of whole body disability for motor or sensory loss of a member shall not exceed the percent of whole body disability for amputation of that member.

H. A category not found within parts 5223.0300 to 5223.0650 shall not be used to determine permanent partial disability.

Subp. 4. **Incorporations by reference.** The technical terms in parts 5223.0300 to 5223.0650 are defined either in part 5223.0310 or by the documents incorporated by reference in parts 5223.0300 to 5223.0650. Documents are incorporated by reference only to the extent necessary for definition or to the

extent specifically referenced in a schedule. The documents incorporated by reference are not subject to frequent change, although new editions occasionally may be published. These documents are common medical references and are conveniently available to the public at the University of Minnesota, Biomedical Library and are accessible through the Minitex interlibrary loan system. These documents are as follows:

A. "Adult Normal for the Nine Hole Peg Test of Finger Dexterity," V. Mathiowetz et al. The Occupational Therapy Journal of Research, volume 5, pp. 24-38 (1985).

B. Guides to the Evaluation of Permanent Impairment, published by the American Medical Association, Committee on Rating of Mental and Physical Impairment, 3rd edition, 1988. This document is also referred to as the A.M.A. Guides.

C. S3.1-1977 Criteria for Permissible Ambient Noise during Audiometric Testing, published by the American National Standards Institute, Inc., 1973.

D. S3.6-1969 (R1973) Specification for Audiometers, published by the American National Standards Institute, Inc., 1977.

E. Metropolitan Life Insurance Company Height and Weight Tables, published by the Metropolitan Life Insurance Company, 1983, and reproduced in the A.M.A. Guides, 3rd edition, page 178.

F. F. F. Plum and J. B. Posner, Diagnosis of Stupor and Coma, 2nd edition, published by F. A. Davis, Philadelphia, 1972.

G. Dorland's Illustrated Medical Dictionary, 27th edition, published by W. B. Saunders Company, 1988. This document is also referred to as Dorland's.

H. D.S.M. III, Diagnostic and Statistical Manual of Mental Disorders, published by American Psychiatric Association, 1980. This document is also referred to as D.S.M. III.

I. Fractures, 2nd edition, Charles A. Rockwood and David Green, published by Lippencott, 1984.

J. Textbook on Anatomy, William Henry Hollinshead, published by Harper & Row, 1985.

K. "The Estimation of Areas of Burns," in Surgery, Gynecology and Obstetrics, by Lund and Browder, pages 352-358, volume 79, published by Surgical Publishing Company of Chicago, 1944. This document is also referred to as Lund and Browder.

L. Stedman's Medical Dictionary, 25th edition, published by Williams and Wilkins, 1990. This document is also referred to as Stedman's.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

**Published Electronically:** *December 19, 2014*

## **5223.0310 DEFINITIONS.**

Subpart 1. **Scope.** For the purpose of parts 5223.0300 to 5223.0650, the terms defined in this part have the meanings given them unless the context clearly indicates otherwise. Terms not defined in this part are defined in documents incorporated by reference. If the definition in a document incorporated by reference conflicts with or differs from the definition in parts 5223.0300 to 5223.0650, the specific definition in parts 5223.0300 to 5223.0650 shall govern.

Subp. 2. **Acromioclavicular grade 1.** "Acromioclavicular grade 1" means an undisplaced acromioclavicular joint.

Subp. 3. **Acromioclavicular grade 2.** "Acromioclavicular grade 2" means a 50 percent displacement of the clavicle in relationship to the acromion at the acromioclavicular joint as measured on standard X-ray view of the acromioclavicular joint in comparison to an uninjured contralateral acromioclavicular joint or in comparison to normative values.

Subp. 4. **Acromioclavicular grade 3.** "Acromioclavicular grade 3" means a completely disrupted acromioclavicular joint as measured on standard X-ray view of the acromioclavicular joint in comparison to an uninjured contralateral acromioclavicular joint or in comparison to normative values.

Subp. 5. **Activities of daily living.** "Activities of daily living" means the ability to perform all of the following:

- A. self cares: urinating, defecating, brushing teeth, combing hair, bathing, dressing oneself, and eating;
- B. communication: writing, seeing, hearing, and speaking;
- C. normal living postures: sitting, lying down, and standing;
- D. ambulation: walking and climbing stairs;
- E. travel: driving and riding;
- F. nonspecialized hand functions: grasping and tactile discrimination;
- G. sexual function: participating in usual sexual activity;
- H. sleep: ability to have restful sleep pattern; and
- I. social and recreational activities: ability to participate in group activities.

Subp. 6. **Adaptive equipment for ambulation.** "Adaptive equipment for ambulation" means a crutch, cane, walker, prosthesis, orthosis, or other medical device other than a wheelchair which allows an individual, who would otherwise be unable, to walk without assistance from another person.

Subp. 7. **Ankylosis.** "Ankylosis" means the abnormal immobility and consolidation of a joint.

Subp. 8. **ANSI.** "ANSI" means the American National Standards Institute.

Subp. 9. **Articulation.** "Articulation" means the enunciation of words.

Subp. 10. **Banding.** "Banding" means a thick, ropelike cord of hypertrophic scarring.

Subp. 11. **Cardiopulmonary exercise testing.** "Cardiopulmonary exercise testing" means a standardized, graduated exercise test performed according to a protocol, for the purpose of determining maximum exercise capacity expressed as VO<sub>2</sub> max.

Subp. 12. **Carpal instability.** "Carpal instability" means either an incompetence of the ligament support system of the wrist or a change in the joint contact surface configuration of the carpal bones such that there is abnormal alignment or movement of the proximal carpal row.

Subp. 13. **Category.** "Category" means a permanent partial impairment as described in parts 5223.0300 to 5223.0650 and the corresponding percent of disability to the whole body for that permanent partial impairment.

Subp. 14. **Chronic.** "Chronic" means the repeated or continuous occurrence of a specific condition or symptom.

Subp. 15. **Colostomy.** "Colostomy" means the surgical creation of a new opening of the colon on the surface of the body.

Subp. 16. **Coma.** "Coma" means a state of unconsciousness from which the individual cannot be aroused, even by powerful stimulation.

Subp. 17. **Contracture.** "Contracture" means a condition of fixed resistance to passive movement at a joint resulting from fibrosis of the soft tissues. A contracture is named by the direction in which the fibrosis draws the joint, that is, a joint drawn into flexion has a flexion contracture and there is a fixed resistance to passive extension.

Subp. 18. **DCO.** "DCO" means the diffusion capacity of carbon monoxide as measured by a test performed as described in the A.M.A. Guide, 3rd edition, pp. 112-113. The measurement is expressed as a percentage of the normal value. The normal values used are those listed in the A.M.A. Guide, 3rd edition, pp. 114-115, incorporated by reference in part 5223.0300, subpart 4, item B.

Subp. 19. **Delirium.** "Delirium" means a mental disturbance marked by illusions, hallucinations, delusions, cerebral excitement, physical restlessness, and incoherence, and having a comparatively short course.

Subp. 20. **Desirable level of weight.** "Desirable level of weight" means preferred weights in the tables created by the Metropolitan Life Insurance Company. For purposes of parts 5223.0300 to 5223.0650, the following are the minimums of the preferred weights (in pounds) for men and women of various heights and builds:

Height	Small Frame		Medium Frame		Large Frame	
	Male	Female	Male	Female	Male	Female
4' 10"		102		109		118
4' 11"		103		111		120
5'		104		113		122
5' 1"		106		115		125
5' 2"	128	108	131	118	138	128
5' 3"	130	111	133	121	140	131
5' 4"	132	114	135	124	142	134
5' 5"	134	117	137	127	144	137
5' 6"	136	120	139	130	146	140
5' 7"	138	123	142	133	149	143
5' 8"	140	126	145	136	152	146
5' 9"	142	129	148	139	155	149
5' 10"	144	132	151	142	158	152

5' 11"	146	135	154	145	161	155
6'	149	138	157	148	164	158
6' 1"	152		160		168	
6' 2"	155		164		172	
6' 3"	158		167		176	
6' 4"	162		171		181	

Subp. 21. **Disarticulation.** "Disarticulation" means an amputation occurring through a joint.

Subp. 22. **Distance vision.** "Distance vision" means the ability to distinguish letters at a distance of 20 feet according to any eye chart in which the 20/20 (6/6) letters subtend five minutes of arc.

Subp. 23. **Dysequilibrium.** "Dysequilibrium" means any derangement of proper balance.

Subp. 24. **Esophagostomy.** "Esophagostomy" means the creation of an artificial opening into the esophagus.

Subp. 25. **Executive functions.** "Executive functions" means such activities as managing a checkbook, entering into contracts, and making medium- and long-range financial plans.

Subp. 26. **Family member.** "Family member" means cohabitant and is not limited to those related by blood or marriage. In cases of institutionalization or similar nonhome environment, family member may include staff members who care for the individual on a regular basis.

Subp. 27. **FEV1.** "FEV1" means the forced expiratory volume in one second as measured by a spirometric test performed as described in the A.M.A. Guide, 3rd edition, pp. 111-112. The measurement used must be taken from the spirogram which is both technically acceptable and represents the best effort of the patient. The measurement is expressed as a percentage of the normal value. The normal values used are those listed in the A.M.A. Guide, 3rd edition, pp. 112-113, incorporated by reference in part 5223.0300, subpart 4, item B.

Subp. 28. **14/14 Snellen rating.** "14/14 Snellen rating" means a measurement of visual acuity for near vision. The numerator is the test distance in inches. The denominator is the distance at which the smallest letter on the test instrument can be seen.

Subp. 29. **Fusion.** "Fusion" means the operative formation of an ankylosis.

Subp. 30. **FVC.** "FVC" means the forced vital capacity as measured by a spirometric test performed as described in the A.M.A. Guide, 3rd edition, pp. 111-112. The measurement used must be taken from the spirogram which is both technically acceptable and represents the best effort of the patient. The measurement is expressed as a percentage of the normal value. The normal values used are those listed in the A.M.A. Guide, 3rd edition, pp. 110-111, incorporated by reference in part 5223.0300, subpart 4, item B.

Subp. 31. **Gastrostomy.** "Gastrostomy" means the creation of an artificial opening into the stomach.

Subp. 32. **Hypertrophic scar.** "Hypertrophic scar" means an elevated irregularly shaped mass of scar tissue.

Subp. 33. **Ileostomy.** "Ileostomy" means the creation of an artificial opening into the ileum.

Subp. 34. **Jejunostomy.** "Jejunostomy" means the creation of an artificial opening into the jejunum.



Subp. 35. **Lethargy.** "Lethargy" means in relation to an injury to the brain, that an individual is drowsy, but can be aroused.

Subp. 36. **Method of Lund and Browder.** "Method of Lund and Browder" means a method of estimating the body surface area of body parts as represented by the following values for adults:

Part	Surface Area (as a percentage of total body surface area)
Head	7
Neck	2
Anterior trunk	13
Posterior trunk	13
Right buttock	2.5
Left buttock	2.5
Genitals	1
Right upper arm	4
Left upper arm	4
Right lower arm (exclusive of hand)	3
Left lower arm (exclusive of hand)	3
Right hand	2.5
Left hand	2.5
Right thigh	9.5
Left thigh	9.5
Right leg (exclusive of foot)	7
Left leg (exclusive of foot)	7
Right foot	3.5
Left foot	3.5

Subp. 37. **Motility chart.** "Motility chart" means the chart of figure 3, p. 160 of the A.M.A. Guides, 3rd edition.

Subp. 38. **Near vision.** "Near vision" means the ability to read text or to distinguish letters at a distance of 14 inches as measured by any eye test for use at 14 inches and is measured using the appropriate optical correction for the 14-inch distance.

Subp. 39. **Nine hole peg test.** The "Nine hole peg test" is a commonly used, relatively inexpensive, and quickly administered measurement of finger dexterity as described in the "Adult Normal for the Nine Hole Peg Test of Finger Dexterity," incorporated by reference in part 5223.0300, subpart 4, item A.

Subp. 40. **Painful organic syndrome.** "Painful organic syndrome" means a musculoskeletal condition characterized by pain with use of the affected member which limits the voluntary active range of motion, without any limitation of forced passive range of motion, and attributed to a lesion in the soft tissues, that is, capsule, ligament, tendon, fascia, and muscle, and defined by a set of clinical findings.

Subp. 41. **Presbycusis.** "Presbycusis" means a decline in hearing acuity that occurs with the aging process.

Subp. 42. **Pseudophakia.** "Pseudophakia" means that the crystalline lens of the eye has been replaced with a surgically implanted lens.

Subp. 43. **Radicular pain.** "Radicular pain" means pain described as radiating distally into an extremity in the distribution of a nerve root.

Subp. 44. **Radicular paresthesia.** "Radicular paresthesia" means abnormal sensation, described as involving an extremity in the distribution of a nerve root.

Subp. 45. **Self cares.** "Self cares" means urinating, defecating, brushing teeth, combing hair, bathing, dressing oneself, and eating.

Subp. 46. **Speech intensity.** "Speech intensity" means the level of sound intensity of an individual's speech. Speech intensity determines the ability to be heard versus intelligibility which determines the ability to be understood.

Subp. 47. **Spinal stenosis.** "Spinal stenosis" means the narrowing of the spinal canal.

Subp. 48. **Spondylolisthesis.** "Spondylolisthesis" means the forward movement of one vertebral body on the vertebrae below it or upon the sacrum.

Subp. 49. **Spondylolisthesis grade 1.** "Spondylolisthesis grade 1" means forward movement from zero to 25 percent of the vertebral body as measured on standard X-ray view of the spine.

Subp. 50. **Spondylolisthesis grade 2.** "Spondylolisthesis grade 2" means forward movement from 25 to 50 percent of the vertebral body as measured on standard X-ray view of the spine.

Subp. 51. **Spondylolisthesis grade 3.** "Spondylolisthesis grade 3" means movement from 50 to 75 percent of the vertebral body as measured on standard X-ray view of the spine.

Subp. 52. **Spondylolisthesis grade 4.** "Spondylolisthesis grade 4" means forward movement from 75 to 100 percent of the vertebral body as measured on standard X-ray view of the spine.

Subp. 53. **Stupor.** "Stupor" means, in relation to a nervous system injury to the brain, that a strong stimulus or pain is needed to arouse consciousness or response.

Subp. 54. **Table for loss of central visual acuity.** "Table for loss of central visual acuity" means the table of Table 2, p. 155 of the A.M.A. Guides, 3rd edition.

Subp. 55. **Tandem gait.** "Tandem gait" means walking by placing one foot directly in front of the other in a heel-to-toe fashion.

Subp. 56. **Tinnitus.** "Tinnitus" means a subjective sense of noises in the head or ringing in the ear for which there is no observable external cause.

Subp. 57. **Trigeminal neuralgia.** "Trigeminal neuralgia" means paroxysmal pain extending along the course of the trigeminal nerve.

Subp. 58. **20/20 Snellen rating.** "20/20 Snellen rating" means a measurement of visual acuity for distance vision. The numerator is the test distance in feet. The denominator is the distance at which the smallest letter discriminated by a patient would subtend five minutes of arc.

Subp. 59. **Vertigo.** "Vertigo" means a sensation of moving around in space or having objects move about the person. It is the result of a disturbance of the equilibratory apparatus.

Subp. 60. **Visual field chart.** "Visual field chart" means the charts of figure 1, p. 156 of the A.M.A. Guides, 3rd edition.

Subp. 61. **VO<sub>2</sub> max.** "VO<sub>2</sub> max" means the maximum exercise capacity of an individual as measured by cardiopulmonary exercise testing and expressed as oxygen consumption in milliliters/(kilograms x minutes).

Subp. 62. **Wrinkling.** "Wrinkling" means small ridges on the skin formed by shrinking or contraction of the skin.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

**Published Electronically:** *October 3, 2013*

#### **5223.0315 PREEXISTING IMPAIRMENTS.**

This part may be used only for the rating of preexisting impairments for determining apportionment under Minnesota Statutes, section 176.101, subdivision 4a. Ratings of permanent partial disability under Minnesota Statutes, section 176.101, subdivisions 3a and 3b, shall be determined under parts 5223.0300 to 5223.0310 and 5223.0320 to 5223.0650. If an impairment is subject to apportionment under Minnesota Statutes, section 176.101, subdivision 4a, the rating for the impaired condition under a category of the schedules of parts 5223.0300 to 5223.0650 must be reduced as provided in this part. As used in this part, "impaired condition" includes the preexisting impairment.

A. This part applies where the preexisting impairment has not been rated and neither item B nor C is applicable.

(1) The preexisting impairment must be rated under a category of the schedules of parts 5223.0300 to 5223.0650.

(2) The whole body disability rating assigned to the impaired condition of the member by the schedules of parts 5223.0300 to 5223.0650 must be reduced by the rating assigned to the preexisting impairment of the member in subitem (1).

(3) For example, the medical report establishes a preexisting amputation of the great toe at the metatarsophalangeal joint. This condition is a five percent preexisting disability to the body as a whole under part 5223.0550, subpart 1, item K, subitem (2). The new work-related condition is an amputation of the rest of the toes of the same foot at the metatarsophalangeal joints, best rated at eight percent disability to the body as a whole under part 5223.0550, subpart 1, item J, which rates the disability for amputation of all toes at metatarsophalangeal joint. The disability rating of eight percent must therefore be adjusted for the preexisting condition, which is a lesser included category. This is done by subtracting five percent for the preexisting condition from eight percent for the overall condition. Payment is made for the resulting three percent disability rating at the rate appropriate for the overall disability rating of eight percent in this example.

B. This item applies if the preexisting impairment of a member has been rated in another proceeding or state and the rating represents a percentage of disability to the whole body. The rating of the impaired condition under a category of these schedules shall be reduced by the rating assigned to the preexisting impairment of the member.

C. This item applies if the injury producing the preexisting impairment occurred prior to January 1, 1984, and the preexisting impairment is governed by Minnesota Statutes, section 176.101, subdivision 3; or if Minnesota Statutes, chapter 176, is inapplicable, the rating represents a percentage of disability of a member, and the rating was made prior to the current injury.

(1) From Table 1, determine the maximum whole body disability assignable to the preexisting impairment. Use Table 2 if impairment to an internal organ is rated as a percentage of disability to the particular organ rather than a percentage of disability to the internal organs as a whole. If the preexisting impairment is not listed in Table 1 or Table 2, the maximum whole body disability is the maximum disability assigned to the affected member by the schedules of parts 5223.0300 to 5223.0650.

**Table 1**

<b>Member</b>	<b>Conversion Factor for Maximum Whole Body Disability (Percent)</b>
Thumb	16
Index finger	9
Middle finger	9
Ring finger	4
Little finger	4
Great toe	5
Lesser toe	1
Hand	54
Hand and wrist	54
Arm	60
Foot	21
Foot and ankle	26
Leg	40
Eye	24
Eyes (both)	85
Hearing loss (one ear)	6
Hearing loss (both ears)	35
Back	71
Voice	70

Burns and skin impairments, including disfigurement	70
Internal organs, excluding brain	85
Brain	100
Head	20

**Table 2**

<b>Member</b>	<b>Conversion Factor for Maximum Whole Body Disability (Percent)</b>
Stomach	65
Pancreas	65
Colon	50
Spleen	0
Bladder	30
Sexual organs or function	20
Circulatory system	90
Heart	85
Lungs	85
Liver	75
Solitary kidney	10
Kidney, excluding solitary kidney	77

(2) Multiply the prior rating of the member's preexisting impairment by the maximum whole body disability determined in subitem (1). If a disputed rating has been closed out to a stipulated rating but payments were made on a different rating, the rating for purposes of this part is the closed-out rating.

(3) Subtract the percentage amount determined in subitem (2) from the whole body disability rating assigned to the impaired condition of the member by the schedules of parts 5223.0300 to 5223.0650. The remainder is the amount due for the impaired condition after apportionment for the preexisting impairment.

(4) For example, a pre-1984 back injury was rated at 25 percent of the back. The whole body disability attributable to this injury is 25 percent multiplied by 71 percent, which equals 17.75 percent. After 1984, a second back injury is rated at 24.5 percent under parts 5223.0300 to 5223.0650 (24.5 percent minus 17.75 percent equals 6.75 percent). Six and three-fourths (6.75) percent is the amount assigned to the impaired condition after apportionment.

D. If Minnesota Statutes, sections 176.101, subdivision 4a, and 176.105, subdivision 4, paragraph (c), apply, apportionment must be determined according to subitems (1) and (2).

(1) For each impairing condition, determine the percentage of whole body disability under items A to C, as appropriate.

(2) Combine the percentages obtained in subitem (1) as described in part 5223.0300, subpart 3, item E. Before the next application of the formula, the result of an application of the formula must be stated as a decimal, not as a percentage, that is rounded up or down to four decimal places.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364*

**Published Electronically:** *August 16, 2010*

### **5223.0320 FACE, NOSE, MOUTH, OR THROAT.**

Subpart 1. **General.** For permanent partial impairment to the face, nose, mouth, or throat other than for cosmetic disfigurement, disability of the whole body is as provided in subparts 2 to 4. Permanent partial impairment due to cosmetic disfigurement is as provided in part 5223.0650 and may be combined with ratings under this part as described in part 5223.0300, subpart 3, item E.

Subp. 2. **Chewing or swallowing.** Signs or symptoms of organic disease of the face, nose, mouth, or throat are present or there is an objectively demonstrated neurological lesion of a type known to interfere with chewing or swallowing; and, in the case of organic disease of the face, nose, mouth, or throat, there is anatomic loss or alteration; and signs or symptoms have persisted despite treatment.

- A. Restricted to mechanical soft diet, ten percent.
- B. Diet restricted to liquids, 25 percent.
- C. Diet by tube feeding or gastrostomy, 50 percent.

Subp. 3. **Articulation.** Signs or symptoms of organic disease of the face, nose, mouth, or throat are present or there is an objectively demonstrated neurological lesion of a type known to interfere with articulation, as defined in part 5223.0310, subpart 9; and, in the case of organic disease of the face, nose, mouth, or throat, there is anatomic loss or alteration, and signs or symptoms have persisted despite treatment.

A. Speech intensity, as defined in part 5223.0310, subpart 46, is sufficient and 95 percent or more of words, that is, nearly all words, are understood by persons who are not family members, but speech is distorted, three percent.

B. Speech intensity can be sustained but is insufficient in noisy environments, or 95 percent or more of words, that is, nearly all words, are understood by family members, as defined in part 5223.0310, subpart 26, but strangers have difficulty understanding anything but basic communications, that is, name, address, or rote information, ten percent.

C. Speech intensity cannot be sustained for more than a few seconds and 95 percent or more of words, that is, nearly all words, are understood by family members though strangers have difficulty understanding anything but basic communications, 15 percent.

D. Speech is understood by family members only, 20 percent.

E. Can produce only a barely heard whisper; or unintelligible except for basic communication with family members, 25 percent.

F. Completely inaudible or completely unintelligible, 35 percent.

Subp. 4. **Upper respiratory tract.** Signs or symptoms of upper respiratory tract obstruction are present, and there is anatomical loss or alteration of nares, nasal cavities, sinuses, eustachian tubes, mouth, pharynx, larynx, upper trachea to fourth ring, or lower trachea to bifurcation, and signs or symptoms have persisted despite treatment.

A. Incomplete or unilateral obstruction of the upper respiratory tract, including, but not limited to, chronic mastoiditis, chronic rhinitis, chronic sinusitis, or chronic eustachian tube defects, two percent.

B. Complete bilateral obstruction of the nose or nasopharynx, five percent.

C. Other disorders, the rating is as provided in part 5223.0560.

Subp. 5. **Temporomandibular joint.** Impairment of the temporomandibular joint is ratable only under subparts 2 and 3 and part 5223.0650, subpart 2.

Subp. 6. **Jaw and facial bones.** Impairment of the jaw and facial bones is ratable only under subparts 2, 3, and 4 and parts 5223.0330 and 5223.0650, subpart 2.

Subp. 7. **Complete loss of teeth.** Ratings under this subpart are not combinable with any other subpart under this part. Ratings under this part may not exceed a total of ten percent whole body impairment.

A. Upper incisors, one percent each.

B. All other teeth, 0.5 percent each.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364*

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## **5223.0330 EYE.**

Subpart 1. **General.** For permanent partial impairment to vision from any cause, disability of the whole body is as provided in subparts 2 and 3. Permanent partial disability due to cosmetic disfigurement is as provided in part 5223.0650 and may be combined with ratings under this part as described in part 5223.0300, subpart 3, item E. Permanent partial disability due to impairment of the jaw and facial bones is as provided in part 5223.0320, subpart 6, and may be combined with ratings under this part as described in part 5223.0300, subpart 3, item E.

Subp. 2. **Complete loss of vision.**

A. Complete loss of vision in both eyes, 85 percent.

B. Complete loss of vision in one eye:

(1) if vision in the other eye is completely normal in regard to acuity, motility, and visual field, 24 percent; or

(2) if vision in the other eye is not completely normal, rate as provided in subpart 3.

C. Enucleation:

(1) unilateral:

(a) if vision in the other eye is completely normal in regard to acuity, motility, and visual field, 24 percent; or

(b) if vision in the other eye is not completely normal, rate as provided in subpart 3;

(2) bilateral, 85 percent.

D. In all other cases of loss of vision, the rating is as provided in subpart 3.

**Subp. 3. Incomplete loss of vision.**

A. Disability shall not be determined until all medically acceptable attempts to correct the defect have been made. Before the final examination on which disability must be determined, at least six months shall elapse after all visible inflammation has disappeared. In cases of disturbance of extrinsic ocular muscles, optic nerve atrophy, injury of the retina, sympathetic ophthalmia, and traumatic cataract, at least 12 months shall elapse before the final examination is made. Testing shall be conducted with corrective lenses applied, unless indicated otherwise in this part.

B. The primary coordinate factors of vision are central visual acuity, visual field efficiency, and ocular motility.

(1) The maximum limit for each coordinate function is established in units (a) to (c).

(a) The maximum limit of central visual acuity is the ability to recognize letters or characters which subtend an angle of five minutes, each unit part of which subtends a one-minute angle at the distance viewed. A 20/20 Snellen rating is 100 percent maximum central visual acuity for distance vision. A 14/14 Snellen rating is 100 percent maximum central visual acuity for near vision, as defined in part 5223.0310, subpart 38.

(b) The maximum visual field is 500 degrees. It is the sum of the degrees in the eight principal meridians from the point of fixation to the outermost limits of visual perception. One hundred percent visual field efficiency is the visual field that extends from the point of fixation 85 degrees temporally, 85 degrees down temporally, 65 degrees direct down, 50 degrees down nasally, 60 degrees nasally, 55 degrees up nasally, 45 degrees direct up, and 55 degrees up temporally.

