The Musculoskeletal System – Lower Body

Trainee Handout

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Objectives

* Demonstrate an understanding of the basic principles for applying the Rating Schedule while evaluating Lower Body musculoskeletal disabilities
* Identify the circumstances in which separate evaluations are permissible for the same joint
* Recognize the rules and regulations surrounding musculoskeletal disabilities
* Determine appropriate evaluation levels based on the evidence surrounding the disabilities of the lower extremities

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Topic 1: Musculoskeletal evaluations

**38 CFR 4.40 Functional Loss**

38 CFR 4.40 provides that disability of the musculoskeletal system is primarily the inability, due to damage or infection in parts of the system, to perform the normal working movements of the body with normal excursion, strength, speed, coordination and endurance. It is, therefore, essential that the examination adequately portray the anatomical damage as well as the functional loss with respect to all of these elements. The functional loss may be due to absence of or pathology affecting part or all of the necessary bones, joints and muscles, or it may be due to pain. We consider pain in evaluating disabilities when adequate pathology is present and evidenced by the visible behavior of the claimant undertaking the motion. We also consider weakness and limitation of motion in evaluating disabilities. Objective evidence of weakness is manifest by motor strength tests and clinical findings of atrophy (a diminution of tone and size of the muscle).

A precedential Court decision, *DeLuca v. Brown*, 1995, requires that we consider evidence showing not only limitation of motion, but also any evidence demonstrating weakened movement, excess fatigability, incoordination and pain in evaluating disabilities. The Court held that the Rating Schedule does not prohibit consideration of a higher evaluation based on a greater limitation of motion due to pain on use including during flare-ups. The medical examiner is to give an opinion on whether pain could significantly limit functional ability during flare-ups or used repeatedly over time. The examiner is to express this additional limitation in degrees of additional range of motion lost due to pain on use or during flare-ups. If the examiner cannot provide this opinion without resorting to speculation, he/she is to express that, rather than guessing whether or not any additional limitation of motion occurs on repetitive movement.

The Rating Schedule provides that in evaluating the joints, a complete medical examination is required to understand the nature and extent of the claimant’s disabilities.

Examiners should provide information not only on the history and objective findings on exam, but also furnish findings of any of the following: (38 CFR 4.45)

* less movement than normal (due to ankylosis, limitations, contracted scars, etc.)
* more movement than normal (from a flail joint, nonunion of fracture, relaxation of ligament, etc.)
* weakened movement (due to muscle or tendon injury, disease or injury to nerves)
* excess fatigability
* incoordination or impaired ability to execute skilled movements smoothly
* pain on movement, swelling, deformity, or atrophy of disuse

Ideally, in the examination report, each of these should be noted, whether by objective findings or by absence. The examiner should furnish the limitation of motion, in degrees, resulting from these factors. The examiner should ask the claimant for information on flare-ups and frequency of flare-ups of symptoms that are intermittent or experienced only after a period of use or time. For example, if the veteran has normal range of motion of the left knee from 0 – 140 degrees, but the examiner states that in her opinion the veteran’s additional loss of range of motion due to pain, weakness, fatigability, and weakness, and considering flare-ups and pain on repeated use, is 10 degrees (in extension), evaluate the motion based on this limitation. As mentioned, the examiner should state the limits of functional ability during flare-ups in terms of degree of motion loss or state that it is not possible to do so without resort to speculation.

**Major Joints**

The following joints are considered major joints of the lower body musculoskeletal system:

* Hip
* Knee
* Ankle

**Groups of Minor Joints**

The following are considered groups of minor joints of the lower body musculoskeletal system:

* Interphalangeal, metatarsal and tarsal joints of the Lower Extremities
* Lumbosacral articulation and both sacroiliac joints (are to be rated on disturbance of lumbar spine functions)

**38 CFR 4.59 Painful Motion**

The Rating Schedule states that with any form of arthritis painful motion is an important factor of disability; and the facial expression, wincing, etc., on pressure or manipulation, should be carefully noted and definitely related to affected joints. The intent of the Rating Schedule is to recognize painful motion with joint or periarticular pathology as productive of disability. 38 CFR 4.59 provides that findings of painful, unstable, or malaligned joints due to healed injury should be entitled *at least the minimum compensable rating* (10 percent) for the joint. Evidence of muscle spasm may be characteristic of painful motion. Crepitation, an audible clicking or popping sound, may also serve to identify points of contact that are diseased. Flexion would elicit such manifestations. The examiner should test the joints for pain on both active and passive motion, weight bearing and non-weight bearing; and if possible, provide the range of motion of the opposite undamaged joint for comparison purposes.

**Circulatory Disturbances**

Any circulatory disturbances, especially of the lower extremity following injury in the popliteal space, must not be overlooked, and require rating generally as phlebitis. (38 CFR 4.62)

**Acute, Subacute, or Chronic Diseases**

An acute, subacute or chronic disease is defined as one lasting three months or more, and generally cannot be prevented by vaccines or cured by medication, nor do they just disappear.

For a joint or group of joints affected by degenerative arthritis, use the diagnostic code which justifies the assigned evaluation.