(c) Maximum ocular motility is present if there is absence of diplopia in all parts of the field of binocular fixation, and if normal binocular motor coordination is present.

(2) The minimum limit for each coordinate function is established in units (a) to (c).

(a) The minimum limit of central visual acuity is a 20/800 Snellen rating for distance vision and a 14/140 Snellen rating for near vision.

(b) The minimum limit for field vision is established as a concentric central contraction of the visual field to five degrees.

(c) The minimum limit for ocular motility is established by the presence of diplopia in all parts of the field of binocular fixation or by absence of binocular motor coordination.

C. The measurement of the coordinate factors of vision shall be performed as specified in subitems (1) to (3).

(1) Central visual acuity shall be measured in a 20/20 Snellen rating for distance vision and a 14/14 Snellen rating for near vision, with each eye being measured separately, with correction. Test illumination shall be at least five foot-candles.

(a) Using the corrected near vision and the corrected far vision for an eye, refer to the table for loss of central vision, as defined in part 5223.0310, subpart 54, and locate the appropriate percentage of loss using the upper figure of the two provided. This is the percentage loss of central vision for that eye.



(b) In cases with aphakia, or pseudophakia as defined in part 5223.0310, subpart 42, proceed as in unit (a), but use the lower figure of the two provided in the table. This is the percentage loss of central vision corrected for aphakia or pseudophakia for that eye.

(2) For each eye, the extent of the field of vision shall be determined by perimetric test methods. The result shall be plotted on the visual field chart as defined in part 5223.0310, subpart 60.

(a) The amount of radial contraction in the eight principal meridians shall be determined. The sum of the degrees of field vision lost on these meridians, divided by 500, is the visual field loss of one eye, expressed as a percentage. If the eye has a concentric central contraction of the field to a diameter of five degrees, the visual loss is 100 percent.

(b) If the impairment of field is irregular and not fairly disclosed by the eight radii, the determination shall be based on a number of radii greater than eight and the divisor in unit (a) shall be changed accordingly.

(c) If there is a loss of a quadrant or a half-field, the degrees of field vision lost in each included meridian are added to one-half the sum of the two boundary meridians.

(3) Ocular motility shall be measured in all parts of the motor field with any useful correction applied.

(a) All directions of gaze shall be tested with use of a test light and without the addition of colored lenses or correcting prisms. The extent of diplopia is determined on the perimeter at 330 millimeters or on a tangent screen at a distance of one meter from the eye.

(b) Plot the test results on a motility chart, as defined in part 5223.0310, subpart 37.

(c) Determine the percentage loss of ocular motility from the motility chart by adding the percentages for loss of ocular motility due to diplopia in the meridian of maximum impairment on the motility charts. This percentage is assigned to the injured eye or, if both eyes are injured, to the eye with the greatest impairment of central visual acuity and field vision. The eye with the greatest impairment means the eye for which the loss of central vision and visual field is the greatest. For the purpose of calculation, a value of zero percent is deemed to be one percent. For the other eye, the percentage loss of ocular motility is zero.

D. The visual impairment of one eye is the combination of the percentage losses of central vision acuity, visual field, and ocular motility as described in part 5223.0300, subpart 3, item E. This combination is calculated by combining the loss of vision and the loss of visual field for each eye. The combined loss for the eye with the larger combined loss is combined with the loss of ocular motility.

Impairment of the eye shall be increased by adding two percent for each of the following conditions which are present due to the injury:

- (1) loss of color vision;
- (2) loss of adaptation to light and dark;
- (3) metamorphopsia;
- (4) entropion or ectropion uncorrected by surgery;
- (5) lagophthalmos;
- (6) epiphora;
- (7) muscle disturbances such as ocular tics not included under diplopia;

(8) for dates of injury on or after August 9, 2010, corneal transplant.

E. The procedure for determining whole body disability due to vision loss is described in subitems (1) to (5). The better eye has the lower percentage impairment. The poorer eye has the greater percentage impairment.

(1) Multiply the percentage impairment of the better eye by three.

(2) Add the percentage impairment of the poorer eye to the product obtained in subitem (1).

(3) Divide the sum obtained in subitem (2) by four.

(4) The quotient obtained in subitem (3) is the percentage impairment of the visual system. Fractions shall be rounded to the nearest whole number percentage by rounding up from the midpoint and rounding down from below the midpoint.

(5) The percentage impairment of the visual system is translated to the percentage disability of the whole body by Table 3.

Table 3

Eye Schedule

Impairment of Visual System, Percent	Disability of Whole Body, Percent	Impairment of Visual System, Percent	Disability of Whole Body, Percent
0	0	45	42
1	1	46	43
2	2	47	44
3	3	48	45
4	4	49	46
5	5	50	47
6	6	51	48
7	7	52	49
8	8	53	50
9	8	54	51
10	9	55	52
11	10	56	53
12	11	57	54
13	12	58	55
14	13	59	56
15	14	60	57
16	15	61	58

17	16	62	59
18	17	63	59
19	18	64	60
20	19	65	61
21	20	66	62
22	21	67	63
23	22	68	64
24	23	69	65
25	24	70	66
26	25	71	67
27	25	72	68
28	26	73	69
29	27	74	70
30	28	75	71
31	29	76	72
32	30	77	73
33	31	78	74
34	32	79	75
35	33	80	76
36	34	81	76
37	35	82	77
38	36	83	78
39	37	84	79
40	38	85	80
41	39	86	81
42	40	87	82
43	41	88	83
44	42	89	84
		90-100	85

Subp. 4. **Extraocular muscle.** Impairment of extraocular muscle is ratable only under subpart 3.

Subp. 5. **Ocular adnexa.** Impairment of the eyelid, eyelashes, conjunctiva, lacrimal duct, or lacrimal gland are ratable only under subpart 3 or part 5223.0650, subpart 2.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

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#### **5223.0340 EAR.**

Subpart 1. **General.** For permanent partial impairment to hearing, disability to the whole body is as provided in subparts 2 to 8. For hearing loss, the maximum disability of the whole body is 35 percent. Permanent partial impairment due to cosmetic disfigurement is rated as provided in part 5223.0650 and may be combined with ratings under this part as described in part 5223.0300, subpart 3, item E. Permanent partial impairment due to impairment of vestibular function is rated as provided in part 5223.0360, subpart 5, and may be combined with ratings under this part.

Subp. 2. **Standards for audiometric calibration and test environment.** To ensure accurate measurement of hearing loss, the standards in items A and B shall be observed in conducting the audiological evaluation required in subpart 4.

A. The audiometer used to measure hearing loss shall be calibrated to meet the specifications of ANSI, S3.6-1969 (R 1973), Specifications for Audiometers, as incorporated by reference in part 5223.0300, subpart 4, item D. The following are also required:

(1) biological or electroacoustical calibration checks of the audiometer shall be performed monthly;

(2) electroacoustical calibration shall be performed annually to certify the audiometer to the ANSI standard in this item; and

(3) the calibration records shall be preserved and shall be provided upon request.

B. Audiometric test rooms or booths shall meet the specifications of ANSI S3.1-1977, Criteria for Permissible Ambient Noise during Audiometric Testing, as incorporated by reference in part 5223.0300, subpart 4, item C.

Subp. 3. **Waiting period for final evaluation of hearing loss.** A waiting period of at least three months shall elapse between the date of the occurrence of the noise injury and the final evaluation of the permanent partial hearing loss.

Subp. 4. **Procedure for determining binaural hearing loss.** The calculation for the percent of binaural hearing loss is done with the worksheet provided in subpart 5 and consists of the steps in items A to F.

A. For each ear, test the hearing threshold levels at the four frequencies of 500, 1,000, 2,000, and 3,000 Hertz as determined by pure tone air conduction testing.

B. For each ear, determine the average four-frequency hearing level. The average four-frequency hearing level is one-fourth of the sum of the threshold levels at each of the four tested frequencies. The average four-frequency hearing level is expressed in decibels.

C. For each ear, subtract 25 decibels from the average four-frequency hearing level for that ear. The remainder, expressed in decibels, is the adjusted average four-frequency hearing level.

D. For each ear, multiply the adjusted average four-frequency hearing level by 1.5. The product is the monaural hearing loss, expressed as a percentage. A product less than zero percent is deemed to be zero. A product greater than 100 percent is deemed to be 100 percent.

E. Considering both ears, compare the monaural hearing losses as determined in item D. The ear with the smaller monaural hearing loss is the better ear. The ear with the larger monaural hearing loss is the poorer ear.

F. Multiply the monaural hearing loss of the better ear by five, add this product to the monaural hearing loss of the poorer ear, and divide the sum by six. The quotient is the binaural hearing loss, expressed as a percentage. The formula is:

$$\frac{\begin{array}{l} (5 \times \text{monaural hearing loss} \\ \text{of better ear}) \end{array} + \begin{array}{l} (\text{monaural hearing loss of} \\ \text{poorer ear}) \end{array}}{6} = \text{percent binaural hearing loss}$$

**Subp. 5. Worksheet for calculating percent of binaural hearing loss.**

Left Ear		Right Ear	
Hertz	Threshold	Hertz	Threshold
500	A. _____	500	A. _____
1,000	B. _____	1,000	B. _____
2,000	C. _____	2,000	C. _____
3,000	D. _____	3,000	D. _____
(A + B + C + D) ÷ 4 =	E. _____	(A + B + C + D) ÷ 4 =	E. _____
E - 25 = (if < 0 use 0)	F. _____	E - 25 = (if < 0 use 0)	F. _____
F x 1.5 =	G. _____	F x 1.5 =	G. _____

Make G(1) the lesser  
of the two G's

Make G(2) the greater  
of the two G's

[[G(1) x 5] + G(2)] ÷ 6 = H. \_\_\_\_\_ (binaural hearing loss)

H converts to whole body impairment as provided in subpart 6

**Subp. 6. Procedure for determining disability due to binaural hearing loss.** The binaural hearing loss is translated to a percentage of disability of the whole body by the ear schedule in this subpart.

Ear Schedule

Binaural Hearing Loss, Percent	Whole Body Disability, Percent
0.0 - 1.7	0
1.8 - 4.2	1
4.3 - 7.4	2
7.5 - 9.9	3
10.0 - 13.1	4
13.2 - 15.9	5
16.0 - 18.8	6
18.9 - 21.4	7
21.5 - 24.5	8
24.6 - 27.1	9
27.2 - 30.0	10
30.1 - 32.8	11
32.9 - 35.9	12
36.0 - 38.5	13
38.6 - 41.7	14
41.8 - 44.2	15
44.3 - 47.4	16
47.5 - 49.9	17
50.0 - 53.1	18
53.2 - 55.7	19
55.8 - 58.8	20
58.9 - 61.4	21
61.5 - 64.4	22
64.6 - 67.1	23
67.2 - 70.0	24
70.1 - 72.8	25
72.9 - 75.9	26
76.0 - 78.5	27
78.6 - 81.7	28
81.8 - 84.2	29
84.3 - 87.4	30

87.5 - 89.9	31
90.0 - 93.1	32
93.2 - 95.7	33
95.8 - 98.8	34
98.9 - 100.0	35

Subp. 7. **Presbycusis.** The calculation of the binaural hearing loss shall not include an additional adjustment for presbycusis.

Subp. 8. **Tinnitus.** No additional percentage of permanent partial impairment for hearing loss shall be allowed for tinnitus, as defined in part 5223.0310, subpart 56.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364*

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### 5223.0350 SKULL DEFECTS.

Subpart 1. **General.** For permanent partial impairment to the skull, disability of the whole body is as provided in subparts 2 and 3. Associated central nervous system deficits must be rated as provided in part 5223.0360 and may be combined with ratings under this part as described in part 5223.0300, subpart 3, item E.

#### Subp. 2. **Skull depressions.**

A. Unfilled skull defects are rated according to their surface area, rounded to the nearest square centimeter by rounding up from the midpoint and rounding down from below the midpoint:

- (1) up to five square centimeters, one percent;
- (2) six to ten square centimeters, three percent;
- (3) 11 to 16 square centimeters, five percent;
- (4) 17 to 26 square centimeters, ten percent;
- (5) 27 to 42 square centimeters, 15 percent;
- (6) 43 or more square centimeters, 20 percent.

B. Filled skull defects are rated at zero percent. If there is a cosmetic deformity, the rating is as provided in part 5223.0650.

Subp. 3. **Skull fractures.** For a fracture which deforms the face, the rating is as provided in part 5223.0650, subpart 2.

A. Basilar skull fracture without cerebrospinal fluid leak, zero percent.

B. Other fractures of the skull, zero percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364*

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**5223.0360 CENTRAL NERVOUS SYSTEM.**

Subpart 1. **General.** For permanent partial impairment of the central nervous system the percentage of disability of the whole body is as provided in subparts 2 to 7.

Subp. 2. **Trigeminal nerve.** For permanent partial impairment of the trigeminal nerve, the percent of disability is provided in items A to J:

- A. partial unilateral sensory loss, three percent;
- B. complete unilateral sensory loss, ten percent;
- C. partial bilateral sensory loss, ten percent;
- D. complete bilateral sensory loss, 25 percent;
- E. intractable trigeminal neuralgia, as defined in part 5223.0310, subpart 57, 20 percent;
- F. atypical facial neuralgia, five percent;
- G. partial unilateral motor loss:
  - (1) less than 25 percent of function lost, zero percent;
  - (2) 25 to 75 percent of function lost, two percent;
- H. complete unilateral motor loss, more than 75 percent of function lost, five percent;
- I. partial bilateral motor loss:
  - (1) less than 25 percent of function lost, zero percent;
  - (2) 25 to 75 percent of overall function lost, ten percent;
- J. complete bilateral motor loss, more than 75 percent of overall function lost, 30 percent.

Subp. 3. **Taste or smell.** For permanent partial impairment of taste or smell, the percent of disability is provided in items A and B:

- A. total loss of taste, one percent;
- B. total loss of smell, one percent.

Subp. 4. **Facial nerve.** For injuries to the lower motor neuron, rate each side independently, then add the ratings for the overall impairment:

- A. partial unilateral motor loss, 25 to 75 percent of function lost, three percent;
- B. unilateral motor loss, more than 75 percent of function lost:
  - (1) able to close the eye without assistance, seven percent;
  - (2) unable to close the eye without assistance, ten percent.

Subp. 5. **Dysequilibrium or vertigo.** Signs or symptoms of dysequilibrium, as defined in part 5223.0310, subpart 23, or vertigo, as defined in part 5223.0310, subpart 59, are present and persistent despite therapy, and there is anatomic loss or alteration or objectively measurable neurologic deficit in the vestibular mechanism, ocular mechanism, proprioceptive sense organs, spinal cord, brain stem, cerebellum, or cerebral cortex of a type known to cause dysequilibrium or vertigo:

A. can live independently without supervision or assistance but with restrictions on working at exposed heights, walking on scaffolding or girders, and activities such as riding a bicycle, ten percent;



B. can live independently without supervision or assistance but with restrictions preventing the operation of any motor vehicle, 20 percent;

C. able to perform self cares, as defined in part 5223.0310, subpart 45, independently but requires adaptive equipment for ambulation as defined in part 5223.0310, subpart 6, and is not capable of operating any motor vehicle, 40 percent;

D. requires some assistance with self cares and a wheelchair or human assistance with ambulation, 75 percent;

E. unable to perform self cares and dependent even with wheelchair locomotion, 95 percent.

Subp. 6. **Spinal cord.** To rate under this subpart, determine the impairment to the central nervous system, peripheral nervous system, respiratory system, urinary bladder, anus, penis, and any other members as provided in items A to G. The ratings obtained are then combined for the final rating as described in part 5223.0300, subpart 3, item E:

A. central nervous system ataxia, movement disorder, tremor, or spasticity as provided in subpart 7, item E;

B. the extremities as provided in parts 5223.0400 to 5223.0430;

C. the respiratory system as provided in part 5223.0560;

D. the urinary bladder as provided in part 5223.0600, subpart 4;

E. the anus as provided in part 5223.0590, subpart 4;

F. the penis as provided in part 5223.0600, subpart 6, or the vagina or vulva as provided in part 5223.0600, subpart 9;

G. any other members as provided in the appropriate parts of this schedule.

Subp. 7. **Brain dysfunction.** Signs or symptoms of organic brain dysfunction due to illness or injury must be present and persistent with anatomic loss or alteration, or objectively measurable neurologic deficit. A rating under this part is the combination as described in part 5223.0300, subpart 3, item E, of the ratings assigned by items A to I.

A. Communications disturbances, expressive:

(1) mild disturbance of expressive language ability not significantly impairing ability to be understood, such as mild word-finding difficulties, mild degree of paraphasia, ten percent;

(2) unintelligible oral language, but still capable of functional communication with the use of additional methods such as gestures, facial expression, writing, word board, or alphabet board, 35 percent;

(3) unable to produce any functional communication, 70 percent.

B. Communication disturbances, receptive:

(1) unable to comprehend oral speech without the addition of visual cues such as gestures, facial expressions, or written material, 35 percent;

(2) some ability to comprehend communication is present, but significant impairment even with use of visual cues such as gestures, facial expressions, and written material, 60 percent;

(3) no evidence of functional comprehension of language, 95 percent.

C. Disturbances of consciousness or complex integrated cerebral function disturbances must be determined by medical observation, and in the case of complex integrated cerebral function, supported by psychometric testing. Functional overlay or primary psychiatric disturbances shall not be rated under this part. Disturbances of complex integrated cerebral function include defects in orientation, ability to abstract or understand concepts, memory, judgment, ability to initiate and perform planned activity, and acceptable social behavior. Disturbances of consciousness include lethargy, clouding of consciousness, delirium, stupor, and coma:

(1) mild impairment of complex integrated cerebral function is demonstrated by psychometric testing but able to live independently, ten percent;

(2) mild impairment of complex integrated cerebral function is demonstrated by psychometric testing and able to live independently but requiring supervision with executive function, as defined in part 5223.0310, subpart 25, 20 percent;

(3) moderate impairment of complex integrated cerebral function is demonstrated by psychometric testing or there is a mild clouding of consciousness and able to perform all activities of daily living, as defined in part 5223.0310, subpart 5, independently but requiring some supervision on a daily basis, 40 percent;

(4) moderately severe impairment of complex integrated cerebral function is demonstrated by psychometric testing or there is a moderate clouding of consciousness or persistent lethargy as defined in part 5223.0311, subpart 38, and requires supervision for activities of daily living, as defined in part 5223.0310, subpart 5, 75 percent;

(5) severe impairment of complex integrated cerebral function is demonstrated by psychometric testing or there is delirium as defined in part 5223.0310, subpart 19, and requires assistance as well as supervision in activities of daily living, 95 percent;

(6) stupor, as defined in part 5223.0310, subpart 53; coma, as defined in part 5223.0310, subpart 16; or persistent vegetative state, 99 percent.

D. Emotional disturbances and personality changes must be substantiated by medical observation and supported by psychometric testing. These disturbances may include irritability, outbursts of rage or aggression, absence of normal emotional response, inappropriate euphoria, depression, abnormal emotional interaction with others, involuntary laughing and crying, akinetic mutism, and uncontrollable fluctuation of emotional state. Primary psychiatric disturbances, including functional overlay, shall not be rated under this part:

(1) intermittent emotional disturbances requiring intervention by a caregiver are only present under stressful situations such as losing one's job, getting a divorce, or a death in the family, ten percent;

(2) mild emotional disturbance is present at all times but can live independently and relate to others, 20 percent;

(3) moderate emotional disturbance is present at all times and can live independently but requires some supervision on a daily basis, 40 percent;

(4) moderate to severe emotional disturbances are present at all times, and requires sheltering with some supervision of all activities, 75 percent;

(5) severe degree of emotional disturbance is present at all times and is confined to continuous supervision and protective care, 95 percent.

E. Ataxia, movement disorder including tremor, or spasticity:

(1) in the upper extremity:

(a) performance on the nine hole peg test better, that is, faster, than the tenth percentile of the age-sex specific normative value in both arms, zero percent;

(b) performance on the nine hole peg test worse, that is, slower, than the tenth percentile of the age-sex specific normative value in one arm, ten percent;

(c) performance on the nine hole peg test worse, that is, slower, than the tenth percentile of the age-sex specific normative value in both arms, 40 percent;

(d) requires some assistance with activities of daily living, as defined in part 5223.0310, subpart 5, 75 percent;

(e) unable to perform activities of daily living, 95 percent;

(2) the tenth percentile of the age-sex specific normative value, in seconds, of the nine hold peg test is:

(a) at less than 25 years of age:

i. for a male: right hand - 18.5; left hand - 19.6;

ii. for a female: right hand - 18.5; left hand - 20.3;

(b) at 25 to 29 years of age:

i. for a male: right hand - 18.7; left hand - 19.7;

ii. for a female: right hand - 18.6; left hand - 19.9;

(c) at 30 to 34 years of age:

i. for a male: right hand - 20.9; left hand - 21.5;

ii. for a female: right hand - 18.7; left hand - 20.4;

(d) at 35 to 39 years of age:

i. for a male: right hand - 21.0; left hand - 23.9;

ii. for a female: right hand - 18.4; left hand - 19.9;

(e) at 40 to 44 years of age:

i. for a male: right hand - 20.5; left hand - 21.5;

ii. for a female: right hand - 19.5; left hand - 22.2;

(f) at 45 to 49 years of age:

i. for a male: right hand - 21.7; left hand - 24.1;

ii. for a female: right hand - 19.9; left hand - 20.8;

(g) at 50 to 54 years of age:

i. for a male: right hand - 21.5; left hand - 23.6;

- ii. for a female: right hand - 21.2; left hand - 23.9;
    - (h) at 55 to 59 years of age:
      - i. for a male: right hand - 22.5; left hand - 25.1;
      - ii. for a female: right hand - 21.2; left hand - 22.3;
    - (i) at 60 to 64 years of age:
      - i. for a male: right hand - 23.6; left hand - 24.2;
      - ii. for a female: right hand - 21.0; left hand - 23.4;
    - (j) at 65 to 69 years of age:
      - i. for a male: right hand - 24.4; left hand - 27.4;
      - ii. for a female: right hand - 22.4; left hand - 24.9;
    - (k) at 70 to 74 years of age:
      - i. for a male: right hand - 26.2; left hand - 28.8;
      - ii. for a female: right hand - 23.7; left hand - 25.5;
    - (l) at greater than 74 years of age:
      - i. for a male: right hand - 28.0; left hand - 32.5;
      - ii. for a female: right hand - 25.2; left hand - 30.1;
  - (3) in the lower extremity:
    - (a) normal tandem gait, as defined in part 5223.0310, subpart 55, zero percent;
    - (b) abnormal tandem gait and with restriction on working on exposed heights and walking on scaffolding or girders, ten percent;
    - (c) unable to walk on level ground without adaptive equipment for ambulation, as defined in part 5223.0310, subpart 6, 40 percent;
    - (d) unable to walk and must use a wheelchair, 75 percent;
    - (e) abnormal sitting balance impairs use of the upper extremities so unable to perform any activities of daily living, as defined in part 5223.0310, subpart 5, 95 percent.
- F. Impairments of respiration, urinary bladder function, anorectal function, or sexual function, the rating is as provided in parts 5223.0560 to 5223.0600.
- G. Episodic neurologic disorders, that is, syncope, epilepsy, or convulsive disorders:
- (1) able to live independently without supervision or assistance but with restrictions preventing the operation of motor vehicles or dangerous machinery and working on exposed heights, 20 percent;
  - (2) able to live independently but having three or more seizures per 12-month period despite adequate treatment and with restrictions preventing the operation of motor vehicles or dangerous machinery and working on exposed heights, 30 percent;
  - (3) able to perform all self cares, as defined in part 5223.0310, subpart 45, independently, but some supervision is required, 40 percent;

(4) requires some assistance with self care, supervision is required, and some protective care is required, 75 percent;

(5) unable to perform any self cares, constant supervision and constant protective care is required, and confinement to home or domicile is necessary, 95 percent.

H. Recurring vascular headaches characterized as throbbing in nature, accompanied by nausea and vomiting, and associated with an inability to perform activities of daily living, as defined in part 5223.0310, subpart 5, in excess of 12 hours, two percent.

I. Motor or sensory impairments, the rating is as provided in parts 5223.0400 to 5223.0430.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; L 2013 c 62 s 32*

**Published Electronically:** *October 3, 2013*

### **5223.0370 MUSCULOSKELETAL SCHEDULE; CERVICAL SPINE.**

Subpart 1. **General.** For permanent partial impairment to the cervical spine, disability of the whole body is as provided in subparts 2 to 5. The impairing condition in the cervical spine resulting from an injury may be rated only under one category of subpart 2, 3, or 4. Categories from more than one category in subpart 2, 3, or 4 cannot be used in rating the impairing condition resulting from a single injury. Categories in subparts 2 to 4 may not be combined or added together in rating the extent of impairment due to a single injury except as specifically provided. Categories in other subparts may be combined with the rating under subpart 3 or 4 as specifically provided in this part.

If any injury has resulted in mutually exclusive impairing conditions in other areas of the spine, such as thoracic spine or lumbar spine, the mutually exclusive impairing conditions must be rated separately and all impairments shall be combined as described in part 5223.0300, subpart 3, item E.

A. Permanent partial impairment due to injury of the spinal cord is as provided in part 5223.0360, subpart 6, and may be combined with ratings under subpart 2.

B. Permanent partial impairment due to injury of the nerve roots is as provided in parts 5223.0400 and 5223.0410 and may be combined with ratings under this part if the nerve injury results in complete loss, as defined in part 5223.0410, subpart 1, item A. If the loss is less than complete, the ratings under this part are inclusive of any injury to the nerve.

C. Permanent partial impairment due to bladder dysfunction is as provided in part 5223.0600, subpart 3, and may be combined with ratings under this part.

D. Permanent partial impairment due to sexual dysfunction is as provided in part 5223.0600, subparts 6 and 9, and may be combined with ratings under this part.

E. Permanent partial impairment due to anal dysfunction is as provided in part 5223.0590, subpart 4, and may be combined with ratings under this part.

#### **Subp. 2. Fractures.**

A. Compression fracture of vertebral body, with no involvement of posterior elements, one or more vertebral bodies is rated by the greatest loss of vertebral height among the involved segments:

(1) decrease of no more than ten percent in vertebral height in any vertebral segment, zero percent;

(2) decrease of greater than ten percent but less than or equal to 25 percent in vertebral height in at least one vertebral segment, six percent;

(3) decrease in vertebral height is greater than 25 percent but less than or equal to 50 percent in at least one vertebral segment, 14 percent;

(4) decrease of greater than 50 percent in vertebral height in at least one vertebral segment, 19 percent.

B. Vertebral fractures involving posterior elements and X-ray evidence of dislocation regardless of vertebral compression of any degree:

(1) normal reduction and no surgery required, 10.5 percent;

(2) surgery performed and normal reduction achieved, 14 percent;

(3) no surgery performed and reduction not normal, 15 percent;

(4) surgery performed with poor reduction, 19 percent.

C. Any other documented acute fracture other than as specified in item A or B, four percent.

D. For fractures of multiple vertebral levels, add three percent, regardless of the number of levels involved, to whichever of item A, B, or C is otherwise applicable.

**Subp. 3. Cervical pain syndrome.**

A. Symptoms of pain or stiffness in the region of the cervical spine not substantiated by persistent objective clinical findings, regardless of radiographic findings, zero percent.

B. Symptoms of pain or stiffness in the region of the cervical spine, substantiated by persistent objective clinical findings, that is, involuntary muscle tightness in the paracervical muscle or decreased passive range of motion in the cervical spine, but no radiographic abnormality, 3.5 percent.

C. Symptoms of pain or stiffness in the region of the cervical spine, substantiated by persistent objective clinical findings, that is, involuntary muscle tightness in the paracervical muscle or decreased passive range of motion in the cervical spine, and with any radiographic, myelographic, CT scan, or MRI scan abnormality not specifically addressed elsewhere in this part:

(1) single vertebral level, seven percent;

(2) multiple vertebral levels, ten percent.

**Subp. 4. Radicular syndromes.**

A. Radicular pain or paresthesia, as defined in part 5223.0310, subpart 44, with or without cervical pain syndrome, not substantiated by persistent objective clinical findings, regardless of radiographic findings, zero percent.

B. Radicular pain or paresthesia, with or without cervical pain syndrome, with persistent objective clinical findings confined to the region of the cervical spine, that is, involuntary muscle tightness in the paracervical muscle or decreased passive range of motion in the cervical spine, but no radiographic findings, 3.5 percent.

C. Radicular pain or paresthesia, with or without cervical pain syndrome, with persistent objective clinical findings confined to the region of the cervical spine, that is, involuntary muscle tightness in the paracervical muscle or decreased passive range of motion in the cervical spine, and with any

radiographic, myelographic, CT scan, or MRI scan abnormality not specifically addressed elsewhere in this part:

- (1) single vertebral level, seven percent;
- (2) multiple vertebral levels, ten percent;
- (3) if a surgery at one level, other than fusion, is performed as part of the treatment, ten percent;
- (4) if a surgery at more than one level, other than a fusion, is performed as part of the treatment, 13 percent.

D. Radicular pain or paresthesia, with or without cervical pain syndrome, and with objective radicular findings, that is, hyporeflexia or EMG abnormality or nerve root specific muscle weakness in the upper extremity, on examination and myelographic, CT scan, or MRI scan evidence of intervertebral disc bulging, protrusion, or herniation that impinges on a cervical nerve root, and the medical imaging findings correlate anatomically with the findings on neurologic examination, nine percent with the addition of as many of subitems (1) to (4) as apply, but each may be used only once:

- (1) if chronic radicular pain or paresthesia persist despite treatment, add three percent;
- (2) if a surgery other than a fusion performed as part of the treatment, add two percent, if surgery included a fusion, the rating is as provided in subpart 5;
- (3) for additional surgery, other than a fusion, regardless of the number of additional surgeries, add two percent, if the additional surgery included a fusion, the rating is as provided in subpart 5;
- (4) additional concurrent lesion on contralateral side at the same level or on either side at any other level which meets all of the criteria of this item or item E, add nine percent.

E. Radicular pain or paresthesia, with or without cervical pain syndrome, and with objective radicular findings, that is, reflex changes or EMG abnormality or nerve root specific muscle weakness in the upper extremity, or myelopathic findings on examination and myelographic, CT scan, or MRI scan evidence of spinal stenosis, as defined in part 5223.0310, subpart 47, that impinges on a cervical nerve root or spinal cord and the medical imaging findings correlate with the findings on neurological examination, ten percent with the addition of as many of subitems (1) to (4) as apply, but each may be used only once:

- (1) if chronic radicular pain or paresthesia, or myelopathic symptoms persist despite treatment, add three percent;
- (2) if a surgery other than a fusion performed as part of the treatment, add five percent, if surgery included a fusion, the rating is as provided in subpart 5. For dates of injury on or after August 9, 2010, for the first surgery performed as part of the treatment, regardless of the type of surgery, add five percent; if surgery included a fusion, also add the rating as provided in subpart 5;
- (3) for additional surgery, other than a fusion, regardless of the number of additional surgeries, add three percent, if the additional surgery included a fusion, the rating is as provided in subpart 5. For dates of injury on or after August 9, 2010, for additional surgery, regardless of the number of additional surgeries, add three percent. If any of the additional surgeries included a fusion, also add the rating as provided in subpart 5;
- (4) additional concurrent lesion on contralateral side at same level or at either side at other level which meets all of the criteria of this item or item D, add nine percent.

**Subp. 5. Fusion.**

A. Fusion, as defined in part 5223.0310, subpart 29, at one level performed as part or all of the surgical treatment of a cervical pain or radicular syndrome, add 2.5 percent to the otherwise appropriate category in subpart 3 or 4.

B. Fusion at multiple levels performed as part or all of the surgical treatment of a cervical pain or radicular syndrome, add five percent to the otherwise appropriate category in subpart 3 or 4.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

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**5223.0380 MUSCULOSKELETAL SCHEDULE; THORACIC SPINE.**

Subpart 1. **General.** For permanent partial impairment to the thoracic spine, disability of the whole body is as provided in subparts 2 to 4. The impairing condition in the thoracic spine resulting from an injury may be rated only under one category of subpart 2, 3, or 4. Categories from more than one of subpart 2, 3, or 4 cannot be used in rating the impairing condition resulting from a single injury. Categories in subparts 2 to 4 may not be combined or added together in rating the extent of impairment due to a single injury except as specifically provided. Categories in other subparts may be combined with the rating under subpart 3 or 4 as specifically provided in this part.

If any injury has resulted in mutually exclusive impairing conditions in other areas of the spine, such as cervical spine, under part 5223.0370, or lumbar spine, under part 5223.0390, the mutually exclusive impairing conditions must be rated separately and then all ratings combined as described in part 5223.0300, subpart 3, item E.

A. Permanent partial disability due to injury of the spinal cord is as provided in part 5223.0360, subpart 6, and may be combined with ratings under subpart 2.

B. Permanent partial impairment due to bladder dysfunction is as provided in part 5223.0600, subpart 3, and may be combined with ratings under this part.

C. Permanent partial impairment due to sexual dysfunction is as provided in part 5223.0600, subparts 6 and 9, and may be combined with ratings under this part.

D. Permanent partial impairment due to anal dysfunction is as provided in part 5223.0590, subpart 4, and may be combined with ratings under this part.

**Subp. 2. Fractures.**

A. Compression fracture of vertebral body, with no involvement of posterior elements, one or more vertebral bodies is rated by the greatest loss of vertebral height among the involved segments:

(1) decrease of no more than ten percent of vertebral height in any vertebral segment, zero percent;

(2) decrease of greater than ten percent but less than or equal to 25 percent in vertebral height in at least one vertebral segment, four percent;

(3) decrease in vertebral height is greater than 25 percent but less than or equal to 50 percent in at least one vertebral segment, 10.5 percent;



(4) decrease of greater than 50 percent in vertebral height in at least one vertebral segment, 15 percent.

B. Vertebral fractures involving posterior elements and X-ray evidence of dislocation regardless of vertebral compression of any degree:

- (1) normal reduction and no surgery required, 10.5 percent;
- (2) surgery performed and normal reduction achieved, 14 percent;
- (3) no surgery performed and reduction is not normal, 15 percent;
- (4) surgery performed with poor reduction, 19 percent.

C. Any other documented acute fracture other than as specified in item A or B, four percent.

D. For fractures of multiple vertebral levels, add three percent, regardless of the number of levels involved, to item A, B, or C as otherwise applicable.

**Subp. 3. Thoracic pain syndrome.**

A. Symptoms of pain or stiffness in the region of the thoracic spine not substantiated by persistent objective clinical findings, regardless of radiographic findings, zero percent.

B. Symptoms of pain or stiffness in the region of the thoracic spine, substantiated by persistent objective clinical findings, that is, involuntary muscle tightness in the paradorsal muscles, regardless of radiographic abnormality, 2.5 percent.

**Subp. 4. Radicular syndromes.**

A. Radicular pain or radicular paresthesia, as defined in part 5223.0310, subparts 43 and 44, with or without thoracic pain syndrome, not substantiated by persistent objective clinical findings, regardless of radiographic findings, zero percent.

B. Radicular pain or radicular paresthesia, with or without thoracic pain syndrome, with persistent objective clinical findings confined to the region of the thoracic spine, that is, involuntary muscle tightness in the paradorsal muscles, but no radiographic findings, 2.5 percent.

C. Radicular pain or radicular paresthesia, with or without thoracic pain syndrome, with persistent objective clinical findings confined to the region of the thoracic spine, that is, involuntary muscle tightness in the paradorsal muscles, and with any radiographic, myelographic, CT scan, or MRI scan abnormality not specifically addressed elsewhere in this part, five percent.

D. Radicular pain or radicular paresthesia, with or without thoracic pain syndrome, and myelographic, CT scan, or MRI scan evidence of intervertebral disc bulging, protrusion, or herniation that impinges on a thoracic nerve root, and the medical imaging findings correlate anatomically, three percent with the addition of as many of subitems (1) to (4) as apply, but each may be used only once:

(1) if chronic radicular pain or radicular paresthesia persist despite treatment, add two percent;

(2) if a surgery is performed as part of the treatment, add two percent;

(3) for additional surgery, regardless of the number of additional surgeries, add two percent;

(4) additional concurrent lesion on contralateral side at same level or on either side at other level which meets all of the criteria of this item, add three percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

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### **5223.0390 MUSCULOSKELETAL SCHEDULE; LUMBAR SPINE.**

Subpart 1. **General.** For permanent partial impairment to the lumbar spine, disability of the whole body is as provided in subparts 2 to 5. The impairing condition in the lumbar spine resulting from an injury may be rated only under one category of subpart 2, 3, or 4. Categories from more than one of subpart 2, 3, or 4 cannot be used in rating the impairing condition resulting from a single injury. Categories in subparts 2 to 4 may not be combined or added together in rating the extent of impairment due to a single injury except as specifically provided. Categories in other subparts may be combined with the rating under subpart 3 or 4 as specifically provided in this part.

If any injury has resulted in mutually exclusive impairing conditions in other areas of the spine, such as cervical spine, under part 5223.0370, or thoracic spine, under part 5223.0380, the mutually exclusive impairing conditions must be rated separately and then all impairments combined as described in part 5223.0300, subpart 3, item E.

A. Permanent partial impairment due to injury of the spinal cord is as provided in part 5223.0360, subpart 6, and may be combined with ratings under subpart 2.

B. Permanent partial impairment due to injury of the nerve roots is as provided in parts 5223.0420 and 5223.0430 and may be combined with ratings under this part if the nerve root injury results in complete loss as defined in part 5223.0420, subpart 1, item A, or 5223.0430, subpart 1, item A. If the loss is less than complete, the ratings under this part are inclusive of any injury to the nerve root.

C. Permanent partial impairment due to bladder dysfunction is as provided in part 5223.0600, subpart 3, and may be combined with ratings under this part.

D. Permanent partial impairment due to sexual dysfunction is as provided in 5223.0600, subparts 6 and 9, and may be combined with ratings under this part.

E. Permanent partial impairment due to anal dysfunction is as provided in part 5223.0590, subpart 4, and may be combined with ratings under this part.

#### **Subp. 2. Fractures.**

A. Compression fracture of vertebral body, with no involvement of posterior elements, one or more vertebral bodies is rated by the greatest loss of vertebral height among the involved segments:

(1) decrease of no more than ten percent of vertebral height in any vertebral segment, zero percent;

(2) decrease of greater than ten percent but less than or equal to 25 percent in vertebral height in at least one vertebral segment, four percent;

(3) decrease in vertebral height is greater than 25 percent but less than or equal to 50 percent in at least one vertebral segment, 10.5 percent;

(4) decrease of greater than 50 percent in vertebral height in at least one vertebral segment, 15 percent.

B. Vertebral fractures involving posterior elements and X-ray evidence of dislocation regardless of vertebral compression of any degree:

- (1) normal reduction and no surgery required, 10.5 percent;
- (2) surgery performed and normal reduction achieved, 14 percent;
- (3) no surgery performed and reduction is not normal, 15 percent;
- (4) surgery performed with poor reduction, 19 percent.

C. Any other documented acute fracture other than as specified in item A or B, four percent.

D. For fractures of multiple vertebral levels, add three percent, regardless of the number of levels involved, to item A, B, or C as otherwise applicable.

**Subp. 3. Lumbar pain syndrome.**

A. Symptoms of pain or stiffness in the region of the lumbar spine not substantiated by persistent objective clinical findings, regardless of radiographic findings, zero percent.

B. Symptoms of pain or stiffness in the region of the lumbar spine, substantiated by persistent objective clinical findings, that is, involuntary muscle tightness in the paralumbar muscles or decreased range of motion in the lumbar spine, but no radiographic abnormality, 3.5 percent.

C. Symptoms of pain or stiffness in the region of the lumbar spine, substantiated by persistent objective clinical findings, that is, involuntary muscle tightness in the paralumbar muscles or decreased range of motion in the lumbar spine, and with any radiographic, myelographic, CT scan, or MRI scan abnormality not specifically addressed elsewhere in this part:

- (1) single vertebral level, seven percent;
- (2) multiple vertebral levels, ten percent.

D. Symptoms of pain or stiffness in the region of the lumbar spine, substantiated by persistent objective clinical findings, that is, involuntary muscle tightness in the paralumbar muscles or decreased range of motion in the lumbar spine, and with radiographic evidence of spondylolisthesis, as defined in part 5223.0310, subpart 48:

- (1) grade 1, as defined in part 5223.0310, subpart 49, seven percent;
- (2) grade 2, as defined in part 5223.0310, subpart 50, 14 percent;
- (3) grade 3 or 4, as defined in part 5223.0310, subparts 51 and 52, 24.5 percent.

**Subp. 4. Radicular syndromes.**

A. Radicular pain or radicular paresthesia, as defined in part 5223.0310, subparts 43 and 44, with or without lumbar pain syndrome, not substantiated by persistent objective clinical findings, regardless of radiographic findings, zero percent.

B. Radicular pain or radicular paresthesia, with or without lumbar pain syndrome, with persistent objective clinical findings confined to the region of the lumbar spine, that is, involuntary muscle tightness in the paralumbar muscles or decreased range of motion in the lumbar spine, but no radiographic findings, 3.5 percent.

C. Radicular pain or radicular paresthesia, with or without lumbar pain syndrome, with persistent objective clinical findings confined to the region of the lumbar spine, that is, involuntary muscle

tightness in the paralumbar muscles or decreased range of motion in the lumbar spine, and with any radiographic, myelographic, CT scan, or MRI scan abnormality not specifically addressed elsewhere in this part:

- (1) single vertebral level, seven percent;
- (2) multiple vertebral levels, ten percent;
- (3) if a surgery at one level, other than fusion, performed as part of the treatment, ten percent;
- (4) if a surgery at more than one level other than a fusion is performed as part of the treatment, 13 percent.

D. Radicular pain or radicular paresthesia, with or without lumbar pain syndrome, and with objective radicular findings, that is, hyporeflexia or EMG abnormality or nerve root specific muscle weakness in the lower extremity, on examination and myelographic, CT scan, or MRI scan evidence of intervertebral disc bulging, protrusion, or herniation that impinges on a lumbar nerve root, and the medical imaging findings correlate anatomically with the findings on neurologic examination, nine percent with the addition of as many of subitems (1) to (4) as apply, but each may be used only once:

- (1) if chronic radicular pain or radicular paresthesia persist despite treatment, add three percent;
- (2) if a surgery other than a fusion performed as part of the treatment, add two percent, if surgery included a fusion, the rating is as provided in subpart 5;
- (3) for additional surgery, other than a fusion, regardless of the number of additional surgeries, add two percent, if the additional surgery included a fusion, the rating is as provided in subpart 5;
- (4) additional concurrent lesion on contralateral side at the same level or on either side at other level, which meets all of the criteria of this item or item E, add nine percent.

E. Radicular pain or radicular paresthesia, with or without lumbar pain syndrome, and with objective radicular findings, that is, reflex changes or EMG abnormality or nerve root specific muscle weakness in the lower extremity, on examination and myelographic, CT scan, or MRI scan evidence of spinal stenosis, as defined in part 5223.0310, subpart 47, that impinges on a lumbar nerve root, and the medical imaging findings correlate with the findings on neurological examination, ten percent with the addition of as many of subitems (1) to (4) as apply, but each may be used only once:

- (1) if chronic radicular pain or radicular paresthesia persist despite treatment, add three percent;
- (2) if a surgery other than a fusion performed as part of the treatment, add five percent, if surgery included a fusion, the rating is as provided in subpart 5;
- (3) for additional surgery, other than a fusion, regardless of the number of additional surgeries, add three percent, if additional surgery included a fusion, the rating is as provided in subpart 5;
- (4) additional concurrent lesion on contralateral side at the same level or on either side at other level, which meets all of the criteria of this item or item D, add nine percent.

Subp. 5. **Fusion.**

A. Fusion, as defined in part 5223.0310, subpart 29, at one level performed as part or all of the surgical treatment of a lumbar pain or radicular pain syndrome, add five percent to the otherwise appropriate category in subpart 3 or 4.

B. Fusion at multiple levels performed as part or all of the surgical treatment of a lumbar pain or radicular pain syndrome, add ten percent to the otherwise appropriate category in subpart 3 or 4.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

**Published Electronically:** *August 16, 2010*

**5223.0400 PERIPHERAL NERVOUS SYSTEM; UPPER EXTREMITY-MOTOR LOSS.**

Subpart 1. **General.** For permanent partial impairment to the peripheral nerves, plexuses, and nerve roots of the upper extremity resulting from nerve injury or disease, and if there is total loss of motor function for those particular portions of the body served by the peripheral nerve, plexus, or nerve root, disability to the whole body is as provided in subparts 2 to 6.

A. Total or complete motor loss means that motor function is less than muscle strength grade 2/5.

B. If injury to a nerve, plexus, or nerve root results only in sensory loss, the rating is as provided in part 5223.0410.

C. If motor loss occurs together with sensory loss, the rating under this part may be combined as described in part 5223.0300, subpart 3, item E, with the rating under part 5223.0410.

D. The ratings in this part include the rating of the impairment due to any restriction of range of motion or ankylosis at any joint of the affected member that is strictly the result of the nerve lesion and no further rating for those losses shall be combined with ratings under this part.

Subp. 2. **Peripheral nerve.** There is total or complete motor loss of the peripheral nerve, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration:

A. median nerve:

- (1) entire motor distribution involved, 33 percent;
- (2) involving the flexor pollicis longus, flexor digitorum profundus (index), flexor digitorum superficialis, pronator quadratus, and intrinsic muscles of the hand, 21 percent;
- (3) involving the flexor pollicis longus, flexor digitorum profundus (index), and pronator quadratus (anterior interosseous syndrome), 15 percent;

B. radial nerve:

- (1) entire motor distribution, 25 percent;
- (2) with sparing of triceps, 22 percent;
- (3) with sparing of triceps and wrist extensors, 15 percent;

C. ulnar nerve:

- (1) entire motor distribution involved, 25 percent;

- (2) only intrinsic muscles of the hand involved, 18 percent;
- D. anterior thoracic nerve, three percent;
- E. axillary nerve, 21 percent;
- F. dorsal scapular nerve, three percent;
- G. long thoracic nerve, nine percent;
- H. musculocutaneous nerve, 15 percent;
- I. subscapular nerve, three percent;
- J. suprascapular nerve, 15 percent;
- K. thoracodorsal nerve, three percent;
- L. spinal accessory nerve, six percent.

Subp. 3. **Brachial plexus.** There is total or complete motor loss of the brachial plexus, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration:

- A. upper trunk (C5, C6), 42 percent;
- B. middle trunk (C7), 21 percent;
- C. lower trunk (C8, T1), 42 percent;
- D. entire plexus, unilateral, 60 percent.

Subp. 4. **Nerve root.** There is total or complete motor loss of the nerve root, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration:

- A. C5 root, 18 percent;
- B. C6 root, 21 percent;
- C. C7 root, 21 percent;
- D. C8 root, 27 percent;
- E. T1 root, 12 percent.

Subp. 5. **Incomplete loss.** Incomplete loss means that motor function is less than normal but at least antigravity. Motor function is measured in the specific muscles innervated by the injured or diseased nerve, plexus trunk, or nerve root, and muscle strength is graded as follows:

- A. 5/5: majority of the tested muscles able to sustain contraction against expected resistance;
- B. 4/5: majority of the tested muscles unable to sustain contraction against expected resistance but able to sustain contraction against some applied resistance;
- C. 3/5: majority of the tested muscles unable to sustain contraction against any applied resistance but able to move part through full range of motion against gravity;
- D. 2/5: majority of the tested muscles able to move part through full range of motion with gravity eliminated.

The rating for incomplete loss is made on the muscle strength grade of the majority of the affected muscles:

- (1) muscle strength grade 5/5, zero percent;

- (2) muscle strength grade 4/5, 25 percent of rating assigned in subpart 2, 3, or 4;
- (3) muscle strength grade 3/5, 50 percent of rating assigned in subpart 2, 3, or 4;
- (4) muscle strength grade 2/5, 75 percent of rating assigned in subpart 2, 3, or 4;
- (5) muscle strength grade less than 2/5, 100 percent of rating assigned in subpart 2, 3, or

4.

Subp. 6. **Complex regional pain syndrome, reflex sympathetic dystrophy, causalgia, and cognate conditions.** This subpart applies to dates of injury from July 1, 1993, through August 8, 2010. For dates of injury on or after August 9, 2010, rate complex regional pain syndrome, reflex sympathetic dystrophy, causalgia, and cognate conditions as provided under part 5223.0435. For purposes of rating under this part, reflex sympathetic dystrophy, causalgia, and cognate conditions are deemed to occur in a member if at least five of the following conditions persist concurrently in that member: edema, local skin color change of red or purple, osteoporosis in underlying bony structures demonstrated by radiograph, local dyshidrosis, local abnormality of skin temperature regulation, reduced passive range of motion in contiguous or contained joints, local alteration of skin texture of smooth or shiny, or typical findings of reflex sympathetic dystrophy on bone scan.

If reflex sympathetic dystrophy is present and persistent despite treatment, the permanent partial disability, rating from the most proximal joint of the involved member, is:

- A. mild: meets the requirements of this subpart, 25 percent of the rating for the appropriate category in part 5223.0540;
- B. moderate: meets the requirements of this subpart and the involved member is limited to a helping role in bilateral upper extremity activities, 50 percent of the rating for the appropriate category in part 5223.0540;
- C. severe: meets the requirements of this subpart and the involved member cannot be used for most of the activities of daily living, 75 percent of the rating for the appropriate category in part 5223.0540.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

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#### **5223.0410 PERIPHERAL NERVOUS SYSTEM; UPPER EXTREMITY-SENSORY LOSS.**

Subpart 1. **Total loss.** For permanent partial impairment to the peripheral nerves, plexuses, and nerve roots of the upper extremities resulting from nerve injury or disease and if there is loss of sensory function for those particular portions of the body served by the peripheral nerve, plexus, or root, the disability of the whole body is as provided in subparts 2 to 7.

- A. Total or complete sensory loss means that there is no preserved sensation.
- B. If injury to a nerve, plexus, or nerve root results only in motor loss, the rating is as provided in part 5223.0400.

C. If motor loss occurs together with sensory loss, then the rating under this part may be combined as described in part 5223.0300, subpart 3, item E, with the rating under part 5223.0400.

Subp. 2. **Peripheral nerve.** There is total or complete sensory loss of the peripheral nerve, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration:

- A. in the distribution of the axillary, one percent;
- B. in the distribution of the medial antebrachial cutaneous, two percent;
- C. in the distribution of the medial brachial cutaneous, two percent;
- D. in the distribution of the musculocutaneous, one percent;
- E. in the distribution of the radial, three percent;
- F. in the distribution of the suprascapular, three percent;
- G. in the distribution of the median, 24 percent; or
- H. in the distribution of the ulnar:
  - (1) entire distribution, ten percent;
  - (2) dorsal ulnar sensory nerve only, three percent;
  - (3) ulnar digital nerve to the fifth finger only, both proximal and distal to the metacarpophalangeal joint of the fifth finger, 5.5 percent, if only distal to the metacarpophalangeal joint, the rating is as provided in subpart 6, item A, subitem (5).

Subp. 3. **Brachial plexus.** There is total or complete sensory loss of the brachial plexus, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration:

- A. in the distribution of the entire plexus, unilateral, 60 percent;
- B. in the distribution of the upper trunk, 15 percent;
- C. in the distribution of the middle trunk, three percent;
- D. in the distribution of the lower trunk, 12 percent.

Subp. 4. **Nerve root.** There is total or complete sensory loss of the nerve root, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration:

- A. in the distribution of the C5 nerve root, three percent;
- B. in the distribution of the C6 nerve root, 12 percent;
- C. in the distribution of the C7 nerve root, seven percent;
- D. in the distribution of the C8 nerve root, ten percent;
- E. in the distribution of the T1 nerve root, three percent.

Subp. 5. **Partial loss.** Partial loss means that there is incomplete sensory loss. Partial loss is rated at 25 percent of the percentages assigned in subparts 2 to 4 except as provided for in subpart 6 in regard to sensory loss in the digits.

Subp. 6. **Loss of sensation in the digits.**

A. Total sensory loss in the digits: signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration, and sensory loss is confined to the digits and not part of a larger sensory loss rated in subpart 2, 3, or 4.

- (1) Loss of sensation in the thumb:
  - (a) whole, 10.5 percent;
  - (b) radial side distal to the metacarpophalangeal joint, four percent;



- (c) ulnar side distal to the metacarpophalangeal joint, 6.5 percent.
- (2) Loss of sensation in the index finger:
  - (a) whole, 5.5 percent;
  - (b) radial side distal to the metacarpophalangeal joint, whole, 3.5 percent;
  - (c) ulnar side distal to the metacarpophalangeal joint, two percent.
- (3) Loss of sensation in the middle finger:
  - (a) whole, 5.5 percent;
  - (b) radial side distal to the metacarpophalangeal joint, 3.5 percent;
  - (c) ulnar side distal to the metacarpophalangeal joint, two percent.
- (4) Loss of sensation in the ring finger:
  - (a) whole, three percent;
  - (b) radial side distal to the metacarpophalangeal joint, two percent;
  - (c) ulnar side distal to the metacarpophalangeal joint, one percent.
- (5) Loss of sensation in the little finger:
  - (a) whole, three percent;
  - (b) radial side distal to the metacarpophalangeal joint, one percent;
  - (c) ulnar side distal to the metacarpophalangeal joint, two percent.

B. Sensory loss distal to proximal interphalangeal joint, 75 percent of the value as provided in item A, either whole, radial side, or ulnar side as applicable.

C. Sensory loss distal to the middle of the distal phalanx, 50 percent of the value as provided in item A, either whole, radial side, or ulnar side as applicable.

D. The levels of sensory loss in the digits and the corresponding disabilities of the whole body are measured as follows:

- (1) minimal, two-point discrimination at six millimeters or less, zero percent;
- (2) moderate, two-point discrimination greater than six millimeters, one-half of the value in item A;
- (3) severe, two-point discrimination at greater than ten millimeters, three-fourths of the value in item A;
- (4) total, two-point discrimination at greater than 15 millimeters, the same value as in item A.

Subp. 7. **Reflex sympathetic dystrophy, causalgia, and cognate conditions.** This subpart applies to dates of injury from July 1, 1993, through August 8, 2010. For dates of injury on or after August 9, 2010, rate complex regional pain syndrome, reflex sympathetic dystrophy, causalgia, and cognate conditions as provided under part 5223.0435. For purposes of rating under this part, reflex sympathetic dystrophy, causalgia, and cognate conditions are deemed to occur in a member if at least five of the following conditions persist concurrently in that member: edema, local skin color change of red or purple, osteoporosis in underlying bony structures demonstrated by radiograph, local dyshidrosis, local

abnormality of skin temperature regulation, reduced passive range of motion in contiguous or contained joints, local alteration of skin texture of smooth or shiny, or typical findings of reflex sympathetic dystrophy on bone scan.

If reflex sympathetic dystrophy is present and persistent despite treatment, the permanent partial disability, rating from the most proximal joint of the involved member, is:

A. mild: meets the requirements of this subpart, 25 percent of the rating for the appropriate category in part 5223.0540;

B. moderate: meets the requirements of this subpart and the involved member is limited to a helping role in bilateral upper extremity activities, 50 percent of the rating for the appropriate category in part 5223.0540;

C. severe: meets the requirements of this subpart and the involved member cannot be used for most of the activities of daily living, 75 percent of the rating for the appropriate category in part 5223.0540.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

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#### **5223.0420 PERIPHERAL NERVOUS SYSTEM; LOWER EXTREMITY-MOTOR LOSS.**

Subpart 1. **Total loss.** For permanent partial impairment to the peripheral nerves, plexuses, and nerve roots of the lower extremity resulting from nerve injury or disease, and if there is loss of motor function for those particular portions of the body served by the peripheral nerve, plexus, or nerve root, disability to the whole body is as provided in subparts 2 to 6.

A. Total or complete motor loss in the lower extremity means that motor function is less than or equal to muscle strength grade 2/5.

B. If injury to nerve, plexus, or nerve root results in sensory loss alone, the rating is as provided in part 5223.0430.

C. If motor loss occurs together with sensory loss, the rating under this part may be combined as described in part 5223.0300, subpart 3, item E, with the rating under part 5223.0430.

D. The ratings in this part include the rating of the impairment due to any restriction of range of motion or ankylosis of any joint of the affected member that is strictly the result of the nerve lesion and no further rating for those losses shall be combined with ratings under this part.

Subp. 2. **Peripheral nerve.** There is total or complete motor loss of the peripheral nerve, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration:

A. femoral:

(1) entire motor distribution involved, 17 percent;

(2) iliacus spared, 14 percent;

B. obturator nerve:

(1) entire motor distribution, four percent;

(2) only adductor magnus involved, zero percent;

- C. inferior gluteal, six percent;
- D. superior gluteal, eight percent;
- E. sciatic, entire motor distribution involved, 30 percent;
- F. common peroneal, 14 percent;
- G. deep peroneal:
  - (1) entire motor distribution involved, ten percent;
  - (2) only the peroneus tertius and extensor digitorum brevis involved, two percent;
- H. superficial peroneal, four percent;
- I. tibial nerve:
  - (1) entire motor distribution involved, 14 percent;
  - (2) gastrocnemius innervation spared, eight percent;
  - (3) gastrocnemius and soleus innervation spared, six percent;
  - (4) lateral plantar branch, two percent;
  - (5) medial plantar branch, two percent.

Subp. 3. **Lumbosacral plexus.** There is total or complete motor loss of the lumbosacral plexus, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration: entire lumbosacral plexus, unilateral, 50 percent.

Subp. 4. **Nerve root.** There is total or complete motor loss of the nerve root, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration:

- A. L3 nerve root, eight percent;
- B. L4 nerve root, 14 percent;
- C. L5 nerve root, 15 percent;
- D. S1 nerve root, 12 percent.

Subp. 5. **Incomplete loss.** Incomplete loss means that motor function is less than normal but at least antigravity. Motor function is measured in the specific muscles innervated by the injured nerve, plexus, or nerve root, and muscle strength is graded as follows:

- A. 5/5: majority of the tested muscles able to sustain contraction against expected resistance;
- B. 4/5: majority of the tested muscles unable to sustain contraction against expected resistance but able to sustain contraction against some applied resistance;
- C. 3/5: majority of the tested muscles unable to sustain contraction against any applied resistance but able to move part through full range of motion against gravity;
- D. 2/5: majority of the tested muscles able to move part through full range of motion with gravity eliminated.

The rating for incomplete loss is made on the muscle strength grade of the majority of the affected muscles:

- (1) muscle strength grade 5/5, zero percent;

- (2) muscle strength grade 4/5, 25 percent of rating assigned in subpart 2, 3, or 4;
- (3) muscle strength grade 3/5, 50 percent of rating assigned in subpart 2, 3, or 4;
- (4) muscle strength grade 2/5 or less, 100 percent of rating assigned in subpart 2, 3, or 4.

Subp. 6. **Reflex sympathetic dystrophy, causalgia, and cognate conditions.** This subpart applies to dates of injury from July 1, 1993, through August 8, 2010. For dates of injury on or after August 9, 2010, rate complex regional pain syndrome, reflex sympathetic dystrophy, causalgia, and cognate conditions as provided under part 5223.0435. For purposes of rating under this part, reflex sympathetic dystrophy, causalgia, and cognate conditions are deemed to occur in a member if at least five of the following conditions persist concurrently in that member: edema, local skin color change of red or purple, osteoporosis in underlying bony structures demonstrated by radiograph, local dyshidrosis, local abnormality of skin temperature regulation, reduced passive range of motion in contiguous or contained joints, local alteration of skin texture of smooth or shiny, or typical findings of reflex sympathetic dystrophy on bone scan.

If reflex sympathetic dystrophy is present and persistent despite treatment, the permanent partial disability, rating from the most proximal joint of the involved member, is:

- A. mild: meets the requirements of this subpart, 25 percent of the rating for the appropriate category in part 5223.0550;
- B. moderate: meets the requirements of this subpart and the individual can ambulate only with assistive devices or special shoes, 50 percent of the rating for the appropriate category in part 5223.0550;
- C. severe: meets the requirements of this subpart and the individual is unable to weight-bear to effectively perform most of the activities of daily living, 75 percent of the rating for the appropriate category in part 5223.0550.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

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### **5223.0430 PERIPHERAL NERVOUS SYSTEM; LOWER EXTREMITY-SENSORY LOSS.**

Subpart 1. **Total loss.** For permanent partial impairment to the peripheral nerves, plexuses, and nerve roots of the lower extremities resulting from nerve injury or disease and where there is loss of sensory function for those particular portions of the body served by the peripheral nerve, plexus, or root, the disability of the whole body is as provided in subparts 2 to 6.

- A. Total or complete sensory loss means that there is no preserved sensation.
- B. If injury to a nerve, plexus, or nerve root results only in motor loss, the rating is provided in part 5223.0420.
- C. If motor loss occurs together with sensory loss, the rating under this part may be combined as described in part 5223.0300, subpart 3, item E, with the rating under part 5223.0420.

Subp. 2. **Peripheral nerve.** There is total or complete sensory loss of the peripheral nerve, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration in the distribution of the:

- A. femoral, anterior crural, two percent;

- B. genitofemoral, or genitocrural, two percent;
- C. lateral femoral cutaneous, four percent;
- D. posterior cutaneous of thigh, two percent;
- E. sciatic, ten percent;
- F. superficial peroneal, two percent;
- G. tibial nerve:
  - (1) entire sensory distribution, six percent;
  - (2) lateral plantar branch, two percent; or
  - (3) medial plantar branch, two percent;
- H. sural (external saphenous), one percent.

Subp. 3. **Lumbosacral plexus.** There is total or complete sensory loss of the lumbosacral plexus, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration, and there is objective conformation by electrodiagnostic testing: in the distribution of the lumbosacral plexus, 16 percent.

Subp. 4. **Nerve root.** There is total or complete sensory loss of the nerve root, and signs or symptoms of organic disease or injury are present, and there is anatomic loss or alteration in the distribution of the:

- A. L3 nerve root, two percent;
- B. L4 nerve root, two percent;
- C. L5 nerve root, three percent;
- D. S1 nerve root, four percent;

E. S2, S3, and S4 nerve roots resulting in saddle anesthesia, two percent, for abnormality of penile sensation or function, the rating is as provided in part 5223.0600, subpart 6; for abnormality of vaginal sensation or function, the rating is as provided in part 5223.0600, subpart 9; for abnormality of anal function, the rating is as provided in part 5223.0590, subpart 4.

Subp. 5. **Partial loss.** Partial loss means that there is incomplete sensory loss. Partial loss is rated at 25 percent of the percentages assigned in subparts 2 to 4.

Subp. 6. **Reflex sympathetic dystrophy, causalgia, and cognate conditions.** This subpart applies to dates of injury from July 1, 1993, through August 8, 2010. For dates of injury on or after August 9, 2010, rate complex regional pain syndrome, reflex sympathetic dystrophy, causalgia, and cognate conditions as provided under part 5223.0435. For purposes of rating under this part, reflex sympathetic dystrophy, causalgia, and cognate conditions are deemed to occur in a member if at least five of the following conditions persist concurrently in that member: edema, local skin color change of red or purple, osteoporosis in underlying bony structures demonstrated by radiograph, local dyshidrosis, local abnormality of skin temperature regulation, reduced passive range of motion in contiguous or contained joints, local alteration of skin texture of smooth or shiny, or typical findings of reflex sympathetic dystrophy on bone scan.

If reflex sympathetic dystrophy is present and persistent despite treatment, the permanent partial disability, rating from the most proximal joint of the involved member, is:

A. mild: meets the requirements of this subpart, 25 percent of the rating for the appropriate category in part 5223.0550;

B. moderate: meets the requirements of this subpart and the individual can ambulate only with assistive devices or special shoes, 50 percent of the rating for the appropriate category in part 5223.0550;

C. severe: meets the requirements of this subpart and the individual is unable to weight-bear to effectively perform most of the activities of daily living, 75 percent of the rating for the appropriate category in part 5223.0550.

**Statutory Authority:** *MS s 176.105*

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### **5223.0435 COMPLEX REGIONAL PAIN SYNDROME, REFLEX SYMPATHETIC DYSTROPHY, OR CAUSALGIA.**

Subpart 1. **Applicability.** This part applies to dates of injury on or after August 9, 2010. For dates of injury from July 1, 1993, through August 8, 2010, the following parts apply: 5223.0400, subpart 6; 5223.0410, subpart 7; 5223.0420, subpart 6; and 5223.0430, subpart 6.

Subp. 2. **Rating.** To rate complex regional pain syndrome, reflex sympathetic dystrophy, causalgia, and cognate conditions, determine the impairment to the peripheral nervous system, the musculoskeletal system, the skin, and the vascular system as provided in items A to I. The ratings obtained are then combined for the final rating as described in part 5223.0300, subpart 3, item E. The percent of whole body disability for complex regional pain syndrome, reflex sympathetic dystrophy, or causalgia of a member shall not exceed the percent of whole body disability for amputation of that member. If there is no rating under items A to I, then the final rating is zero percent.

- A. For upper extremity motor loss rate as provided in part 5223.0400, subparts 1 to 5.
- B. For upper extremity sensory loss rate as provided in part 5223.0410, subparts 1 to 6.
- C. For upper extremity vascular loss rate as provided in part 5223.0580.
- D. For loss of range of motion in the upper extremity rate as provided in parts 5223.0450 to 5223.0480.
- E. For lower extremity motor loss rate as provided in part 5223.0420, subparts 1 to 5.
- F. For lower extremity sensory loss rate as provided in part 5223.0430, subparts 1 to 5.
- G. For lower extremity vascular loss rate as provided in part 5223.0580.
- H. For loss of range of motion in the lower extremity rate as provided in parts 5223.0500 to 5223.0530.
- I. For impairment due to disorder of the skin rate as provided in part 5223.0630.

**Statutory Authority:** *MS s 176.105*

**History:** *35 SR 138*

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**5223.0436 THORACIC OUTLET SYNDROME.**

Subpart 1. **Applicability.** This part applies to dates of injury on or after August 9, 2010.

Subp. 2. **Rating.** To rate thoracic outlet syndrome, determine the impairment to the peripheral nervous system and the vascular system as provided in items A to C. The ratings obtained are then combined for the final rating as described in part 5223.0300, subpart 3, item E. If there is no rating under items A to C, then the final rating is zero percent.

- A. For upper extremity motor loss rate as provided in part 5223.0400.
- B. For upper extremity sensory loss rate as provided in part 5223.0410.
- C. For upper extremity vascular loss rate as provided in part 5223.0580.

**Statutory Authority:** *MS s 176.105*

**History:** *35 SR 138*

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**5223.0440 MUSCULOSKELETAL SCHEDULE; TRUNK, EXCLUDING SPINE.**

Subpart 1. **General.** For permanent partial impairment to the trunk, excluding the spine, disability of the whole body is as provided in this part. For purposes of rating, the trunk has been divided into:

- A. the chest, including the scapulae, clavicles, sternum, ribs, costal cartilages, and chest wall musculature; and
- B. the abdomen, including the abdominal musculature.

Subp. 2. **Chest.** Disorders of the chest resulting in a permanent impairment of the respiration must be rated under part 5223.0560.

- A. Scapula:
  - (1) disorder, fracture, or surgical removal or alteration of the scapula not otherwise ratable under part 5223.0450, zero percent;
  - (2) disorder, dislocation, fracture, or surgical removal or alteration of the acromioclavicular joint not otherwise ratable under part 5223.0450, zero percent.
- B. Clavicle:
  - (1) disorder, fracture, or surgical removal or alteration of the clavicle not otherwise ratable under part 5223.0450, zero percent;
  - (2) disorder, dislocation, fracture, or surgical removal or alteration of the sternoclavicular joint, zero percent.
- C. Sternum disorder, dislocation, fracture, or surgical alteration or removal of:
  - (1) the sternum, zero percent;
  - (2) the manubriosternal joint, zero percent;
  - (3) the xiphisternal junction, zero percent;
  - (4) the xiphoid, zero percent.

D. Ribs, costal cartilage, and rib musculature, disorder, dislocation, fracture, or surgical alteration or removal of:

- (1) rib or ribs, zero percent;
- (2) costal cartilage, zero percent;
- (3) costal muscles, zero percent.

Subp. 3. **Abdomen.**

A. Abdominal muscle:

- (1) strain or sprain of abdominal muscle, zero percent;
- (2) tear or other acquired defect in abdominal muscle not otherwise ratable under item B, zero percent.

B. Hernia:

- (1) inguinal hernia, direct or indirect, unilateral or bilateral, repaired once or twice, zero percent;
- (2) inguinal hernia, direct or indirect, unilateral or bilateral, recurring after two repairs, three percent;
- (3) abdominal hernia, repaired, zero percent;
- (4) abdominal hernia, recurrent after two or more herniorrhaphies, one percent;
- (5) femoral hernia, unilateral or bilateral, repaired, zero percent;
- (6) femoral hernia, unilateral or bilateral, recurrent after two or more herniorrhaphies, one percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

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**5223.0450 MUSCULOSKELETAL SCHEDULE; SHOULDER AND UPPER ARM.**

Subpart 1. **General.** For permanent partial impairment to the shoulder and upper arm, disability of the whole body is as provided in subparts 2 to 4. The percent of whole body disability under this part may not exceed the percent of whole body disability for amputation of the arm at the shoulder. Each mutually exclusive impairing condition must be rated separately and the ratings must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is represented by a category designated as exclusive under subpart 2, it must be rated by that category only and that rating may not be combined with a rating under any other category of this part for that impairing condition.

If an impairing condition is represented by a category designated as combinable under subpart 3, it must be rated under that category and under the appropriate categories describing loss of function under subpart 4. The ratings obtained must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is not represented by a category designated either exclusive or combinable, it must be rated only under the appropriate categories describing loss of function under subpart 4.



Subp. 2. **Exclusive categories.**

- A. Acromioclavicular separation of the following severity:
  - (1) grade 1, as defined in part 5223.0310, subpart 2, zero percent;
  - (2) grade 2, as defined in part 5223.0310, subpart 3, one percent;
  - (3) grade 3, as defined in part 5223.0310, subpart 4, three percent.
- B. Anterior or posterior shoulder dislocation, documented by examination, imaging study, or invasive investigation:
  - (1) first episode or occurring less than three times in six months, three percent;
  - (2) occurring at least three times in six months, no surgical repair, ten percent;
  - (3) recurring after attempted surgical repair, ten percent;
  - (4) if repaired surgically and there is no recurrence after surgical repair, the rating is as provided under subpart 4.
- C. Resection distal end of clavicle, three percent.
- D. Chronic bicipital tendon rupture, one percent.
- E. Resection arthroplasty of the glenohumeral joint, 36 percent.
- F. Painful organic syndrome, as defined in part 5223.0310, subpart 40, not elsewhere specified and substantiated by appropriate, consistent, and reproducible clinical or medical imaging findings which results in persistent limitation of active range of motion but no limitation of passive range of motion, zero percent.

Subp. 3. **Combinable categories.**

- A. For dates of injury from July 1, 1993, through August 8, 2010, chronic rotator cuff tear, demonstrated by medical imaging study, with or without surgical repair:
  - (1) partial thickness, two percent;
  - (2) full thickness, six percent.
- B. Implant arthroplasty of the glenohumeral joint, 18 percent.
- C. Fracture or dislocation involving scapula, clavicle, humerus, not otherwise ratable under subpart 2 or 3, or part 5223.0460, zero percent.
- D. For dates of injury on or after August 9, 2010, acromioplasty, zero percent.
- E. For dates of injury on or after August 9, 2010, rotator cuff tear, demonstrated by medical imaging study:
  - (1) healed or surgically repaired with no persistent tear, zero percent;
  - (2) partial thickness tear which persists despite treatment, two percent;
  - (3) full thickness tear which persists despite treatment, six percent.

Subp. 4. **Categories describing loss of function.** Function at the shoulder is measured by the available passive range of motion in three arcs at the shoulder: flexion or extension, abduction or adduction, and rotation. Examination with goniometer is performed to determine the limits of passive range of motion

in each arc. If there is an impairment in more than one arc, the ratings for each arc are added to determine the final impairment for loss of function.

- A. Extent of range of flexion or extension:
- (1) extension is greater than zero degrees and flexion is:
    - (a) to greater than 150 degrees, zero percent;
    - (b) to between 121 degrees and 150 degrees, three percent;
    - (c) to between 101 degrees and 120 degrees, five percent;
    - (d) to between 51 degrees and 100 degrees, eight percent;
    - (e) to between zero degrees and 50 degrees, 12.5 percent;
    - (f) to less than zero degrees, that is, there is an extension contracture, 18 percent;
  - (2) extension is limited to between zero and nine degrees flexion, that is, there is a flexion contracture, and flexion is:
    - (a) to greater than 150 degrees, zero percent;
    - (b) to between 121 degrees and 150 degrees, three percent;
    - (c) to between 101 degrees and 120 degrees, five percent;
    - (d) to between 51 degrees and 100 degrees, eight percent;
    - (e) to less than 51 degrees, 12.5 percent;
  - (3) extension is limited to between ten degrees and 50 degrees flexion, that is, there is a flexion contracture, and flexion is:
    - (a) to greater than 150 degrees, two percent;
    - (b) to between 121 degrees and 150 degrees, five percent;
    - (c) to between 101 degrees and 120 degrees, seven percent;
    - (d) to between 51 degrees and 100 degrees, ten percent;
    - (e) to less than 51 degrees, 14.5 percent;
  - (4) extension is limited to between 51 degrees and 100 degrees flexion, that is, there is a flexion contracture, and flexion is:
    - (a) to greater than 150 degrees, eight percent;
    - (b) to between 121 degrees and 150 degrees, 11 percent;
    - (c) to between 101 degrees and 120 degrees, 13 percent;
    - (d) to less than 101 degrees, 16 percent;
  - (5) extension is limited to between 101 degrees and 150 degrees flexion, that is, there is a flexion contracture, and flexion is:
    - (a) to greater than 150 degrees, 14.5 percent;
    - (b) to between 121 degrees and 150 degrees, 17.5 percent;
    - (c) to less than 121 degrees, 18 percent;

(6) extension is limited to greater than 150 degrees flexion, that is, there is a flexion contracture, and flexion is to greater than 150 degrees, 18 percent;

(7) ankylosis, as defined in part 5223.0310, subpart 7, in flexion or extension occurs:

- (a) in extension, 18 percent;
- (b) between zero degrees and 50 degrees of flexion, 14.5 percent;
- (c) between 51 degrees of flexion and 100 degrees of flexion, 16 percent;
- (d) at greater than 100 degrees of flexion, 18 percent.

B. Extent of range of abduction or adduction:

(1) adduction is greater than zero degrees and abduction is:

- (a) to greater than 150 degrees, zero percent;
- (b) to between 121 degrees and 150 degrees, three percent;
- (c) to between 81 degrees and 120 degrees, eight percent;
- (d) to less than 81 degrees, 11 percent;

(2) adduction is limited to between zero and nine degrees abduction, that is, there is an abduction contracture, and abduction is:

- (a) to greater than 150 degrees, zero percent;
- (b) to between 121 degrees and 150 degrees, three percent;
- (c) to between 81 degrees and 120 degrees, eight percent;
- (d) to less than 81 degrees, 11 percent;

(3) adduction is limited to between ten degrees and 80 degrees abduction, that is, there is an abduction contracture, and abduction is:

- (a) to greater than 150 degrees, two percent;
- (b) to between 121 degrees and 150 degrees, five percent;
- (c) to between 81 degrees and 120 degrees, ten percent;
- (d) to less than 81 degrees, 11 percent;

(4) adduction is limited to greater than 80 degrees abduction, that is, there is an abduction contracture, 11 percent;

(5) ankylosis, as defined in part 5223.0310, subpart 7, in abduction or adduction occurs:

- (a) in adduction, 11 percent;
- (b) between zero degrees and 80 degrees of abduction, six percent;
- (c) at greater than 80 degrees, 11 percent.

C. Extent of range of rotation:

(1) external rotation is greater than 40 degrees and internal rotation is:

- (a) to greater than 20 degrees, zero percent;
- (b) to between zero degrees and 20 degrees, one percent;

(c) limited to between zero degrees and nine degrees external rotation, that is, there is an external rotation contracture, one percent;

(d) limited to between ten degrees and 40 degrees external rotation, that is, there is an external rotation contracture, three percent;

(e) limited to greater than 40 degrees external rotation, that is, there is an external rotation contracture, seven percent;

(2) external rotation is limited to between ten degrees and 40 degrees and internal rotation is:

(a) to greater than 20 degrees, one percent;

(b) to between zero degrees and 20 degrees, two percent;

(c) limited to between zero degrees and nine degrees external rotation, that is, there is an external rotation contracture, two percent;

(d) limited to between ten degrees and 40 degrees external rotation, that is, there is an external rotation contracture, four percent;

(3) external rotation is limited to between zero degrees and nine degrees and internal rotation is:

(a) to greater than 20 degrees, one percent;

(b) to between zero degrees and 20 degrees, two percent;

(c) limited to between one degree and nine degrees external rotation, that is, there is an external rotation contracture, two percent;

(4) external rotation is limited to between one degree and 20 degrees internal rotation, that is, there is an internal rotation contracture, and internal rotation is:

(a) to greater than 20 degrees, three percent;

(b) to between one degree and 20 degrees, four percent;

(5) external rotation is limited to greater than 20 degrees internal rotation, that is, there is an internal rotation contracture, and internal rotation is to greater than 20 degrees, seven percent;

(6) ankylosis, as defined in part 5223.0310, subpart 7, in rotation occurs:

(a) at greater than 20 degrees of internal rotation, seven percent;

(b) between 20 degrees of internal rotation and 40 degrees of external rotation, four percent;

(c) at greater than 40 degrees of external rotation, seven percent.

**Statutory Authority:** *MS s 176.105*

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**5223.0460 MUSCULOSKELETAL SCHEDULE; ELBOW AND FOREARM.**

Subpart 1. **General.** For permanent partial impairment to the elbow and forearm, disability of the whole body is as provided in subparts 2 to 4. The percent of whole body disability under this part may not exceed the percent of whole body disability for amputation of the arm at the elbow under part 5223.0540. Each mutually exclusive impairing condition must be rated separately and the ratings must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is represented by a category designated as exclusive under subpart 2, it must be rated by that category only and that rating may not be combined with a rating under any other category of this part for that impairing condition.

If an impairing condition is represented by a category designated as combinable under subpart 3, it must be rated under that category and under the appropriate categories describing loss of function under subpart 4. The ratings obtained must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is not represented by a category designated either exclusive or combinable, it must be rated only under the appropriate categories describing loss of function under subpart 4.

**Subp. 2. Exclusive categories.**

- A. Flail elbow, 39 percent.
- B. Resection head of radius, five percent.
- C. Painful organic syndrome, as defined in part 5223.0310, subpart 40, including chronic epicondylitis, medial or lateral, not elsewhere specified, and substantiated by appropriate, consistent, and reproducible clinical findings which results in persistent limitation of active range of motion but no limitation of passive range of motion, zero percent.
- D. Nerve entrapment syndrome of the radial, median, or ulnar nerve at the elbow or in the forearm:
  - (1) resolved with treatment, zero percent;
  - (2) pain and paresthesia recurring or persisting despite treatment, but not substantiated by persistent findings on electrodiagnostic testing, zero percent;
  - (3) pain and paresthesia persisting despite treatment, or recurring and persisting despite treatment and substantiated by persistent findings on electrodiagnostic testing, two percent;
  - (4) objectively demonstrable motor or sensory loss, the rating is as provided in parts 5223.0400 and 5223.0410.

**Subp. 3. Combinable categories.**

- A. Arthroplasty:
  - (1) total elbow, 17 percent;
  - (2) radial head, five percent.
- B. Elbow instability: excessive passive mediolateral motion in comparison to normal:
  - (1) subluxation in extension, reduced by flexion:
    - (a) intermittent, five percent;
    - (b) continuous, ten percent;

- (2) dislocation:
  - (a) intermittent or elicited only by examination, six percent;
  - (b) spontaneous continuous, ten percent.

C. Elbow lateral deviation: permanent deformity; measured with elbow in full passive extension:

- (1) less than 30 degrees, zero percent;
- (2) greater than or equal to 30 degrees, three percent.

D. Fracture or dislocation involving humerus, radius, or ulna, not otherwise ratable under subpart 2 or 3 or part 5223.0450 or 5223.0470, zero percent.

Subp. 4. **Categories describing loss of function.** Function at the elbow or forearm is measured by the available passive range of motion at the elbow.

The passive range of motion is measured in two arcs: flexion or extension and supination or pronation. Examination with goniometer is performed to determine the limitation of passive range of motion in each arc. If there is impairment in more than one arc, the ratings for each arc are added to determine the overall disability for loss of motion.

A. Extent of range of flexion or extension:

(1) extension is limited to between zero and 30 degrees flexion, that is, any flexion contracture is less than 30 degrees, and flexion is:

- (a) to greater than 100 degrees, zero percent;
- (b) to between 61 degrees and 100 degrees, six percent;
- (c) to between 31 degrees and 60 degrees, 15 percent;
- (d) to less than 31 degrees, 25 percent;

(2) extension is limited to between 31 degrees and 60 degrees flexion, that is, there is a flexion contracture, and flexion is:

- (a) to greater than 100 degrees, three percent;
- (b) to between 61 degrees and 100 degrees, nine percent;
- (c) to less than 61 degrees, 18 percent;

(3) extension is limited to between 61 degrees and 100 degrees flexion, that is, there is a flexion contracture, and flexion is:

- (a) to greater than 100 degrees, seven percent;
- (b) to less than 101 degrees, 13 percent;

(4) extension is limited to greater than 100 degrees flexion, that is, there is a flexion contracture, and flexion is to greater than 100 degrees flexion, 25 percent;

(5) ankylosis, as defined in part 5223.0310, subpart 7, in flexion or extension occurs:

- (a) between zero degrees and 30 degrees, 25 percent;
- (b) between 31 degrees and 60 degrees, 18 percent;

- (c) between 61 degrees and 100 degrees, 13 percent;
- (d) at greater than 100 degrees, 25 percent.

B. Extent of range of rotation:

- (1) pronation is greater than 45 degrees and supination is:
  - (a) to greater than 45 degrees, zero percent;
  - (b) to between zero degrees and 45 degrees, one percent;
  - (c) limited to between one degree and 45 degrees pronation, that is, there is a pronation contracture, three percent;
  - (d) limited to greater than 45 degrees pronation, that is, there is a pronation contracture, 17 percent;
- (2) pronation is limited to between one degree and 45 degrees and supination is:
  - (a) to greater than 45 degrees, five percent;
  - (b) to between zero degrees and 45 degrees, six percent;
  - (c) limited to between one degree and 45 degrees pronation, that is, there is a pronation contracture, eight percent;
- (3) pronation is limited to between zero degrees and 45 degrees supination, that is, there is a supination contracture, and supination is:
  - (a) to greater than 45 degrees, 11 percent;
  - (b) to between zero degrees and 45 degrees, 12 percent;
- (4) pronation is limited to greater than 45 degrees supination, that is, there is a supination contracture, 17 percent;
- (5) ankylosis, as defined in part 5223.0310, subpart 7, in rotation occurs:
  - (a) at greater than 45 degrees of supination, 17 percent;
  - (b) between ten degrees of supination and 45 degrees of supination, 12 percent;
  - (c) between nine degrees of supination and 45 degrees of pronation, eight percent;
  - (d) at greater than 45 degrees of pronation, 17 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

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**5223.0470 MUSCULOSKELETAL SCHEDULE; WRIST.**

Subpart 1. **General.** For permanent partial impairment to the wrist, disability of the whole body is as provided in subparts 2 to 4. The percent of whole body disability under this part may not exceed the percent of whole body disability for amputation of the arm at the wrist under part 5223.0540. Each mutually exclusive impairing condition must be rated separately and the ratings must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is represented by a category designated as exclusive under subpart 2, it must be rated by that category only and that rating may not be combined with a rating under any other category of this part for that impairing condition.

If an impairing condition is represented by a category designated as combinable under subpart 3, it must be rated under that category and under the appropriate categories describing loss of function under subpart 4. The ratings obtained must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is not represented by a category designated either exclusive or combinable, it must be rated only under the appropriate categories describing loss of function under subpart 4.

**Subp. 2. Exclusive categories.**

A. Painful organic syndrome, as defined in part 5223.0310, subpart 40, including tendonitis syndrome and de Quervain syndrome, not elsewhere specified, and substantiated by appropriate, consistent, and reproducible clinical findings which results in persistent limitation of active range of motion but no limitation of passive range of motion, zero percent.

B. Nerve entrapment syndrome of the ulnar, radial, or median nerve at the wrist:

- (1) resolved with treatment, zero percent;
- (2) pain and paresthesia recurring or persisting despite treatment, but not substantiated by persistent findings on electrodiagnostic testing, zero percent;
- (3) pain and paresthesia persisting despite treatment or recurring and persisting despite treatment and substantiated by persistent findings on electrodiagnostic testing, three percent;
- (4) objectively demonstrable motor or sensory loss, the rating is as provided in parts 5223.0400 and 5223.0410.

**Subp. 3. Combinable categories.**

A. Arthroplasty:

- (1) total wrist, 18 percent;
- (2) ulnar head, five percent;
- (3) proximal carpal row, nine percent;
- (4) single carpal bone resection except resection of the pisiform or hook of the hamate, six percent;
- (5) excision of the pisiform or the hook of the hamate, two percent.

B. Carpal instability, as defined in part 5223.0310, subpart 12, based on appropriate clinical, laboratory, and medical imaging findings:

- (1) confirmed by clinical examination only, four percent;
- (2) confirmed by both clinical examination and medical imaging study, seven percent;
- (3) confirmed by both clinical examination and medical imaging study which also demonstrates degenerative arthritis, 11 percent.

C. Fracture or dislocation involving radius, ulna, carpal bone not otherwise ratable under subpart 2 or 3 or part 5223.0460, zero percent.



Subp. 4. **Categories describing loss of function.** Function at the wrist is measured by the available passive range of motion at the wrist.

The passive range of motion is measured in two arcs: flexion or extension and deviation. Examination with goniometer is performed to determine the limits of passive range of motion in each arc. If there is impairment in more than one arc, the ratings for each arc are added to determine the overall disability for loss of motion.

- A. Extent of range of flexion or extension:
- (1) extension is greater than 45 degrees and flexion is:
    - (a) to greater than 45 degrees, zero percent;
    - (b) to between 31 degrees and 45 degrees, 2.5 percent;
    - (c) to between zero degrees and 30 degrees, five percent;
    - (d) limited to between one degree and 30 degrees extension, that is, there is an extension contracture, ten percent;
    - (e) limited to greater than 30 degrees extension, that is, there is an extension contracture, 25 percent;
  - (2) extension is limited to between 31 degrees and 45 degrees and flexion is:
    - (a) to greater than 45 degrees, 2.5 percent;
    - (b) to between 31 degrees and 45 degrees, five percent;
    - (c) to between zero degrees and 30 degrees, 7.5 percent;
    - (d) limited to between one degree and 30 degrees extension, that is, there is an extension contracture, 12.5 percent;
    - (e) limited to greater than 30 degrees extension, that is, there is an extension contracture, 25 percent;
  - (3) extension is limited to between one degree and 30 degrees and flexion is:
    - (a) to greater than 45 degrees, five percent;
    - (b) to between 31 degrees and 45 degrees, 7.5 percent;
    - (c) to between zero degrees and 30 degrees, ten percent;
    - (d) to between one degree and 30 degrees extension, that is, there is an extension contracture, 15 percent;
  - (4) extension is limited to between zero degrees and 30 degrees flexion, that is, there is a flexion contracture, and flexion is:
    - (a) to greater than 45 degrees, ten percent;
    - (b) to between 31 degrees and 45 degrees, 12.5 percent;
    - (c) to less than 30 degrees, 15 percent;
  - (5) extension is limited to greater than 30 degrees flexion, that is, there is a flexion contracture, 25 percent;
  - (6) ankylosis, as defined in part 5223.0310, subpart 7, in flexion or extension occurs:

- (a) at greater than 30 degrees of extension, 25 percent;
- (b) between 30 degrees of extension and five degrees of flexion, 15 percent;
- (c) between six degrees of flexion and 30 degrees of flexion, 20 percent;
- (d) at greater than 30 degrees of flexion, 25 percent.

B. Extent of range of deviation:

- (1) ulnar deviation is greater than 15 degrees and radial deviation is:
  - (a) to greater than zero degrees, zero percent;
  - (b) limited to between zero degrees and 15 degrees ulnar deviation, that is, there is an ulnar deviation contracture, two percent;
  - (c) limited to greater than 15 degrees ulnar deviation, that is, there is an ulnar deviation contracture, five percent;
- (2) ulnar deviation is limited to between zero degrees and 15 degrees and radial deviation is:
  - (a) to greater than zero degrees, two percent;
  - (b) to between zero degrees and 15 degrees ulnar deviation, that is, there is an ulnar deviation contracture, four percent;
- (3) ulnar deviation is limited to greater than zero degrees radial deviation, that is, there is a radial deviation contracture, five percent;
- (4) ankylosis, as defined in part 5223.0310, subpart 7, in deviation occurs:
  - (a) in radial deviation, five percent;
  - (b) between zero degrees of ulnar deviation and 15 degrees of ulnar deviation, two percent;
  - (c) at greater than 15 degrees of ulnar deviation, five percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364*

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## **5223.0480 MUSCULOSKELETAL SCHEDULE; HAND AND FINGERS.**

### **Subpart 1. General.**

A. Permanent partial impairment of fingers is a disability of the whole body is as provided in subparts 2 to 4. The percent of whole body disability under this part may not exceed the percent of whole body disability for amputation of the hand or digit if the impairing condition is confined to a digit under part 5223.0540. Each mutually exclusive impairing condition must be rated separately and the ratings must be combined as described in part 5223.0300, subpart 3, item E. If an impairing condition is represented by a category designated as exclusive under subpart 2, it must be rated by that category only and that rating may not be combined with a rating under any other category of this part for that impairing condition.

If an impairing condition is represented by a category designated as combinable under subpart 3, it must be rated under that category and under the appropriate categories describing loss of function under subpart 4. The ratings obtained must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is not represented by a category designated either exclusive or combinable, it must be rated only under the appropriate categories describing loss of function under subpart 4.

B. For purposes of computing the percent of disability due to injuries of the digits, each digit and each joint of each digit is assigned a percentage representing the percent of disability of the whole body resulting from 100 percent disability of that digit or joint. In subparts 2, item D; 3; and 4, the final percent disability of the whole body is computed by multiplying the overall percent disability to the digit or joint times the values listed in this subpart.

- (1) Value of the digits:
  - (a) thumb, 22 percent;
  - (b) index finger, 11 percent;
  - (c) middle finger, 11 percent;
  - (d) ring finger, five percent;
  - (e) little finger, five percent.
- (2) Value of the joints:
  - (a) thumb:
    - i. carpometacarpal joint, 17 percent;
    - ii. metacarpophalangeal joint, seven percent;
    - iii. interphalangeal joint, two percent;
  - (b) index and middle fingers:
    - i. metacarpophalangeal joint, 11 percent;
    - ii. proximal interphalangeal joint, eight percent;
    - iii. distal interphalangeal joint, five percent;
  - (c) ring and little fingers:
    - i. metacarpophalangeal joint, five percent;
    - ii. proximal interphalangeal joint, four percent;
    - iii. distal interphalangeal joint, two percent.

**Subp. 2. Exclusive categories.**

A. Mallet deformity, loss of active extension at distal interphalangeal joint of 30 degrees or more, substantiated by objective clinical findings, and persisting despite therapy, or recurring and persisting after attempted surgical correction:

- (1) index finger, 0.5 percent;
- (2) middle finger, 0.5 percent;
- (3) ring finger, 0.2 percent;

- (4) little finger, 0.2 percent.

B. Boutonniere deformity, flexion of the proximal interphalangeal joint of 30 degrees or more and extension of the distal interphalangeal joint, which can be reduced passively but not actively, substantiated by objective clinical findings, and persisting despite treatment, or recurring and persisting after attempted surgical correction:

- (1) index finger, 1.1 percent;
- (2) middle finger, 1.1 percent;
- (3) ring finger, 0.5 percent;
- (4) little finger, 0.5 percent.

C. Swan neck deformity, hyperextension of the proximal interphalangeal joint exceeding 15 degrees or more and flexion of the distal interphalangeal, which can be reduced passively but not actively, substantiated by objective clinical findings; and persisting despite treatment, or recurring and persisting after attempted surgical correction:

- (1) index finger, 1.1 percent;
- (2) middle finger, 1.1 percent;
- (3) ring finger, 0.5 percent;
- (4) little finger, 0.5 percent.

D. Arthroplasty, 100 percent of the value of the joint.

Subp. 3. **Combinable categories.**

A. Ulnar or radial deviation at a joint: permanent fixed deformity, measured with joint at neutral position:

- (1) less than ten degrees, zero percent;
- (2) mild: ten degrees to 19 degrees, ten percent of the value of the digit;
- (3) moderate: 20 degrees to 30 degrees, 20 percent of the value of the digit;
- (4) severe: greater than 30 degrees, 30 percent of the value of the digit.

B. Rotational deformity: permanent fixed deformity, measured with joint at neutral position:

- (1) less than five degrees, zero percent;
- (2) mild: five degrees to 15 degrees, ten percent of the value of the digit;
- (3) moderate: 16 degrees to 30 degrees, 20 percent of the value of the digit;
- (4) severe: greater than 30 degrees, 30 percent of the value of the digit.

C. Instability: excessive passive ulnar or radial motion in the joint in comparison to normal:

- (1) less than five degrees, zero percent;
- (2) mild: five degrees to ten degrees, ten percent of the value of the joint;
- (3) moderate: 11 degrees to 20 degrees, 20 percent of the value of the joint;
- (4) severe: greater than 20 degrees, 30 percent of the value of the joint.

D. Intrinsic tightness: measured by hyperextending the digit at the metacarpophalangeal joint and then attempting to flex the proximal interphalangeal joint, and persisting despite therapy, or recurring and persisting after attempted surgical correction:

- (1) flexion greater than 80 degrees at the proximal interphalangeal joint, zero percent;
- (2) mild: flexion from 60 degrees to 80 degrees, 15 percent of the value of the digit;
- (3) moderate: flexion from 20 degrees to 59 degrees, 30 percent of the value of the digit;
- (4) severe: flexion less than 20 degrees, 40 percent of the value of the digit.

E. Triggering: substantiated by objective clinical findings, and persisting despite therapy, or recurring and persisting after attempted surgical correction:

- (1) mild: inconstant during active range of motion, ten percent of the value of the digit;
- (2) moderate: constant during active range of motion, 20 percent of the value of the digit;
- (3) severe: constant during passive range of motion, 30 percent of the value of the digit.

F. Fracture or dislocation involving metacarpal or phalanx not otherwise ratable under subpart 3 or 4, zero percent.

Subp. 4. **Categories describing loss of function.** Function of the hand and fingers is measured by the available passive range of motion at each joint and by the quality and extent of tactile sensation in the hand. For injuries involving lacerated tendons, the available active range of motion is measured and applied to items A to H.

The passive range of motion at all joints of the digits excluding the carpometacarpal joint of the thumb is measured in one arc: flexion or extension. Examination with goniometer is performed to determine the limits of passive range of motion at each of these joints. The passive range of motion of the carpometacarpal joint of the thumb is measured by three movements of the thumb: extension or abduction, radial abduction, and opposition. Examination with a metric ruler is performed to determine the passive limitations of each of the movements of the carpometacarpal joint of the thumb.

For the thumb, all appropriate ratings for loss of motion at the interphalangeal, metacarpal, and carpometacarpal joints are added to determine the overall rating for loss of motion of the thumb. This overall rating for loss of motion of the thumb is multiplied by the value of the thumb as provided in subpart 1, item B, subitem (1), to find the whole body disability for loss of motion of the thumb.

For the fingers, ratings for loss of motion at different joints of the same finger are combined to determine the overall rating for loss of motion of the finger. The overall rating for loss of motion of a finger is multiplied by the value of the finger as provided in subpart 1, item B, subitem (1), to find the whole body disability for loss of motion of that finger.

When there is injury to more than one digit, the disabilities for loss of motion of each affected digit are added to determine the overall disability for loss of motion of the hand.

The quality and extent of tactile sensation is evaluated according to part 5223.0410, subpart 6.

Any disability for loss of sensation is combined with any overall disability for loss of range of motion to determine the final disability for loss of function.

A. Extent of range of flexion or extension at metacarpophalangeal joint for fingers excluding the thumb:

- (1) extension is greater than zero degrees and flexion is:
  - (a) to greater than 70 degrees, zero percent;
  - (b) limited to between 51 degrees and 70 degrees, ten percent of the value of the digit;
  - (c) limited to between 21 degrees and 50 degrees, 25 percent of the value of the digit;
  - (d) limited to between zero degrees and 20 degrees, 40 percent of the value of the digit;
  - (e) less than zero degrees, that is, there is an extension contracture, 60 percent of the value of the digit;
- (2) extension is limited to between zero degrees and nine degrees flexion, that is, there is a flexion contracture, and flexion is:
  - (a) to greater than 70 degrees, zero percent;
  - (b) limited to between 51 degrees and 70 degrees, ten percent of the value of the digit;
  - (c) limited to between 21 degrees and 50 degrees, 25 percent of the value of the digit;
  - (d) limited to between zero degrees and 20 degrees, 40 percent of the value of the digit;
- (3) extension is limited to between ten degrees and 30 degrees flexion, that is, there is a flexion contracture, and flexion is:
  - (a) to greater than 70 degrees, ten percent of the value of the digit;
  - (b) limited to between 51 degrees and 70 degrees, 20 percent of the value of the digit;
  - (c) limited to between 21 degrees and 50 degrees, 35 percent of the value of the digit;
  - (d) limited to between ten degrees and 20 degrees, 50 percent of the value of the digit;
- (4) extension is limited to between 31 degrees and 60 degrees flexion, that is, there is a flexion contracture, and flexion is:
  - (a) to greater than 70 degrees, 35 percent of the value of the digit;
  - (b) limited to between 51 degrees and 70 degrees, 45 percent of the value of the digit;
  - (c) limited to between 31 degrees and 50 degrees, 60 percent of the value of the digit;
- (5) extension is limited to between 61 degrees and 80 degrees flexion, that is, there is a flexion contracture, and flexion is:
  - (a) to greater than 70 degrees, 70 percent of the value of the digit;

(b) limited to between 61 degrees and 70 degrees, 80 percent of the value of the digit;

(6) extension is limited to greater than 80 degrees flexion, that is, there is a flexion contracture, 100 percent of the value of the digit;

(7) ankylosis, as defined in part 5223.0310, subpart 7, of the metacarpophalangeal joint for the fingers excluding the thumb occurs:

(a) in extension, 60 percent of the value of the digit;

(b) between neutral and 30 degrees of flexion, 50 percent of the value of the digit;

(c) between 31 degrees of flexion and 60 degrees of flexion, 60 percent of the value of the digit;

(d) between 61 degrees of flexion and 80 degrees of flexion, 80 percent of the value of the digit;

(e) at greater than 80 degrees of flexion, 100 percent of the value of the digit.

B. Extent of range of flexion or extension and the proximal interphalangeal joint for fingers excluding the thumb:

(1) extension is greater than zero degrees and flexion is:

(a) to greater than 90 degrees, zero percent;

(b) limited to between 61 degrees and 90 degrees, ten percent of the value of the digit;

(c) limited to between 46 degrees and 60 degrees, 25 percent of the value of the digit;

(d) limited to between zero degrees and 45 degrees, 45 percent of the value of the digit;

(e) less than zero degrees, that is, there is an extension contracture, 80 percent of the value of the digit;

(2) extension is limited to between zero degrees and nine degrees flexion, that is, there is a flexion contracture, and flexion is:

(a) to greater than 90 degrees, zero percent;

(b) limited to between 61 degrees and 90 degrees, ten percent of the value of the digit;

(c) limited to between 46 degrees and 60 degrees, 25 percent of the value of the digit;

(d) limited to between zero degrees and 45 degrees, 45 percent of the value of the digit;

(3) extension is limited to between ten degrees and 45 degrees flexion, that is, there is a flexion contracture, and flexion is:

(a) to greater than 90 degrees, ten percent of the value of the digit;

(b) limited to between 61 degrees and 90 degrees, 20 percent of the value of the digit;

(c) limited to between 46 degrees and 60 degrees, 35 percent of the value of the digit;

(d) limited to between ten degrees and 45 degrees, 55 percent of the value of the digit;

(4) extension is limited to between 46 degrees and 60 degrees flexion, that is, there is a flexion contracture, and flexion is:

(a) to greater than 90 degrees, 30 percent of the value of the digit;

(b) limited to between 61 degrees and 90 degrees, 40 percent of the value of the digit;

(c) limited to between 46 degrees and 60 degrees, 55 percent of the value of the digit;

(5) extension is limited to between 61 degrees and 90 degrees flexion, that is, there is a flexion contracture, and flexion is:

(a) to greater than 90 degrees, 45 percent of the value of the digit;

(b) limited to between 61 degrees and 90 degrees, 55 percent of the value of the digit;

(6) extension is limited to greater than 90 degrees flexion, that is, there is a flexion contracture, 80 percent of the value of the digit;

(7) ankylosis, as defined in part 5223.0310, subpart 7, at the proximal interphalangeal joint for the fingers excluding the thumb occurs:

(a) in extension, 80 percent of the value of the digit;

(b) between zero degrees and 45 degrees of flexion, 55 percent of the value of the digit;

(c) between 46 degrees of flexion and 90 degrees of flexion, 65 percent of the value of the digit;

(d) at greater than 90 degrees of flexion, 90 percent of the value of the digit.

C. Extent of range of flexion or extension at the distal interphalangeal joint for fingers excluding the thumb:

(1) extension is greater than zero degrees and flexion is:

(a) to greater than 45 degrees, zero percent;

(b) limited to between zero degrees and 45 degrees, 20 percent of the value of the digit;

(c) less than zero degrees, that is, there is an extension contracture, 45 percent of the value of the digit;

(2) extension is limited to between zero degrees and nine degrees flexion, that is, there is a flexion contracture, and flexion is:



- (a) to greater than 45 degrees, zero percent;
  - (b) limited to between zero degrees and 45 degrees, 20 percent of the value of the digit;
- (3) extension is limited to between ten degrees and 45 degrees flexion, that is, there is a flexion contracture, and flexion is:
- (a) to greater than 45 degrees, ten percent of the value of the digit;
  - (b) limited to between ten degrees and 45 degrees, 30 percent of the value of the digit;
- (4) extension is limited to greater than 45 degrees flexion, that is, there is a flexion contracture, 45 percent of the value of the digit;
- (5) ankylosis, as defined in part 5223.0310, subpart 7, at the interphalangeal joint for the fingers excluding the thumb occurs:
- (a) in extension, 45 percent of the value of the digit;
  - (b) between zero degrees and 45 degrees of flexion, 30 percent of the value of the digit;
  - (c) greater than 45 degrees of flexion, 45 percent of the value of the digit.
- D. Extent of range of flexion or extension at the metacarpophalangeal joint for the thumb:
- (1) extension is greater than zero degrees and flexion is:
    - (a) to greater than 30 degrees, zero percent;
    - (b) limited to between zero degrees and 30 degrees, six percent of the thumb;
    - (c) limited to less than zero degrees, that is, there is an extension contracture, six percent of the thumb;
  - (2) extension is limited to between zero degrees and 30 degrees flexion, that is, there is a flexion contracture, and flexion is:
    - (a) to greater than 30 degrees, zero percent;
    - (b) limited to between zero degrees and 30 degrees, six percent of the thumb;
  - (3) extension is limited to greater than 30 degrees flexion, that is, there is a flexion contracture, 11 percent of the thumb;
  - (4) ankylosis, as defined in part 5223.0310, subpart 7, at the metacarpophalangeal joint of the thumb occurs:
    - (a) at less than or equal to 30 degrees of flexion, six percent of the thumb;
    - (b) at greater than 30 degrees of flexion, 11 percent of the thumb.
- E. Extent of range of flexion or extension at the interphalangeal joint for the thumb:
- (1) extension is greater than zero degrees and flexion is:
    - (a) to greater than 40 degrees, zero percent;
    - (b) limited to between zero degrees and 40 degrees, three percent of the thumb;

(c) limited to less than zero degrees, that is, there is an extension contracture, nine percent of the thumb;

(2) extension is limited to between zero degrees and nine degrees flexion, that is, there is a flexion contracture, and flexion is:

(a) to greater than 40 degrees, zero percent;

(b) limited to between zero degrees and 40 degrees, three percent of the thumb;

(3) extension is limited to between ten degrees and 40 degrees flexion, that is, there is a flexion contracture, and flexion is:

(a) to greater than 40 degrees, three percent of the thumb;

(b) limited to between ten degrees and 40 degrees, six percent of the thumb;

(4) extension is limited to greater than 40 degrees flexion, that is, there is a flexion contracture, nine percent of the thumb;

(5) ankylosis, as defined in part 5223.0310, subpart 7, at the interphalangeal joint of the thumb occurs:

(a) in extension, nine percent of the thumb;

(b) between zero degrees and 40 degrees of flexion, four percent of the thumb;

(c) greater than 40 degrees of flexion, nine percent of the thumb.

F. Abduction of the thumb is the greatest possible distance from the flexor crease of the metacarpophalangeal joint of the fifth metacarpophalangeal joint to the palmar skin of the thumb tuft. The limit of passive abduction is:

(1) greater than ten centimeters, zero percent;

(2) eight to ten centimeters, five percent of the thumb;

(3) less than eight centimeters, 20 percent of the thumb.

G. Radial abduction of the thumb is the greatest possible distance from the radial border of the index finger to the ulnar border of the thumb. The limit of passive radial abduction is:

(1) greater than eight centimeters, zero percent;

(2) between five centimeters and eight centimeters, 20 percent of the thumb;

(3) less than five centimeters, 40 percent of the thumb.

H. Opposition of the thumb is the smallest possible distance between the thumb and index fingertips. The limit of passive opposition is:

(1) less than one centimeter, zero percent;

(2) between one centimeter and three centimeters, 25 percent of the thumb;

(3) greater than three centimeters, 50 percent of the thumb.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

**Published Electronically:** *August 16, 2010*

**5223.0490 MUSCULOSKELETAL SCHEDULE; PELVIS.**

Subpart 1. **General.** For permanent impairment to the pelvis, disability of the whole body is as provided in subpart 2. Permanent impairments due to sprains or strains of the sacroiliac joints must be treated as lumbar regional pain syndrome and rated as provided in part 5223.0390, subpart 3.

A. Permanent partial impairment due to injury to the peripheral nerves is as provided in parts 5223.0420 and 5223.0430, and may be combined with ratings under this part.

B. Permanent partial impairment due to bladder and urinary tract dysfunction is as provided in part 5223.0600, subpart 4, and may be combined with ratings under this part.

C. Permanent partial impairment due to sexual dysfunction is as provided in part 5223.0600, subparts 7 and 10, and may be combined with ratings under this part.

D. Permanent partial impairment due to anal dysfunction is as provided in part 5223.0590, subpart 4, and may be combined with ratings under this part.

**Subp. 2. Fractures.**

A. Fracture, healed or ununited, without displacement demonstrated on medical imaging study, zero percent.

B. Healed fracture with displacement demonstrated on medical imaging study, and with persistent gait abnormality, five percent.

C. Ununited fracture with displacement demonstrated on medical imaging study, and with persistent gait abnormality, ten percent.

D. Persistent coccygodynia with or without coccyx fracture and with or without surgical treatment, zero percent.

E. Fracture into acetabulum, the rating is the loss of range of motion at the hip as provided in part 5223.0500, subpart 4, and the rating under the categories of this part, and the final rating is the higher of the two, which may not be added or combined.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364*

**Published Electronically:** *August 16, 2010*

**5223.0500 MUSCULOSKELETAL SCHEDULE; HIP AND UPPER LEG.**

Subpart 1. **General.** For permanent partial impairment to the hip and upper leg, disability of the whole body is as provided in subparts 2 to 4. The percent of whole body disability under this part may not exceed the percent of whole body disability for amputation of the leg at the hip under part 5223.0550. Each mutually exclusive impairing condition must be rated separately and the ratings must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is represented by a category designated as exclusive under subpart 2, it must be rated by that category only and that rating may not be combined with a rating under any other category of this part for that impairing condition.

If an impairing condition is represented by a category designated as combinable under subpart 3, it must be rated under that category and under the appropriate categories describing loss of function under subpart 4. The ratings obtained must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is not represented by a category designated either exclusive or combinable, it must be rated only under the appropriate categories describing loss of function under subpart 4.

**Subp. 2. Exclusive categories.**

A. Painful organic syndrome, as defined in part 5223.0310, subpart 40, not elsewhere specified and substantiated by appropriate, consistent, and reproducible clinical or medical imaging findings which results in persistent limitation of active range of motion or persistent deviation of gait but no limitation of passive range of motion, zero percent.

B. Nerve entrapment syndrome of the femoral, obturator, or sciatic nerve at the pelvis, hip, or upper leg:

(1) resolved with treatment, zero percent;

(2) pain and paresthesia recurring or persisting despite treatment, but not substantiated by persistent findings on electrodiagnostic testing, zero percent;

(3) pain and paresthesia persisting despite treatment, or recurring and persisting despite treatment and substantiated by persistent findings on electrodiagnostic testing, two percent;

(4) objectively demonstrable motor or sensory loss, the rating is as provided in parts 5223.0420 and 5223.0430.

C. Nonunion of femoral shaft fracture requiring nonweight bearing orthosis for ambulation, 20 percent.

**Subp. 3. Combinable categories.**

A. Traumatic or surgical discrepancy of the lower extremity:

(1) less than 1.0 centimeters, zero percent;

(2) 1.0 centimeters to 1.9 centimeters, three percent;

(3) 2.0 centimeters to 3.2 centimeters, 4.5 percent;

(4) 3.3 centimeters to 4.4 centimeters, six percent;

(5) 4.5 centimeters and greater, nine percent.

B. Arthroplasty, eight percent.

C. Fractures:

(1) nonunion of hip fracture, 12 percent;

(2) fracture requiring femoral endoprosthesis, six percent;

(3) hip pinning for fracture, three percent;

(4) fracture or dislocation involving the femur not otherwise ratable under subpart 2 or 3 or part 5223.0510, zero percent.

Subp. 4. **Categories describing loss of function.** Function of the hip is measured by the available passive range of motion in three arcs: flexion or extension, abduction or adduction, and rotation. Examination with goniometer is performed to determine the limits of passive range of motion in each arc.

If there is impairment in more than one arc, the rating for each arc is added to determine the final rating for loss of function.

- A. Extent of range of flexion or extension:
- (1) extension is greater than zero degrees and flexion is:
    - (a) to greater than 90 degrees, zero percent;
    - (b) limited to between 61 degrees and 90 degrees, two percent;
    - (c) limited to between 31 degrees and 60 degrees, four percent;
    - (d) limited to between zero degrees and 30 degrees, six percent;
    - (e) less than zero degrees, that is, there is an extension contracture, seven percent;
  - (2) extension is limited to between zero and 19 degrees flexion, that is, there is a flexion contracture, and flexion is:
    - (a) to greater than 90 degrees, zero percent;
    - (b) limited to between 61 degrees and 90 degrees, two percent;
    - (c) limited to between 31 degrees and 60 degrees, four percent;
    - (d) limited to less than 31 degrees, six percent;
  - (3) extension is limited to between 20 degrees and 30 degrees flexion, that is, there is a flexion contracture, and flexion is:
    - (a) to greater than 90 degrees, two percent;
    - (b) limited to between 61 degrees and 90 degrees, four percent;
    - (c) limited to between 31 degrees and 60 degrees, six percent;
    - (d) limited to less than 31 degrees, eight percent;
  - (4) extension is limited to between 31 degrees and 45 degrees flexion, that is, there is a flexion contracture, and flexion is:
    - (a) to greater than 90 degrees, ten percent;
    - (b) limited to between 61 degrees and 90 degrees, 12 percent;
    - (c) limited to less than 61 degrees, 14 percent;
  - (5) extension is limited to between 46 degrees and 60 degrees flexion, that is, there is a flexion contracture, and flexion is:
    - (a) to greater than 90 degrees, 20 percent;
    - (b) limited to between 61 degrees and 90 degrees, 22 percent;
    - (c) limited to less than 61 degrees, 24 percent;
  - (6) extension is limited to greater than 60 degrees flexion, that is, there is a flexion contracture, 40 percent;

(7) ankylosis, as defined in part 5223.0310, subpart 7, in flexion or extension occurs:

- (a) in extension, 40 percent;
- (b) between zero degrees and 30 degrees flexion, 20 percent;
- (c) between 31 degrees and 60 degrees flexion, 24 percent;
- (d) at greater than 60 degrees flexion, 40 percent.

B. Extent of range of abduction or adduction:

(1) adduction is greater than 20 degrees and abduction is:

- (a) to greater than 20 degrees, zero percent;
- (b) limited to between one degree and 20 degrees, one percent;
- (c) limited to between zero degrees and 20 degrees adduction, that is, there is an adduction contracture, four percent;
- (d) limited to greater than 20 degrees, that is, there is an adduction contracture, eight percent;

(2) adduction is limited to between zero degrees and 20 degrees and abduction is:

- (a) to greater than 20 degrees, one percent;
- (b) limited to between one degree and 20 degrees, two percent;
- (c) limited to between zero degrees and 20 degrees adduction, that is, there is an adduction contracture, five percent;

(3) adduction is limited to between zero degrees and 20 degrees abduction, that is, there is an abduction contracture, and abduction is:

- (a) to greater than 20 degrees, four percent;
- (b) limited to between zero degrees and 20 degrees, five percent;

(4) adduction is limited to greater than 20 degrees abduction, that is, there is an abduction contracture, eight percent;

(5) ankylosis, as defined in part 5223.0310, subpart 7, in abduction or adduction occurs:

- (a) in adduction, eight percent;
- (b) between zero degrees and 20 degrees abduction, five percent;
- (c) at greater than 20 degrees abduction, eight percent.

C. Extent of range of rotation:

(1) external rotation is greater than 30 degrees and internal rotation is:

- (a) to greater than 20 degrees, zero percent;
- (b) limited to between one degree and 20 degrees, two percent;
- (c) limited to between zero degrees and 20 degrees external rotation, that is, there is an external contracture, two percent;
- (d) limited to between 21 degrees and 30 degrees external rotation, that is, there is an external rotation contracture, four percent;

(e) limited to greater than 30 degrees external rotation, that is, there is an external rotation contracture, eight percent;

(2) external rotation is limited to between 21 degrees and 30 degrees and internal rotation is:

(a) to greater than 20 degrees, zero percent;

(b) limited to between one degree and 20 degrees, two percent;

(c) limited to between zero degrees and 20 degrees external rotation, that is, there is an external rotation contracture, two percent;

(d) limited to between 21 degrees and 30 degrees external rotation, that is, there is an external rotation contracture, four percent;

(3) external rotation is limited to between zero degrees and 20 degrees and internal rotation is:

(a) to greater than 20 degrees, two percent;

(b) limited to between one degree and 20 degrees, four percent;

(c) limited to between zero degrees and 20 degrees external rotation, that is, there is an external rotation contracture, four percent;

(4) external rotation is limited to between zero degrees and 20 degrees internal rotation, that is, there is an internal rotation contracture, and internal rotation is:

(a) to greater than 20 degrees, two percent;

(b) limited to between zero degrees and 20 degrees, four percent;

(5) external rotation is limited to between 21 degrees and 30 degrees internal rotation, that is, there is an internal rotation contracture, four percent;

(6) external rotation is limited to greater than 30 degrees internal rotation, that is, there is an internal rotation contracture, eight percent;

(7) ankylosis, as defined in part 5223.0310, subpart 7, in rotation occurs:

(a) at greater than 20 degrees internal rotation, eight percent;

(b) between 20 degrees internal rotation and 20 degrees external rotation, four percent;

(c) at greater than 20 degrees external rotation, eight percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

**Published Electronically:** *August 16, 2010*

### **5223.0510 MUSCULOSKELETAL SCHEDULE; KNEE AND LOWER LEG.**

Subpart 1. **General.** For permanent partial impairment to the knee and lower leg, disability of the whole body is as provided in subparts 2 to 4. The percent of whole body disability under this part may not exceed the percent of whole body disability for amputation of the leg at the knee under part 5223.0550.

Each mutually exclusive impairing condition must be rated separately and the ratings must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is represented by a category designated as exclusive under subpart 2, it must be rated by that category only and that rating may not be combined with a rating under any other category of this part for that impairing condition.

If an impairing condition is represented by a category designated as combinable under subpart 3, it must be rated under that category and under the appropriate categories describing loss of function under subpart 4. The ratings obtained must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is not represented by a category designated either exclusive or combinable, it must be rated only under the appropriate categories describing loss of function under subpart 4.

**Subp. 2. Exclusive categories.**

**A. Plateau fracture:**

- (1) undisplaced, two percent;
- (2) depressed bone elevated, medial or lateral plateau, and:
  - (a) semilunar cartilage intact, seven percent;
  - (b) semilunar cartilage excised, partially or completely, nine percent;
- (3) depressed bone elevated, both medial and lateral plateaus, and:
  - (a) both semilunar cartilages intact, nine percent;
  - (b) one or both semilunar cartilages excised partially or completely, 11 percent.

**B. Supracondylar or intercondylar fracture:**

- (1) undisplaced supracondylar or undisplaced intercondylar fracture, two percent;
- (2) undisplaced bicondylar fracture, five percent;
- (3) displaced supracondylar fracture, four percent;
- (4) displaced unicondylar fracture, six percent;
- (5) displaced bicondylar fracture, ten percent.

**C. Patellar shaving, one percent.**

**D. Ruptured collateral ligament repaired or unrepaired:**

- (1) mild laxity, two percent;
- (2) moderate laxity, four percent.

**E. Repair patellar dislocation, five percent.**

**F. Lateral retinacular release, one percent.**

**G. Painful organic syndrome, as defined in part 5223.0310, subpart 40, not elsewhere specified and substantiated by appropriate, consistent, and reproducible clinical or medical imaging findings which results in persistent limitation of active range of motion or persistent deviation of gait but no limitation of passive range of motion, zero percent.**

**H. Nerve entrapment syndrome of the tibial or peroneal nerves at the knee or in the lower leg:**



- (1) resolved with treatment, zero percent;
- (2) pain and paresthesia recurring or persisting despite treatment, but not substantiated by persistent findings on electrodiagnostic testing, zero percent;
- (3) pain and paresthesia persisting despite treatment, or recurring and persisting despite treatment and substantiated by persistent findings on electrodiagnostic testing, two percent;
- (4) objectively demonstrable motor or sensory loss, the rating is as provided in parts 5223.0420 and 5223.0430.

I. Nonunion of tibia fracture requiring nonweight bearing orthosis for ambulation, 18 percent.

Subp. 3. **Combinable categories.**

- A. Partial or total patellectomy, four percent.
- B. Meniscectomy, or excision of semilunar cartilage in a single knee. If meniscectomy, or excision of semilunar cartilage is performed on both knees, rate each separately and combine the ratings for the overall impairment:
  - (1) up to 50 percent of a cartilage removed, two percent;
  - (2) more than 50 percent of a cartilage removed, three percent;
  - (3) up to 50 percent of both cartilages removed, four percent;
  - (4) more than 50 percent of both cartilages removed, six percent;
  - (5) for dates of injury on or after August 9, 2010, up to 50 percent of one cartilage and more than 50 percent of the other cartilage removed, five percent.
- C. Arthroplasty:
  - (1) unicondylar, seven percent;
  - (2) total condylar, eight percent;
  - (3) patella replacement, seven percent.
- D. Cruciate ligament laxity:
  - (1) anterior:
    - (a) mild: positive drawer sign, no pivot shift, three percent;
    - (b) severe: positive drawer sign, pivot shift, five percent;
  - (2) posterior, five percent.
- E. Posttraumatic varus deformity:
  - (1) up to five degrees, zero percent;
  - (2) between six degrees and 15 degrees, two percent;
  - (3) greater than 15 degrees, four percent.
- F. Posttraumatic valgus deformity:
  - (1) up to ten degrees, zero percent;
  - (2) between 11 degrees and 20 degrees, two percent;

(3) greater than 20 degrees, four percent.

G. Proximal tibial osteotomy, four percent.

H. Distal femoral osteotomy, four percent.

I. Fracture or dislocation involving the femur, tibia, or fibula not otherwise ratable under subpart 2 or 3 or part 5223.0500 or 5223.0520, zero percent. For dates of injury on or after August 9, 2010, fracture or dislocation involving the patella not otherwise rated under this subpart, subpart 2, or part 5223.0500 or 5223.0520, zero percent.

Subp. 4. **Categories describing loss of function.** Function of the knee is measured by the available passive range of motion in flexion or extension. Examination with goniometer is performed to determine the limits of passive range.

A. Extent of range of flexion or extension:

(1) extension is limited to between zero degrees and nine degrees flexion, that is, there may be a flexion contracture, and flexion is:

- (a) to greater than 120 degrees, zero percent;
- (b) limited to between 91 degrees and 120 degrees, two percent;
- (c) limited to between 51 degrees and 90 degrees, 12 percent;
- (d) limited to between 20 degrees and 50 degrees, 16 percent;
- (e) limited to less than 20 degrees, 20 percent;

(2) extension is limited to between ten degrees and 20 degrees flexion, that is, there is a flexion contracture, and flexion is:

- (a) to greater than 120 degrees, two percent;
- (b) limited to between 91 degrees and 120 degrees, four percent;
- (c) limited to between 51 degrees and 90 degrees, 14 percent;
- (d) limited to between 20 degrees and 50 degrees, 18 percent;
- (e) limited to less than 20 degrees, 20 percent;

(3) extension is limited to between 21 degrees and 35 degrees flexion, that is, there is a flexion contracture, and flexion is:

- (a) to greater than 120 degrees, eight percent;
- (b) limited to between 91 degrees and 120 degrees, ten percent;
- (c) limited to between 51 degrees and 90 degrees, 20 percent;
- (d) limited to less than 51 degrees, 24 percent;

(4) extension is limited to between 36 degrees and 50 degrees flexion, that is, there is a flexion contracture, and flexion is:

- (a) to greater than 120 degrees, 16 percent;
- (b) limited to between 91 degrees and 120 degrees, 18 percent;
- (c) limited to less than 90 degrees, 28 percent;

(5) extension is limited to between 51 degrees and 90 degrees flexion, that is, there is a flexion contracture, and flexion is:

- (a) to greater than 120 degrees, 26 percent;
- (b) limited to less than 121 degrees, 28 percent;

(6) extension is limited to greater than 90 degrees flexion, that is, there is a flexion contracture, 36 percent;

(7) ankylosis, as defined in part 5223.0310, subpart 7, in flexion or extension occurs:

- (a) between neutral and 20 degrees, 20 percent;
- (b) between 21 degrees and 50 degrees, 24 percent;
- (c) between 51 degrees and 90 degrees, 28 percent;
- (d) at greater than 90 degrees, 36 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

**Published Electronically:** *August 16, 2010*

#### **5223.0520 MUSCULOSKELETAL SCHEDULE; ANKLE.**

Subpart 1. **General.** For permanent partial impairment to the ankle, disability of the whole body is as provided in subparts 2 to 4. The percent of whole body disability under this part may not exceed the percent of whole body disability for amputation of the leg at the ankle under part 5223.0550. Each mutually exclusive impairing condition must be rated separately and the ratings must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is represented by a category designated as exclusive under subpart 2, it must be rated by that category only and that rating may not be combined with a rating under any other category of this part for that impairing condition.

If an impairing condition is represented by a category designated as combinable under subpart 3, it must be rated under that category and under the appropriate categories describing loss of function under subpart 4. The ratings obtained must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is not represented by a category designated either exclusive or combinable, it must be rated only under the appropriate categories describing loss of function under subpart 4.

#### **Subp. 2. Exclusive categories.**

##### **A. Achilles tendon rupture:**

- (1) able to stand on toes, two percent;
- (2) unable to sustain body weight on toes, four percent.

##### **B. Ankle, rupture of medial or lateral ligament, repaired or unrepaired:**

- (1) mild laxity, two percent;
- (2) moderate laxity of at least ten degrees greater widening on the Talar tilt stress test X-ray compared to the uninjured side, four percent.

C. Painful organic syndrome, as defined in part 5223.0310, subpart 40, not elsewhere specified and substantiated by appropriate, consistent, and reproducible clinical or radiographic findings which results in persistent limitation of active range of motion or persistent deviation of gait but no limitation of passive range of motion, zero percent.

D. Nerve entrapment syndrome of the plantar, sural, or peroneal nerve at the ankle or in the foot:

- (1) resolved with treatment, zero percent;
- (2) pain and paresthesia recurring or persisting despite treatment, but not substantiated by persistent findings on electrodiagnostic testing, zero percent;
- (3) pain and paresthesia persisting despite therapy, or recurring and persisting despite treatment and substantiated by electrodiagnostic testing, two percent;
- (4) objectively demonstrable motor or sensory loss, the rating is as provided in parts 5223.0420 and 5223.0430.

E. Calcaneal fracture, extraarticular, three percent.

Subp. 3. **Combinable categories.**

- A. Calcaneal fracture, intra-articular, three percent.
- B. Avascular necrosis of the talus, ten percent.
- C. Arthroplasty, ten percent.
- D. Ankle fractures:
  - (1) medial or lateral malleolus, two percent;
  - (2) bimalleolar or trimalleolar, four percent;
  - (3) any other fractures or dislocations involving the ankle not otherwise ratable under subpart 2 or 3, one percent.

Subp. 4. **Categories describing loss of function.** Function of the ankle is measured by available passive range of motion in two arcs: flexion or extension and inversion or eversion. Examination with goniometer is performed to determine the limits of passive range in each arc. If there is impairment in both arcs, the ratings for loss of motion in the arcs are added to determine the final rating of disability for loss of function.

- A. Extent of range of dorsoplantar flexion:
  - (1) plantar flexion is greater than 30 degrees and dorsiflexion is:
    - (a) to greater than ten degrees, zero percent;
    - (b) limited to between zero degrees and ten degrees, two percent;
    - (c) limited to between one degree and 20 degrees plantar flexion, that is, there is a plantar flexion contracture, five percent;
    - (d) limited to greater than 20 degrees plantar flexion, that is, there is a plantar flexion contracture, ten percent;
  - (2) plantar flexion is limited to between 16 degrees and 30 degrees and dorsiflexion is:

- (a) to greater than ten degrees, two percent;
    - (b) limited to between zero degrees and ten degrees, four percent;
    - (c) limited to between one degree and 20 degrees plantar flexion, that is, there is a plantar flexion contracture, seven percent;
    - (d) limited to greater than 20 degrees plantar flexion, that is, there is a plantar flexion contracture, 12 percent;
  - (3) plantar flexion is limited to between one degree and 15 degrees and dorsiflexion is:
    - (a) to greater than ten degrees, four percent;
    - (b) limited to between zero degrees and ten degrees, six percent;
    - (c) limited to between one degree and 15 degrees plantar flexion, that is, there is a plantar flexion contracture, nine percent;
  - (4) plantar flexion is limited to zero degrees and ten degrees dorsiflexion, that is, there is a dorsiflexion contracture, ten percent;
  - (5) plantar flexion is limited to greater than ten degrees dorsiflexion, that is, there is a dorsiflexion contracture, 20 percent;
  - (6) ankylosis, as defined in part 5223.0310, subpart 7, in dorsiflexion or plantar flexion occurs:
    - (a) at greater than ten degrees of dorsiflexion, 20 percent;
    - (b) between ten degrees of dorsiflexion and 20 degrees of plantar flexion, eight percent;
    - (c) at greater than 20 degrees of plantar flexion, 20 percent.
- B. Extent of range of inversion or eversion:
- (1) eversion is greater than 15 degrees and inversion is:
    - (a) to greater than 30 degrees, zero percent;
    - (b) limited to between 16 degrees and 30 degrees, one percent;
    - (c) limited to between zero degrees and 15 degrees, two percent;
    - (d) limited to between one degree and 15 degrees eversion, that is, there is an eversion contracture, three percent;
    - (e) limited to greater than 15 degrees eversion, that is, there is an eversion contracture, seven percent;
  - (2) eversion is limited to between 11 degrees and 15 degrees and inversion is:
    - (a) to greater than 30 degrees, zero percent;
    - (b) limited to between 16 degrees and 30 degrees, one percent;
    - (c) limited to between zero degrees and 15 degrees, two percent;
    - (d) limited to between one degree and 15 degrees eversion, that is, there is an eversion contracture, three percent;

- (3) eversion is limited to between one degree and ten degrees and inversion is:
  - (a) to greater than 30 degrees, one percent;
  - (b) limited to between 16 degrees and 30 degrees, two percent;
  - (c) limited to between zero degrees and 15 degrees, three percent;
  - (d) limited to between one degree and ten degrees eversion, that is, there is an eversion contracture, four percent;
- (4) eversion is limited to between zero degrees and ten degrees inversion, that is, there is an inversion contracture, and inversion is:
  - (a) to greater than 30 degrees, two percent;
  - (b) limited to between 16 degrees and 30 degrees, three percent;
  - (c) limited to between zero degrees and 15 degrees, four percent;
- (5) eversion is limited to between 11 degrees and 20 degrees inversion, that is, there is an inversion contracture, and inversion is:
  - (a) to greater than 30 degrees, four percent;
  - (b) limited to less than 31 degrees, five percent;
- (6) eversion is limited to greater than 20 degrees inversion, that is, there is an inversion contracture, eight percent;
- (7) ankylosis, as defined in part 5223.0310, subpart 7, in inversion or eversion occurs:
  - (a) at greater than 20 degrees inversion, eight percent;
  - (b) between 20 degrees inversion and ten degrees eversion, one percent;
  - (c) at greater than ten degrees eversion, seven percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

**Published Electronically:** *October 3, 2013*

### **5223.0530 MUSCULOSKELETAL SCHEDULE; FOOT AND TOES.**

Subpart 1. **General.** For permanent partial impairment to the foot and toes, disability of the whole body is as provided in subparts 2 to 4. The percent of whole body disability under this part may not exceed the percent of whole body disability for amputation of the foot, or toe when the impairing condition is confined to a toe under part 5223.0550. Each mutually exclusive impairing condition must be rated separately and the ratings must be combined as described in part 5223.0300, subpart 3, item E.

If an impairing condition is represented by a category designated as exclusive under subpart 2, it must be rated by that category only and that rating may not be combined with a rating under any other category of this part for that impairing condition.

If an impairing condition is not represented by a category designated either exclusive or combinable, it must be rated only under the appropriate categories describing loss of function under subpart 3.

Subp. 2. **Exclusive categories.**

A. Painful organic syndrome, as defined in part 5223.0310, subpart 40, not elsewhere specified and substantiated by appropriate, consistent, and reproducible clinical or radiographic findings which results in persistent limitation of active range of motion or persistent deviation of gait but no limitation of passive range of motion, zero percent.

B. Tarsal fractures:

- (1) healed with normal weight bearing, zero percent;
- (2) healed with deformity resulting in abnormal weight bearing as evidenced by skin calluses, three percent;
- (3) nonunion, three percent.

C. Tarsal metatarsal fracture or dislocation:

- (1) reduced, two percent;
- (2) unreduced, five percent.

D. Metatarsal fractures:

- (1) healed with normal weight bearing, zero percent;
- (2) healed with deformity resulting in abnormal weight bearing as evidenced by skin calluses, three percent;
- (3) nonunion, two percent.

E. Phalangeal fractures:

- (1) healed with normal weight bearing, zero percent;
- (2) healed with deformity resulting in abnormal weight bearing as evidenced by skin calluses or corns, one percent.

Subp. 3. **Categories describing loss of function.** Function of the toes is the availability of passive motion at the joints. When there is more than one impairment to a toe, combine the separate disabilities for the final rating. If there is impairment to more than one toe, add the separate disabilities of each toe for the final rating for loss of function.

A. Ankylosis, as defined in part 5223.0310, subpart 7, of the interphalangeal joint of the great toe:

- (1) between neutral position and 20 degrees of flexion, one percent;
- (2) at greater than 20 degrees of flexion, or in extension, four percent.

B. Ankylosis of the metatarsophalangeal joint of the great toe as determined by standing in a barefoot lateral projection X-ray and through being measured of the proximal phalanx from the weight-bearing surface:

- (1) between neutral position and 20 degrees of dorsiflexion, three percent;
- (2) in plantar flexion, five percent;
- (3) at greater than 20 degrees of dorsiflexion, five percent.

C. Ankylosis of joints of second through fifth toes:

- (1) at the distal interphalangeal joint, zero percent;
- (2) at the proximal interphalangeal joint:
  - (a) between five degrees of dorsiflexion and ten degrees of plantar flexion, zero percent;
  - (b) at greater than five degrees of dorsiflexion, or at greater than ten degrees of plantar flexion, one percent;
- (3) at the metatarsophalangeal joint:
  - (a) between neutral position and ten degrees of dorsiflexion, zero percent;
  - (b) in plantar flexion or at greater than ten degrees of dorsiflexion, one percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364*

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#### **5223.0540 MUSCULOSKELETAL SCHEDULE; AMPUTATIONS OF UPPER EXTREMITY.**

Subpart 1. **Amputations.** Permanent partial impairment due to amputation of upper extremities is a disability of the whole body as follows:

- A. amputation of the upper extremity at the shoulder, including removal of the ipsilateral scapula, clavicle, and muscles of the upper extremity attaching to the chest, 70 percent;
- B. disarticulation, as defined in part 5223.0310, subpart 21, at shoulder joint, 60 percent;
- C. amputation of arm above deltoid insertion, 60 percent;
- D. amputation of arm between deltoid insertion and elbow joint, 57 percent;
- E. disarticulation at elbow joint, 57 percent;
- F. amputation of forearm below elbow but proximal to insertion of biceps tendon, 57 percent;
- G. amputation of forearm below elbow joint distal to insertion of biceps tendon, 54 percent;
- H. disarticulation at wrist joint, 54 percent;
- I. midcarpal or midmetacarpal amputation of hand, 54 percent;
- J. amputation of multiple digits, add as described in part 5223.0300, subpart 3, item F, the ratings obtained for the specific abnormalities in items K to O;
- K. amputation of thumb:
  - (1) at metacarpophalangeal joint or with resection of metacarpal bone, 22 percent;
  - (2) through proximal phalanx, 16 percent;
  - (3) at interphalangeal joint to middle of distal phalanx, 11 percent;
  - (4) distal to middle of distal phalanx, 6.5 percent;
  - (5) isolated soft tissue loss of the end of the digit greater than one centimeter, five percent;
- L. amputation of index finger:



- (1) at metacarpophalangeal joint or with resection of metacarpal bone or through proximal phalanx, 11 percent;
  - (2) at proximal interphalangeal joint or through middle phalanx, nine percent;
  - (3) at distal interphalangeal joint to middle of distal phalanx, five percent;
  - (4) distal to middle of distal phalanx, 2.5 percent;
  - (5) isolated soft tissue loss of the end of the digit greater than one centimeter, 2.5 percent;
- M. amputation of middle finger:
- (1) at metacarpophalangeal joint or with resection of metacarpal bone or through proximal phalanx, 11 percent;
  - (2) at proximal interphalangeal joint or through middle phalanx, nine percent;
  - (3) at distal interphalangeal joint to middle of distal phalanx, five percent;
  - (4) distal to middle of distal phalanx, 2.5 percent;
  - (5) isolated soft tissue loss of the end of the digit greater than one centimeter, 2.5 percent;
- N. amputation of ring finger:
- (1) at metacarpophalangeal joint or with resection of metacarpal bone or through proximal phalanx, 5.5 percent; for dates of injury on or after August 9, 2010, at metacarpophalangeal joint or with resection of metacarpal bone or through proximal phalanx, five percent;
  - (2) at proximal interphalangeal joint or through middle phalanx, four percent;
  - (3) at distal interphalangeal joint to middle of distal phalanx, 2.5 percent;
  - (4) distal to middle of distal phalanx, one percent;
  - (5) isolated soft tissue loss of the end of the digit greater than one centimeter, one percent;
- O. amputation of little finger:
- (1) at metacarpophalangeal joint or with resection of metacarpal bone or through proximal phalanx, 5.5 percent; for dates of injury on or after August 9, 2010, at metacarpophalangeal joint or with resection of metacarpal bone or through proximal phalanx, five percent;
  - (2) at proximal interphalangeal joint or through middle phalanx, four percent;
  - (3) at distal interphalangeal joint to middle of distal phalanx, 2.5 percent;
  - (4) distal to middle of distal phalanx, one percent;
  - (5) isolated soft tissue loss of the end of the digit greater than one centimeter, one percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

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## **5223.0550 MUSCULOSKELETAL SCHEDULE; AMPUTATIONS OF LOWER EXTREMITIES.**

Subpart 1. **Amputations.** For permanent partial impairment due to amputation of lower extremities, the disability of the whole body is:

- A. amputation of the lower limb through the sacroiliac joint, 50 percent;
- B. disarticulation, as defined in part 5223.0310, subpart 21, at hip joint, 40 percent;
- C. amputation above knee joint, three inches or less below tuberosity of ischium, 40 percent;
- D. amputation above knee joint more than three inches below tuberosity of ischium, 36 percent;
- E. disarticulation at knee joint, 34 percent;
- F. amputation below knee joint, four inches or less below intercondylar notch, 34 percent;
- G. amputation below knee joint more than four inches below intercondylar notch, 28 percent;
- H. amputation at ankle, Syme type to midmetatarsal, 26 percent;
- I. midmetatarsal amputation, 14 percent;
- J. amputation of all toes at metatarsophalangeal joints, eight percent;
- K. amputation of great toe:
  - (1) with resection of metatarsal bone, eight percent;
  - (2) at metatarsophalangeal joint, five percent;
  - (3) at interphalangeal joint, four percent; for dates of injury on or after August 9, 2010, at interphalangeal joint to insertion of flexor hallucis longus, four percent;
  - (4) for dates of injury on or after August 9, 2010, distal to insertion of flexor hallucis longus, zero percent;
- L. amputation of any of second to fifth toes:
  - (1) with resection of metatarsal bone, two percent;
  - (2) at metatarsophalangeal joint, one percent;
  - (3) at proximal interphalangeal joint, zero percent;
  - (4) at distal interphalangeal joint, zero percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

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### 5223.0560 RESPIRATORY.

Subpart 1. **Evaluation procedures.** The procedures used in evaluating permanent partial impairment of the respiratory system includes the following:

- A. performance of the following tests of ventilation, as defined in part 5223.0310, subparts 18, 27, and 30:
  - (1) FEV1;
  - (2) FVC;
  - (3) DCO;

B. performance of cardiopulmonary exercise testing. Cardiopulmonary exercise testing, as defined in part 5223.0310, subpart 11, should be done when complaints of dyspnea and limitation of activity are more severe than spirometry or DCO would indicate, or there was incorrect or submaximum performance in the spirometry or DCO tests. Performance on cardiopulmonary exercise testing is measured by the  $VO_2$  max, as defined in part 5223.0310, subpart 61.

Subp. 2. **Fixed obstructive or restrictive disease.** A permanent partial impairment of the respiratory system due to fixed obstructive or restrictive disease must be rated under one of items A to F. If the measurements of FEV1, FVC, FEV1/FVC, DCO, or  $VO_2$  max fall in different items, then the item that provides for the largest percentage of disability is the appropriate rating for the condition.

A. Class 1, zero percent:

(1) FEV1 greater than or equal to 80 percent of predicted, FVC greater than or equal to 80 percent of predicted, DCO greater than or equal to 80 percent of predicted, and FEV1/FVC greater than or equal to 70 percent of predicted; or

(2)  $VO_2$  max greater than 25 milliliters per kilogram each minute.

B. Class 2, ten percent:

(1) FEV1 greater than 69 percent but less than 80 percent of predicted, or FVC greater than 69 percent but less than 80 percent of predicted, or DCO greater than 69 percent but less than 80 percent of predicted, or FEV1/FVC greater than 59 percent but less than 70 percent of predicted; or

(2)  $VO_2$  max greater than 22 milliliters per kilogram each minute but less than or equal to 25 milliliters per kilogram each minute.

C. Class 3, 25 percent:

(1) FEV1 greater than 59 percent but less than 70 percent of predicted, or FVC greater than 59 percent but less than 70 percent of predicted, or DCO greater than 59 percent but less than 70 percent of predicted, or FEV1/FVC greater than 49 percent but less than 60 percent of predicted; or

(2)  $VO_2$  max greater than 19 milliliters per kilogram each minute but less than or equal to 22 milliliters per kilogram each minute.

D. Class 4, 50 percent:

(1) FEV1 greater than 41 percent but less than 60 percent of predicted, or FVC greater than 49 percent but less than 60 percent of predicted, or DCO greater than 41 percent but less than 60 percent of predicted, or FEV1/FVC greater than 41 percent but less than 50 percent of predicted; or

(2)  $VO_2$  max greater than 15 milliliters per kilogram each minute but less than or equal to 19 milliliters per kilogram each minute.

E. Class 5, 75 percent:

(1) FEV1 greater than 30 percent but less than 41 percent of predicted, or FVC greater than 40 percent but less than 50 percent of predicted, or DCO greater than 30 percent but less than 41 percent of predicted, or FEV1/FVC greater than 30 percent but less than 41 percent of predicted; or

(2)  $VO_2$  max greater than seven milliliters per kilogram each minute but less than or equal to 15 milliliters per kilogram each minute.

F. Class 6, 95 percent:

(1) FEV1 less than or equal to 30 percent, or FVC less than or equal to 40 percent, or DCO less than or equal to 30 percent, or FEV1/FVC less than or equal to 30 percent; or

(2) VO<sub>2</sub> max less than or equal to seven milliliters per kilogram each minute.

Subp. 3. **Asthma and pulmonary conditions with an asthmatic component.** Asthma and pulmonary conditions with an asthmatic component may be rated only under this subpart. Ratings under subpart 2 may not be substituted for or combined with ratings under this subpart.

A. Ratings under this subpart are based on:

(1) the level of bronchial obstruction as measured by pulmonary function tests done when the individual is on an optimum treatment regimen but without the addition of inhaled bronchodilator immediately preceding the pulmonary function testings;

(2) the level of bronchial responsiveness as measured by standardized methacholine challenge testing;

(3) the need for bronchodilator therapy.

Each element in subitems (1) to (3) must be present for the rating under that subitem to be assigned.

B. The permanent partial disability for asthma and pulmonary conditions with an asthmatic component is:

(1) class I: FEV1 and FEV1/FVC are equal to or greater than 80 percent of predicted, PD20 is greater than 25 milligrams per milliliter, and no need for persistent bronchodilator therapy, zero percent;

(2) class II: FEV1 and FEV1/FVC are equal to or greater than 80 percent of predicted, PD20 is five to 25 milligrams per milliliter, and no need for persistent bronchodilator therapy, five percent;

(3) class III: FEV1 and FEV1/FVC are equal to or greater than 80 percent of predicted, PD20 is five to 25 milligrams per milliliter, and persistent bronchodilator therapy is required, ten percent;

(4) class IV: FEV1 and FEV1/FVC are equal to or greater than 80 percent of predicted, PD20 is .025 to four milligrams per milliliter, and no persistent bronchodilator therapy is required, ten percent;

(5) class V: FEV1 and FEV1/FVC are equal to or greater than 80 percent of predicted, PD20 is .025 to four milligrams per milliliter, and persistent bronchodilator therapy is required, 13 percent;

(6) class VI: FEV1 and FEV1/FVC are equal to or greater than 80 percent of predicted, and PD20 is less than 0.25 milligrams per milliliter, 15 percent;

(7) class VII: FEV1 or FEV1/FVC is less than 80 percent but greater than or equal to 70 percent of predicted, and PD20 is greater than five milligrams per milliliter, 18 percent;

(8) class VIII: FEV1 or FEV1/FVC is less than 80 percent but greater than or equal to 70 percent of predicted, and PD20 is 0.25 to four milligrams per milliliter, 20 percent;

(9) class IX: FEV1 or FEV1/FVC is less than 80 percent but greater than or equal to 70 percent of predicted, and PD20 is less than 0.25 milligrams per milliliter, 25 percent;

(10) class X: FEV1 or FEV1/FVC is less than 70 percent but greater than or equal to 60 percent of predicted, and PD20 is greater than 0.25 milligrams per milliliter, 28 percent;

(11) class XI: FEV1 or FEV1/FVC is less than 70 percent but greater than or equal to 60 percent of predicted, and PD20 is less than 0.25 milligrams per milliliter, 33 percent;

(12) class XII: FEV1 or FEV1/FVC is less than 60 percent but greater than or equal to 40 percent of predicted, and PD20 is greater than 0.25 milligrams per milliliter, 50 percent;

(13) class XIII: FEV1 or FEV1/FVC is less than 60 percent but greater than or equal to 40 percent of predicted, and PD20 is less than 0.25 milligrams per milliliter, 60 percent;

(14) class XIV: FEV1 or FEV1/FVC is less than 40 percent but greater than or equal to 30 percent of predicted, 75 percent;

(15) class XV: FEV1 or FEV1/FVC is less than 30 percent of predicted, 95 percent.

C. Additional impairment occurs if persistent steroid therapy is required for the treatment of the asthma or asthmatic component:

(1) only inhaled steroids required, add three percent to the otherwise appropriate class in item B, but the total impairment cannot exceed 95 percent;

(2) if oral steroids are required or oral steroids and inhaled steroids, add ten percent to the otherwise appropriate class in item B, but the total impairment cannot exceed 95 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364; 35 SR 138*

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## **5223.0570 ORGANIC HEART DISEASE.**

Subpart 1. **General.** For permanent partial impairment due to organic heart disease, the disability of the whole body is as provided in subparts 2 and 3.

Subp. 2. **Organic heart disease.** Signs or symptoms of organic heart disease are documented, there is anatomic loss or alteration as demonstrated by angiography or nuclear medicine study.

Objective evidence of myocardial infarction is documented, that is, cardiac enzymes or EKG changes:

A. uncomplicated, five percent;

B. with persistent abnormal cardiac function, the rating is as provided in subpart 3 and combined as described in part 5223.0300, subpart 3, item E, with five percent.

Subp. 3. **Exercise limitation.** Signs or symptoms of organic heart disease are documented, there is anatomic loss or alteration as demonstrated on angiography or nuclear medicine study. The percentage of disability is determined by the loss of functional exercise capacity as measured by Bruce protocol exercise stress test or nuclear isotope exercise study.

A. Able to exercise to a VO2 max greater than 25 milliliters per kilogram each minute, zero percent.

B. Exercise stress test or exercise study stopped at or VO2 max of 25 milliliters per kilogram each minute but after 22 milliliters per kilogram each minute due to development of diagnostic ischemic changes, arrhythmia, pathological change in blood pressure or blood pressure-heart rate product, or the development of objective clinical signs of cardiac dysfunction, or dyspnea with rales on auscultation, or chest pain relieved by nitroglycerin, ten percent.

C. Exercise stress test or exercise study stopped at or before VO<sub>2</sub> max of 22 milliliters per kilogram each minute but after 19 milliliters per kilogram each minute due to development of diagnostic ischemic changes, arrhythmia, pathological change in blood pressure or blood pressure-heart rate product, or the development of objective clinical signs of cardiac dysfunction, or dyspnea with rales on auscultation, or chest pain relieved by nitroglycerin, 25 percent.

D. Exercise stress test or exercise study stopped at or before VO<sub>2</sub> max 19 milliliters per kilogram each minute but after 15 milliliters per kilogram each minute due to development of diagnostic ischemic changes, arrhythmia, pathological change in blood pressure or blood pressure-heart rate product, or the development of objective clinical signs of cardiac dysfunction, or dyspnea with rales on auscultation, or chest pain relieved by nitroglycerin, 50 percent.

E. Exercise stress test or exercise study stopped at or before VO<sub>2</sub> max of 15 milliliters per kilogram each minute but after seven milliliters per kilogram each minute due to development of diagnostic ischemic changes, arrhythmia, pathological change in blood pressure or blood pressure-heart rate product, or the development of objective clinical injury of cardiac dysfunction, or dyspnea with rales on auscultation, or chest pain relieved by nitroglycerin, 75 percent.

F. Exercise stress test or exercise study stopped before a VO<sub>2</sub> max of seven milliliters per kilogram each minute due to development of diagnostic ischemic changes, arrhythmia, pathological change in blood pressure or blood pressure-heart rate product, or the development of objective clinical signs of cardiac dysfunction, or dyspnea with rales on auscultation, or chest pain relieved by nitroglycerin, 95 percent.

G. Diagnostic ischemic changes at rest, 95 percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364*

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### 5223.0580 VASCULAR DISEASE AFFECTING EXTREMITIES.

Subpart 1. **General.** This part provides the percentage of disability of the whole body for permanent partial impairment of the vascular system, including the arteries, veins, and lymphatics. For purposes of evaluation, disorders of the vascular system are grouped into the following categories:

- A. ulceration;
- B. edema;
- C. intermittent claudication;
- D. Raynaud's Phenomenon.

A permanent partial impairment of the vascular system may be rated under any of subparts 1 to 6, but only under one subpart for any injury or illness. The category that is appropriate and provides for the largest percentage of disability is the correct category for rating. Any amputation occurring due to impairment of the vascular system shall be rated separately as provided in parts 5223.0540 and 5223.0550 and is the sole rating due to the vascular impairment for that member. If only a part of a limb, that is, a single finger, is amputated, the remainder of the limb may suffer a permanent impairment due to a vascular disorder, that is, Raynaud's Phenomenon in the remaining fingers. In such a case, the ratings under this part may be combined with ratings under parts 5223.0540 and 5223.0550.

Subp. 2. **Ulceration.** There is organic disease of the arterial, venous, or lymphatic system as demonstrated by an X-ray with or without contrast, computerized axial tomogram, sonogram, or radionuclide scan, or a volume study or a flow study, the rating is as provided in part 5223.0640 for skin disorders.

Subp. 3. **Edema.** There is organic disease of the arterial, venous, or lymphatic system as demonstrated by an X-ray with or without contrast, computerized axial tomogram, sonogram, or radionuclide scan, or a volume study or a flow study. For purposes of rating under this subpart, the value of the upper extremity shall be 60 percent of the whole body and the value of the lower extremity shall be 40 percent of the whole body. The ratings for each limb involved are combined as described in part 5223.0300, subpart 3, item E, to determine the final rating under this subpart.

- A. No edema, or edema completely controlled by treatment, zero percent.
- B. There is persistent mild to moderate edema of a limb that is incompletely controlled by treatment, ten percent of the value of the extremity, that is, six percent of the whole body for an upper extremity, four percent of the whole body for a lower extremity.
- C. There is persistent severe edema of a limb that is incompletely controlled by treatment, 30 percent of the value of the extremity, that is, 18 percent of the whole body for an upper extremity, 12 percent of the whole body for a lower extremity.
- D. There is persistent severe edema of a limb that is completely unamenable to treatment, 65 percent of the value of the extremity, that is, 39 percent of the whole body for an upper extremity, 26 percent of the whole body for a lower extremity.

Subp. 4. **Intermittent claudication.** The rating under this subpart is the same whether vascular impairment in one or both lower extremities is the cause of the intermittent claudication. There is organic disease of the arterial system in the lower extremity as demonstrated by an X-ray with or without contrast, computerized axial tomogram, sonogram, or radionuclide scan, or a volume study or a flow study, and:

- A. no intermittent claudication, or claudication completely controlled by treatment, zero percent;
- B. intermittent claudication occurs after walking more than 500 feet on level ground despite treatment, ten percent of the whole body;
- C. intermittent claudication occurs after walking less than 500 feet on level ground despite treatment, 30 percent of the whole body;
- D. claudication occurs at rest despite treatment, 85 percent of the whole body.

Subp. 5. **Raynaud's Phenomenon.** There is organic disease of the arterial system in the upper extremity as demonstrated by a radiograph, X-ray with or without contrast, computerized axial tomogram, sonogram, or radionuclide scan, or a volume study or a flow study, or organic disease of the autonomic nervous system. The ratings for both upper extremities are combined as described in part 5223.0300, subpart 3, item E, to determine the final rating under this subpart.

- A. Raynaud's Phenomenon occurs in a limb on exposure to ambient temperatures lower than zero degrees centigrade, or 32 degrees Fahrenheit, but is controlled by treatment, zero percent.
- B. Raynaud's Phenomenon occurs in a limb on exposure to ambient temperatures lower than four degrees centigrade, or 39 degrees Fahrenheit, despite treatment, five percent.

C. Raynaud's Phenomenon occurs in a limb on exposure to ambient temperatures lower than ten degrees centigrade, or 50 degrees Fahrenheit, despite treatment, 20 percent.

D. Raynaud's Phenomenon occurs in a limb on exposure to ambient temperatures lower than 20 degrees centigrade, or 68 degrees Fahrenheit, despite treatment, 40 percent.

Subp. 6. **Surgical alteration.** Surgical removal or alteration of all or part of an artery, vein, or lymphatic not otherwise ratable under this part, zero percent.

**Statutory Authority:** *MS s 176.105*

**History:** *17 SR 3364*

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### 5223.0590 GASTROINTESTINAL TRACT.

Subpart 1. **General.** This part provides the percentage of disability of the whole body for permanent partial impairment of the gastrointestinal tract. For evaluative purposes, the gastrointestinal tract has been divided into:

- A. the upper digestive tract including the esophagus, stomach, duodenum, small intestine, and pancreas;
- B. the colon and rectum;
- C. the anus;
- D. the liver;
- E. the biliary tract;
- F. enterocutaneous fistulas.

The ratings determined under subparts 2 to 7 may be combined as described in part 5223.0300, subpart 3, item E.

Subp. 2. **Upper digestive tract.** Esophagus, stomach, duodenum, small intestine, and pancreas.

A. Class 1, two percent. Signs or symptoms of organic upper digestive tract disorder are present; there is anatomic loss or alteration, but treatment is not required; and weight can be maintained at the desirable level, as defined in part 5223.0310, subpart 20, by oral diet.

B. Class 2, 15 percent. Signs or symptoms of organic upper digestive tract disorder are present; there is anatomic loss or alteration; treatment with dietary restriction and drugs is required for control of symptoms, signs, or nutritional deficiency; and there is loss of weight below the desirable weight which does not exceed ten percent on oral diet.

C. Class 3, 35 percent:

(1) signs or symptoms of organic upper digestive tract disorder are present; there is anatomic loss or alteration; treatment with dietary restrictions and drugs does not completely control symptoms, signs, or nutritional state; and there is loss of weight below the desirable weight which is greater than ten percent but does not exceed 20 percent on oral diet; or

(2) signs or symptoms of organic upper digestive tract disorder are present; there is anatomic loss or alteration; intravenous hyperalimentation is required for therapy; and weight loss does not exceed 20 percent of the desirable weight.



D. Class 4, 65 percent. Signs or symptoms of organic upper digestive tract disorder are present; there is anatomic loss or alteration; continuous treatment with dietary restrictions and drugs does not completely control symptoms, signs, or nutritional state; and there is loss of weight below the desirable weight which is greater than 20 percent regardless of whether on oral diet or intravenous hyperalimentation.

E. Surgical removal or alteration of all or part of the esophagus, stomach, duodenum, small intestine, or pancreas, not otherwise ratable under this subpart or subpart 7 or part 5223.0620, zero percent.

Subp. 3. **Colon and rectum.** Fiber supplements are not to be considered a special diet or a restriction of diet.

A. Class 1, two percent. Signs or symptoms of organic colonic or rectal disorder are infrequent; limitation of activities, special diet, or medication is not required; no systemic manifestations are present; and weight can be maintained at the desirable level, as defined in part 5223.0310, subpart 20.

B. Class 2, 15 percent. Signs or symptoms of organic colonic or rectal disorder are frequent; there is anatomic loss or alteration; there is intermittent disturbance of bowel function, accompanied by periodic or continual pain; no continuous restriction of diet or symptomatic therapy is necessary; and weight can be maintained at desirable weight.

C. Class 3, 30 percent. Signs or symptoms of organic colonic or rectal disorder are very frequent; there is anatomic loss or alteration; there are moderate to severe exacerbations of disturbance of bowel function, accompanied by periodic or continual pain; treatment with restriction of activity, special diet, and drugs is required during episodes of symptoms; and there is loss of weight below the desirable weight or anemia due to blood loss.

D. Class 4, 50 percent. Signs or symptoms of organic colonic and rectal disorder are continuous; there is anatomic loss or alteration; there are persistent disturbances of bowel function with severe persistent pain; treatment with complete limitation of activity, restriction of diet, and medication is required and does not entirely control the symptoms; and there is loss of weight below the desirable weight or anemia due to blood loss.

E. Surgical removal or alteration of all or part of the colon and rectum, not otherwise ratable under this subpart or subpart 7, zero percent.

Subp. 4. **Anus.**

A. Class 1, two percent:

(1) signs of organic anal disorder are present and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with anal function and there is mild incontinence involving gas or liquid stool;

(2) signs of organic anal disorder are present, and there is anatomic loss or alteration, and anal symptoms are mild, intermittent, and controlled by treatment.

B. Class 2, 12 percent:

(1) signs of organic anal disorder are present and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with anal function, and moderate but partial fecal incontinence is present, and treatment is required;

(2) signs of organic anal disorder are present, there is anatomic loss or alteration, and continual anal symptoms are present and incompletely controlled by treatment.

C. Class 3, 22 percent:

(1) signs of organic anal disorder are present and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with anal function and complete fecal incontinence is present in spite of continuous treatment;

(2) signs of organic anal disorder are present, there is anatomic loss or alteration, and continued anal symptoms are present and completely unresponsive or not amenable to therapy.

Subp. 5. **Liver.**

A. Class 1, five percent:

(1) there is objective evidence of persistent liver disorder even though no symptoms of liver disorder are present; there is no history of ascites, jaundice, or bleeding esophageal varices within five years; weight can be maintained at the desirable level, as defined in part 5223.0310, subpart 20; and biochemical studies, that is, SGOT or SGPT, are less than four times the upper limit of normal;

(2) primary disorders of bilirubin metabolism are present.

B. Class 2, 20 percent. There is objective evidence of persistent liver disorder even though no symptoms of liver disease are present; there is no history of ascites, jaundice, or bleeding esophageal varices within five years; weight can be maintained at the desirable level; and biochemical studies, that is, SGOT or SGPT, are more than four times the upper limit of normal.

C. Class 3, 40 percent. There is objective evidence of persistent liver disorder; there is a history of jaundice, ascites, or bleeding esophageal or gastric varices within the past year; and there are intermittent symptoms of portosystemic encephalopathy.

D. Class 4, 75 percent. There is objective evidence of persistent liver disorder; there is persistent ascites, jaundice, or bleeding esophageal or gastric varices; there are central nervous system manifestations of hepatic insufficiency; and there is loss of lean body weight below the desirable weight which is greater than ten percent.

E. Surgical removal or alteration of part of the liver, not otherwise ratable under this subpart or subpart 7, zero percent.

Subp. 6. **Biliary tract.**

A. Class 1, five percent. There are less than four episodes in a 12-month period of biliary tract dysfunction.

B. Class 2, 20 percent. There are more than four episodes in a 12-month period of biliary tract dysfunction, and symptoms are unresponsive or unamenable to treatment.

C. Class 3, 40 percent. There is irreparable persisting obstruction of the bile tract with recurrent cholangitis.

D. Class 4, 75 percent. There is persistent jaundice and liver disorder due to obstruction of the common bile duct, and the liver disease is as described in subpart 5, item D.

E. Surgical removal or alteration of all or part of the biliary tract or gallbladder, not otherwise ratable under this subpart or subpart 7, zero percent.

Subp. 7. **Enterocutaneous fistulas.**

A. Esophagostomy, as defined in part 5223.0310, subpart 24, ten percent.

- B. Gastrostomy, as defined in part 5223.0310, subpart 31, ten percent.
- C. Jejunostomy, as defined in part 5223.0310, subpart 34, 15 percent.
- D. Ileostomy, as defined in part 5223.0310, subpart 33, 15 percent.
- E. Colostomy, as defined in part 5223.0310, subpart 15, five percent.

**Statutory Authority:** *MS s 176.105*

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### **5223.0600 REPRODUCTIVE AND URINARY TRACT SCHEDULE.**

Subpart 1. **General.** This part provides the percentage of disability of the whole body for permanent partial impairment of the reproductive and urinary systems. The percentages indicated in this schedule are the disability of the whole body for the corresponding class. For evaluative purposes, the reproductive and urinary systems are divided into the:

- A. upper urinary tract;
- B. bladder;
- C. urethra;
- D. male reproductive organs; and
- E. female reproductive organs.

The ratings determined under subparts 2 to 11 may be combined as described in part 5223.0300, subpart 3, item E.

#### **Subp. 2. Upper urinary tract.**

A. Loss of a single kidney, ten percent. This category shall apply only when loss of a single kidney is the only upper urinary tract permanent partial impairment. When loss of a single kidney occurs in combination with any one of the classes in items B to E, the disability rating for that class shall be increased by adding ten percent to the otherwise applicable rating.

B. Class 1, five percent. Signs or symptoms of organic and irreversible upper urinary tract disorder are present; there is anatomic loss or alteration; and the creatinine clearance is decreased below normal but is greater than 52 milliliters per minute.

C. Class 2, 22 percent. Signs or symptoms of organic and irreversible upper urinary tract disorder are present; there is anatomic loss or alteration; and the creatinine clearance is less than 52 milliliters per minute but is greater than 42 milliliters per minute.

D. Class 3, 47 percent. Signs or symptoms of organic and irreversible upper urinary tract disorder are present; there is anatomic loss or alteration; and the creatinine clearance is less than 42 milliliters per minute but is greater than 28 milliliters per minute.

E. Class 4, 77 percent:

(1) signs or symptoms of organic and irreversible upper urinary tract disorder are present; there is anatomic loss or alteration; and the creatinine clearance is less than 28 milliliters per minute;

(2) there is loss of both kidneys or only kidney and chronic hemodialysis or kidney transplantation is required.

F. Surgical removal or alteration of all or part of the upper urinary tract not otherwise ratable under this subpart or subpart 4, zero percent.

**Subp. 3. Bladder.**

A. Class 1, five percent. Signs or symptoms of organic bladder disorder are present and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with bladder function, and intermittent treatment is required, but there is no evidence of intervening malfunction between episodes of treatments or symptomatology.

B. Class 2, 15 percent. Signs or symptoms of organic bladder disorder are present, and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with bladder function, and continuous treatment is required, but there is no incontinence.

C. Class 3, 20 percent. Signs or symptoms of organic bladder disorder are present and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with bladder function, and there is intermittent incontinence.

D. Class 4, 30 percent. Signs or symptoms of organic bladder disorder are present and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with bladder function, and there is total incontinence.

E. Surgical removal or alteration of all or part of the bladder not otherwise ratable under this subpart or subpart 4, zero percent.

**Subp. 4. Urinary diversion.**

A. Uretero - intestinal, ten percent.

B. Cutaneous ureterostomy without intubation, ten percent.

C. Nephrotomy or intubated ureterostomy, 15 percent.

**Subp. 5. Urethra.**

A. Class 1, two percent. Signs or symptoms of organic urethral disorder are present; there is anatomic loss or alteration; and intermittent therapy is required to control symptoms.

B. Class 2, 15 percent. Signs or symptoms of organic urethral disorder are present that are not controlled by treatment and there is anatomic loss or alteration.

**Subp. 6. Penis.**

A. Psychogenic impotence, zero percent.

B. Class 1, ten percent. There is an objectively demonstrated organic dysfunction and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with penile function, and sexual function is possible but there is difficulty with erection, ejaculation, or sensation.

C. Class 2, 15 percent. There is an objectively demonstrated organic dysfunction and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with penile function, and erection is possible but ejaculation and sensation are absent.

D. Class 3, 20 percent. There is an objectively demonstrated organic dysfunction and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with penile function, and there is complete absence of erection, ejaculation, and sensation.

**Subp. 7. Testes, epididymides, and spermatic cords.**

A. Class 1, five percent:

(1) signs or symptoms of organic testicular, epididymal, or spermatic cord disorder are present; there is anatomic alteration or loss; continuous treatment is not required; and there are no abnormalities of seminal or hormonal functions;

(2) there has been loss of one testicle.

B. Class 2, ten percent. Signs or symptoms of organic testicular, epididymal, or spermatic cord disorder are present; there is anatomic alteration or loss; continuous treatment is required; and there are objectively detectable seminal or hormonal abnormalities.

C. Class 3, 20 percent:

(1) signs or symptoms of organic testicular, epididymal, or spermatic cord disorder are present; there is anatomic alteration or loss; and there is complete loss of seminal or hormonal function;

(2) there has been loss of both testes or only testicle.

**Subp. 8. Prostate and seminal vesicles.**

A. Class 1, five percent. Signs or symptoms of organic prostatic or seminal vesicular dysfunction or disorder are present; there is anatomic alteration or loss; and continuous treatment is not required.

B. Class 2, ten percent. Signs or symptoms of organic prostatic or seminal vesicular dysfunction or disorder are present; there is anatomic alteration or loss; and continuous treatment is required.

C. Class 3, 20 percent. There has been ablation of the prostate or seminal vesicles.

**Subp. 9. Vulva and vagina.**

A. Class 1, ten percent:

(1) signs or symptoms of organic vulvar or vaginal dysfunction or disorder are present and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with sexual function, and there is impaired sensation but penile containment is possible;

(2) signs or symptoms of organic vulvar or vaginal dysfunction or disorder are present and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with sexual function, and penile containment is possible, and there is a complete loss of sensation or significant dyspareunia is present.

B. Class 2, 20 percent. Signs or symptoms of organic vulvar or vaginal dysfunction or disorder are present and there is anatomic loss or alteration, or there is an objectively demonstrated neurological lesion known to interfere with sexual function, and there is impaired sexual function, and penile containment is not possible.

**Subp. 10. Cervix and uterus.**

A. Class 1, five percent:

(1) signs or symptoms of organic disorder or deformity of the cervix or uterus are present; there is anatomic loss or alteration; and continuous treatment is not required;

(2) there is cervical stenosis which requires no treatment;

(3) there is anatomic or complete functional loss of the cervix or uterus in the postmenopausal years.

B. Class 2, ten percent:

(1) signs or symptoms of organic disorder or deformity of the cervix or uterus are present; there is anatomic loss or alteration; and continuous treatment is required;

(2) there is cervical stenosis and recurrent treatment is required.

C. Class 3, 20 percent:

(1) signs or symptoms of organic disorder or deformity of the cervix or uterus are present which are not controlled by continuous treatment, and there is anatomic loss or alteration;

(2) there is complete cervical stenosis completely unamenable to treatment;

(3) there is anatomic or complete functional loss of the cervix or uterus in the premenopausal years.

Subp. 11. **Fallopian tubes and ovaries.**

A. Class 1, five percent:

(1) signs or symptoms of organic disorder or deformity of the fallopian tubes or ovaries are present, and continuous treatment is not required;

(2) there is anatomic or complete functional loss of one fallopian tube or ovary in the premenopausal years.

B. Class 2, ten percent. Signs or symptoms of organic disorder or deformity of the fallopian tubes or ovaries are present, and continuous treatment is required, but tubal patency persists and ovulation is possible.

C. Class 3, 20 percent:

(1) signs or symptoms of organic disorder or deformity of the fallopian tubes or ovaries are present, and there is total loss of tubal patency or total failure to produce ova in the premenopausal years completely unamenable to treatment;

(2) there is anatomic or complete functional loss of both fallopian tubes or both ovaries in the premenopausal years.

**Statutory Authority:** *MS s 176.105*

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**5223.0610 HEMATOPOIETIC.**

Subpart 1. **General.** This part provides the percentage of disability of the whole body for permanent partial impairment of the hematopoietic system. For evaluation purposes, the following are considered separately:

- A. red blood cells;
- B. platelets; and
- C. white blood cells.

The ratings determined under subparts 2 to 4 may be combined as described in part 5223.0300, subpart 3, item E.

**Subp. 2. Red blood cells.**

A. History of persistent anemia substantiated by objective tests, and uncorrected by appropriate and persistent therapy:

- (1) hemoglobin greater than nine grams per 100 milliliters, zero percent;
- (2) hemoglobin greater than eight grams per 100 milliliters and less than or equal to nine grams per 100 milliliters, 20 percent;
- (3) hemoglobin greater than seven grams per 100 milliliters and less than or equal to eight grams per 100 milliliters, 40 percent;
- (4) hemoglobin greater than six grams per 100 milliliters and less than or equal to seven grams per 100 milliliters, 60 percent;
- (5) hemoglobin greater than five grams per 100 milliliters and less than or equal to six grams per 100 milliliters, 80 percent;
- (6) hemoglobin less than five grams per 100 milliliters, 95 percent.

B. History of persistent erythrocytosis substantiated by objective tests, uncorrected by continuous therapy for 12 months, and not related to a condition which can be rated as provided in parts 5223.0560 to 5223.0580:

- (1) hemoglobin less than 18 grams per 100 milliliters with no or infrequent therapy, zero percent;
- (2) hemoglobin less than 18 grams per 100 milliliters and requiring frequent or continuous therapy, five percent;
- (3) hemoglobin greater than 18 grams per 100 milliliters despite continuous therapy, ten percent.

**Subp. 3. Platelets.**

A. History of persistent thrombocytopenia substantiated by objective tests, and uncorrected by persistent and appropriate therapy:

- (1) platelet count greater than 70,000, zero percent;
- (2) platelet count less than 70,000 but greater than 40,000 and individual is restricted from high risk activity, 20 percent;
- (3) platelet count less than 40,000 but greater than 20,000 and individual is restricted from strenuous activity, 40 percent;
- (4) platelet count less than 20,000 and there is a consistent risk of life-threatening hemorrhage, 75 percent.

B. Any permanent impairment to other body parts or organs directly resulting from hemorrhage secondary to the thrombocytopenia must be rated as provided in the appropriate parts of this schedule. These ratings must be combined with each other and with any ratings under this part in the manner described in Minnesota Statutes, section 176.105, subdivision 4, paragraph (c).

Subp. 4. **White blood cells.**

A. History of persistent leukopenia substantiated by objective tests, and uncorrected by persistent and appropriate therapy:

- (1) white count greater than or equal to 2,000, zero percent;
- (2) white count less than 2,000 but no limitation on time spent outside domicile, ten percent;
- (3) white count less than 2,000 and there is limitation on the amount of time spent outside of domicile, 40 percent;
- (4) white count less than 2,000 and receiving active medical care for opportunistic infection more than half the time, 70 percent;
- (5) white count less than 2,000 and ongoing active opportunistic infection despite continuous medical care, 95 percent.

Subp. 5. **Spleen.** Surgical removal or alteration of all or part of the spleen, not otherwise ratable under this part, zero percent.

**Statutory Authority:** *MS s 176.105*

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**5223.0620 ENDOCRINE.**

Subpart 1. **General.** For permanent partial impairment due to endocrine disease, the disability of the whole body is as provided in subparts 2 to 5. For evaluation purposes, the following are considered separately:

- A. hypothyroidism;
- B. hypoparathyroidism;
- C. hypoadrenalism; and
- D. hypoinsulinism.

Any permanent partial impairment to other body parts or organs directly resulting from any of these endocrine disorders must be rated as provided in the appropriate parts of this schedule. These ratings may be combined with each other and with any ratings under this part as described in part 5223.0300, subpart 3, item E.

Subp. 2. **Thyroid; hypothyroidism.** History of signs or symptoms of thyroid insufficiency substantiated by objective tests, and there is anatomic loss or alteration, and persisting for 12 months:

- A. signs or symptoms resolved with chronic replacement therapy, zero percent;
- B. signs or symptoms cannot be fully resolved with replacement therapy, 15 percent.



Subp. 3. **Parathyroid; hypoparathyroidism.** History of signs or symptoms of parathyroid insufficiency substantiated by objective tests, and there is anatomic loss or alteration, and persisting:

- A. normal calcium level maintained by replacement therapy, zero percent;
- B. normal calcium level cannot be maintained despite replacement therapy, ten percent.

Subp. 4. **Adrenal; hypoadrenalism.** History of signs or symptoms of adrenal insufficiency substantiated by objective tests, and there is anatomic loss or alteration, and persisting:

- A. signs or symptoms resolved with replacement therapy, zero percent;
- B. signs or symptoms cannot be consistently controlled with replacement therapy, 15 percent.

Subp. 5. **Insulin; hypoinsulinism.** History of signs or symptoms of insulin deficiency substantiated by objective tests, and there is anatomic loss or alteration to the islets of Langerhans, and persisting:

- A. signs or symptoms controlled with diet alone, two percent;
- B. signs or symptoms controlled with oral medication and diet, four percent;
- C. signs or symptoms controlled with insulin and diet, 15 percent;
- D. signs or symptoms inadequately controlled despite treatment with insulin and diet, 25 percent.

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## 5223.0630 SKIN DISORDERS.

Subpart 1. **General.** This part provides the percentage of disability of the whole body for permanent partial impairment of the skin. This schedule is not affected by the location of the skin disorder or the percentage of the body surface area involved, or by the type of skin disorder, except for those due to heat injuries and cold injuries which must be rated as provided in part 5223.0640.

### Subp. 2. **Skin disorders.**

A. Class 0, zero percent. Signs or symptoms of skin disorder resolved completely with treatment.

B. Class 1, two percent. Signs or symptoms of skin disorder are present and supported by objective skin findings, and there is no persistent limitation in the performance of the activities of daily living, as defined in part 5223.0310, subpart 5, although exposure to certain physical or chemical agents may temporarily result in a limitation of activity.

C. Class 2, ten percent. Signs or symptoms of skin disorder are present, and intermittent treatment is required, and there is limitation in the performance of some of the activities of daily living.

D. Class 3, 20 percent. Signs or symptoms of skin disorder are present, and continuous treatment is required, and there is limitation in the performance of many of the activities of daily living but able to live independently.

E. Class 4, 40 percent. Signs or symptoms of skin disorder are present, and continuous treatment is required which may include periodic confinement at home or other domicile, and there is

limitation in the performance of many of the activities of daily living, and cannot live independently, but able to perform self cares independently.

F. Class 5, 75 percent. Signs or symptoms of skin disorder are present, and continuous treatment is required which necessitates confinement at home or other domicile, and there is severe limitation in the performance of nearly all of the activities of daily living and requires some assistance with self cares.

**Statutory Authority:** *MS s 176.105*

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### 5223.0640 HEAT AND COLD INJURIES.

Subpart 1. **General.** This part provides the percentage of disability of the whole body for permanent partial impairment due to heat and cold injuries.

Heat injuries may be due to radiant heat, flame, hot gases or fumes, electric current, friction, chemicals, or radiation. Cold injuries may be due to environmental conditions or from contact with cold solids, liquids, or gases.

The whole body disability due to heat or cold injuries is not directly equal to the percentage of body surface area involved. The percentage of body surface area involved is used, however, in certain items to categorize impairments. When required the percentage of body surface area affected must be determined according to the method of Lund and Browder, as defined in part 5223.0310, subpart 36.

Any permanent partial impairment to other body parts or organs other than as provided in this part and directly resulting from a heat or cold injury must be rated as provided in the appropriate parts of this schedule. These ratings may be combined with each other and with any ratings under this part as described in part 5223.0300, subpart 3, item E.

Subp. 2. **Heat and cold injuries other than electrical conduction.** A rating under this part is the combination, as described in part 5223.0300, subpart 3, item E, of the ratings assigned by items A to G.

A. Any heat or cold injury that heals and leaves no scar, zero percent.

B. Cold intolerance of the hands, face, feet, or head as evidenced by the wearing of heavy gloves, heavy socks, or additional scarves at 35 degrees Fahrenheit:

(1) a scar or skin graft of at least ten square centimeters must be present for an affected member to be rated under this item. These ratings may be added as described in part 5223.0300, subpart 3, item F, to determine the overall rating for cold intolerance:

- (a) dominant hand, four percent;
- (b) nondominant hand, three percent;
- (c) face, three percent; or
- (d) foot, three percent;

(2) with history of preceding heat or cold injury but without scar or skin graft, entire impairment of all affected areas is, two percent.

C. Systemic heat intolerance as evidenced by fatigue or malaise or nausea; an oral temperature of at least 100 degrees Fahrenheit upon exposure to an environmental temperature of 90 degrees Fahrenheit at 60 percent relative humidity; and an initial heat injury that involved at least 50 percent of the body surface area, as measured by the method of Lund and Browder, as defined in part 5223.0310, subpart 36, five percent.

D. Sensitivity to sun exposure as evidenced by the need to cover the skin or use sun screen to prevent sunburn, or local sensitivity to heat as evidenced by redness or pain, and a scar or skin graft of at least ten square centimeters must be present for an affected member to be rated under this item. These ratings may be added as described in part 5223.0300, subpart 3, item F, to determine the overall rating for sensitivity to sun exposure:

- (1) dominant hand, four percent;
- (2) nondominant hand, three percent;
- (3) face, three percent;
- (4) if the sensitivity affects any other areas of the body, affecting less than five percent of the body surface area, zero percent;
- (5) if the sensitivity affects any other body areas, affecting five to 20 percent of the body surface area, two percent;
- (6) if the sensitivity affects any other body areas, affecting more than 20 percent of the body surface area, three percent.

E. Skin sensitivity to dust, chemical, or petroleum exposure, or altered sweating, or apocrine gland dysfunction. For one or any combination of these conditions, the whole body disability is:

- (1) if the sensitivity affects less than five percent of the body surface area, zero percent;
- (2) if the sensitivity affects five to 20 percent of the body surface area, two percent;
- (3) if the sensitivity affects 20 percent or more of the body surface area, three percent.

F. Nondermatomal sensory loss:

- (1) loss of sensation due to nerve injury must be rated as provided in parts 5223.0410 and 5223.0430;
- (2) any loss of sensation in the digits must be rated as provided in part 5223.0410;
- (3) nondermatomal sensory loss, affecting less than five percent of the body surface area, one percent;
- (4) nondermatomal sensory loss, affecting five to 20 percent of the body surface area, three percent;
- (5) nondermatomal sensory loss, affecting more than 20 percent of the body surface area, five percent.

G. Persistent open sores, recurrent skin breakdown after initial healing, or skin grafting, rate as provided in part 5223.0630.

**Subp. 3. Electrical conduction injuries.**

A. Injury to the skin must be rated as provided in subpart 2, items A to G.

B. Injury to peripheral nerve must be rated as provided in parts 5223.0400 to 5223.0430, as applicable.

C. Cosmetic disfigurement must be rated as provided in part 5223.0650.

**Statutory Authority:** *MS s 176.105*

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### 5223.0650 COSMETIC DISFIGUREMENT.

Subpart 1. **General.** This part provides the percentage of disability of the whole body for permanent partial impairment due to cosmetic disfigurement. This part applies only to disfigurement on the face, head, neck, or dorsum of the hands. If there has been an operation, this rating is done after correction by plastic surgery. The final rating under this schedule shall not be done until 24 months after the injury. The ratings under this part may be combined as described in part 5223.0300, subpart 3, item E.

#### Subp. 2. **Face.**

- A. The face is the anterior head from the forehead, to and including the chin.
- B. The nose:
- (1) deformity of nasal tip, or external deformity, thinning, or eversion of ala nasi, five percent;
  - (2) loss of more than 50 percent of nasal cartilage, or of both ala nasi, 25 percent;
  - (3) deforming fracture of the nose, four percent.
- C. The eyes, where this rating may be combined with any additional rating as provided in part 5223.0330, if visual impairment is present:
- (1) loss of one eyebrow, 2.5 percent;
  - (2) loss of two eyebrows, five percent;
  - (3) ectropion:
    - (a) lower lid pulled from eye when mouth is opened and neck extended, five percent;
    - (b) lower lid pulled away with no movement of face or neck, ten percent;
    - (c) cornea unprotected when sleeping, 15 percent;
  - (4) epiphora, ten percent;
  - (5) scarring of an eyelid, four percent.
- D. The mouth, a rating under this item is the sum of subitems (1) to (4):
- (1) noncongenital microstomia or distortion affecting eating and dental hygiene, ten percent;
  - (2) eversion of the upper lip, 7.5 percent;
  - (3) eversion of the lower lip, 7.5 percent;
  - (4) distortion of vermillion border, ten percent.

- E. The ear:
- (1) loss of 75 percent or more of one external ear, five percent;
  - (2) loss of less than 75 percent of one external ear, or significant scarring or disfigurement of an ear, four percent.
- F. The face, in areas other than those covered in items B to E:
- (1) deforming fractures of facial skeleton, other than nose, eight percent per side of face involved;
  - (2) diffuse scarring, that is, secondary to burns:
    - (a) hypertrophic scarring, as defined in part 5223.0310, subpart 32, affecting only forehead above the eyebrows, ten percent;
    - (b) hypertrophic scarring affecting the lower face from eyebrows to chin, 25 percent;
    - (c) hypertrophic scarring affecting both the forehead above the eyebrows and the lower face from the eyebrows to chin, 35 percent;
  - (3) wrinkling, as defined in part 5223.0310, subpart 62, of face in areas covered in subitem (2), units (a) to (c), one-third of listed percentages;
  - (4) linear scarring, that is, secondary to lacerations:
    - (a) linear scar less than two centimeters in length, zero percent;
    - (b) linear scar greater than two centimeters in length but less than eight centimeters in length, two percent;
    - (c) linear scar greater than eight centimeters or multiple linear scars, four percent;
    - (d) hypertrophic linear scarring, multiply listed percentages in units (a) to (c), by 1.25.

**Subp. 3. Head, alopecia.**

- A. Anterior hairline:
- (1) loss of less than 20 percent of hair on anterior hairline, zero percent;
  - (2) loss of 20 to 50 percent of hair on anterior hairline, two percent;
  - (3) loss of more than 50 percent of hair on anterior hairline, three percent.
- B. Elsewhere on head and not affecting anterior hairline:
- (1) loss of zero to 15 percent of hair, zero percent;
  - (2) loss of 16 to 30 percent of hair, one percent;
  - (3) loss of 31 to 50 percent of hair, two percent;
  - (4) loss of more than 50 percent of hair, three percent.

The ratings under this item and item A must be combined as provided in Minnesota Statutes, section 176.105, subdivision 4, paragraph (c).

**Subp. 4. Anterior neck.**

A. The anterior neck extends from the ear lobule anteriorly to the ear lobule and downward to midclavicle. Disfigurement on the posterior neck from the ear lobule posteriorly to the ear lobule shall be rated under subpart 6. Ratings under items B and C shall be combined as described in part 5223.0300, subpart 3, item E.

B. Hypertrophic scarring, as defined in part 5223.0310, subpart 32, or banding, as defined in part 5223.0310, subpart 10, of the anterior neck:

- (1) affecting less than ten percent of the anterior neck, zero percent;
- (2) affecting ten to 30 percent of the anterior neck, ten percent;
- (3) affecting 30 to 50 percent of the anterior neck, 12 percent;
- (4) affecting more than 50 percent of the anterior neck, 15 percent.

C. The chin shelf is the area from the chin backwards to the neck:

- (1) chin shelf extends less than two inches, three percent;
- (2) chin shelf extends less than one inch, ten percent.

**Subp. 5. Hand.** The hand extends from the carpus distally. Loss of body parts and loss of function are rated in parts 5223.0400 to 5223.0550 and ratings as provided in those parts may be combined as described in part 5223.0300, subpart 3, item E, with ratings under this subpart.

A. Hypertrophic scarring, as defined in part 5223.0310, subpart 32, affecting less than 30 percent of dorsum of one hand, zero percent.

B. Hypertrophic scarring affecting 30 to 50 percent of dorsum of one hand, three percent.

C. Hypertrophic scarring affecting 50 percent or more of dorsum of one hand, seven percent.

D. Hypertrophic scarring affecting the palm of the hand, zero percent.

**Subp. 6. Other disfigurements.**

A. Loss of volume of female breast tissue, rate each breast separately and add the ratings for the overall disability due to loss of volume. Ratings under this item may be added as described in part 5223.0300, subpart 3, item F, to ratings under item B:

- (1) loss of zero to 25 percent of volume of breast, zero percent;
- (2) loss of 26 to 50 percent of volume of breast, two percent;
- (3) loss of greater than 50 percent of volume of breast, four percent.

B. Loss of nipple, either male or female, rate each nipple separately and add the ratings for the overall impairment due to loss of nipple. Ratings under this item may be added as described in part 5223.0300, subpart 3, item F, to ratings under item A and combined as described in part 5223.0300, subpart 3, item E, with ratings under other applicable items. Loss of nipple, three percent.

C. Disfigurement other than of the face, head, anterior neck, and hand rated in subparts 2 to 4, or loss of volume of female breast tissue or loss of nipple rated in items A and B. Visible loss of tissue, hypertrophic scarring, as defined in part 5223.0310, subpart 32, and visible pigment changes are considered disfigurements under this item:

- (1) less than five percent of body surface area according to the method of Lund and Browder, as defined in part 5223.0310, subpart 36, zero percent;
- (2) five percent to 20 percent of the body surface area, two percent;
- (3) 21 percent to 50 percent of the body surface area, four percent;
- (4) greater than 50 percent of the body surface area, ten percent.

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