For example, when the requirements for compensable LOM of a joint are met under a DC other than [38 CFR 4.71a, DC 5003](http://www.ecfr.gov/cgi-bin/text-idx?SID=13bcad22732de2e24d3da7cad62932d5&node=se38.1.4_171a&rgn=div8), hyphenate that DC in the conclusion with a preceding “5003-.” Then list the appropriate DC, such as [38 CFR 4.71a, DC 5261](http://www.ecfr.gov/cgi-bin/text-idx?SID=13bcad22732de2e24d3da7cad62932d5&node=se38.1.4_171a&rgn=div8), limited extension of the knee, 10 percent, creating the DC “5003-5261.”

However, if other joints affected by arthritis are compensably evaluated in the same rating decision, use only the DC appropriate to these particular joints which supports the assigned evaluation and omit the modifying “5003.”

**NOTE:** If the arthritis is caused by a traumatic incident do not use DC 5003.

**Osteomyelitis**

Osteomyelitis, DC 5000, is an inflammation of bone matter, and may be either active or inactive. When there is an active process, an infection is present and the condition requires antibiotic treatment. For rating purposes, the condition is considered inactive when there has been no recurrence or evidence of active infection in the past five years. The condition is not to be rated as osteomyelitis if it has been cured by removal (amputation) or radical resection of the affected bone. 38 CFR 4.43 provides that osteomyelitis, once identified, should be considered as a continuously disabling process whether or not an actively discharging sinus (an air space within the substance of bone; an abnormal channel permitting release of pus) or other evidence of infection is manifest from time to time, unless the source of infection is entirely removed by amputation. When no amputation or removal of the infected part has taken place, osteomyelitis may continue as a permanent rating to be combined with other ratings for residual conditions, limiting evaluations to not exceeding the amputation ratings at the site of election (38 CFR 4.68).

In evaluating osteomyelitis, the presence of the condition in the pelvis, vertebrae, or extending into major joints, or with a long history of such constitutional symptoms as anemia or amyloid liver changes, may allow for a 100 percent evaluation. A 60 percent evaluation is for frequent episodes of osteomyelitis, with constitutional symptoms, such as those mentioned above (anemia, amyloid liver changes). Lesser evaluations are assigned for lesser levels of severity. For example a 30 percent evaluation may be assigned when there is definite involucrum or sequestrum, that is, when there is definite evidence showing necrotic (or dead) bone, whether or not there is discharging sinus (drainage of pus).

The 20 and 10 percent evaluations assignable may be for historical evaluation or for other reasons. Note (1) under DC 5000 for osteomyelitis provides that a rating of 10 percent, as an exception to the amputation rule, is to be assigned in any case of active osteomyelitis where the amputation rating for the affected part is 0 percent. Note (2) of DC 5000 for osteomyelitis states that a 20 percent evaluation may be assigned following the initial infection of active osteomyelitis with no subsequent reactivation. The prerequisite for this historical rating is an established recurrent osteomyelitis. To qualify for the 10 percent rating as an historical evaluation, two or more episodes following the initial infection are required. The 20 percent rating assigned as an historical evaluation based on evidence of active infection within the past five years must be distinguished from the 20 percent evaluation authorized when there is a discharging sinus. The historical 20 percent rating or the 10 percent rating, when applicable, will be assigned once only to cover disability at all sites of previously active infection with a future ending date in the case of the 20 percent rating.

(1) An initial episode of active osteomyelitis is not a basis for either of the historical ratings. Do not assign the 20 percent historical evaluation until the first "recurrent" episode of osteomyelitis. Then assign a 20 percent historical evaluation that will be extended for 5 years from the date of examination showing the osteomyelitis to be inactive. Assign a closed rating at the expiration of the 5-year extension.

(2) Assign the 10 percent historical evaluation only if there have been two or more recurrences of active osteomyelitis following the initial infection.

(3) Although saucerization, sequestrectomy or guttering might be successful in treating osteomyelitis, do not discontinue the historical rating since cure of the osteomyelitis may not be considered attained unless there has been removal or radical resection of the affected bone.

Refer to M21-1MR, III.iv.4.A.7 for examples demonstrating the proper rating procedures.

**Rheumatoid Arthritis**

Rheumatoid arthritis, DC 5002, may be evaluated as an active or inactive process. A confirmed diagnosis generally requires correlation of blood work. The sedimentation rate (ESR level) is usually elevated in 90 percent of the cases. Examination findings often note soft tissue changes about the joints, joint effusion (fluid about the joint), limitation of motion usually first affecting proximal interphalangeal and metacarpophalangeal joints; and in more severe and late cases, there may be present constitutional symptoms such as emaciation, anemia, deformities, contractures, subluxations, and muscle and bone atrophy. The condition progresses with inflammatory changes affecting the synovial membranes and may be manifested by evidence of pain, swelling and stiffness of the joints. It usually occurs before middle age and its onset may be acute with a febrile attack. Late radiographic changes may show diminished density of bone substance or articular ends. Haygarth’s nodes, an enlargement of the proximal interphalangeal joints of the fingers, an important diagnostic sign, may also be noted.

***Evaluation Considerations for Rheumatoid Arthritis***

With rheumatoid arthritis (DC 5002), give special attention to the following in addition to, or in advance of, demonstrable x-ray changes:

(a) Muscle spasm;

(b) Periarticular and articular soft tissue changes, such as synovial hypertrophy (swelling of the synovial membrane), villose hypertrophy, flexion contracture deformities, joint effusion, destruction of articular cartilage; and ankylosis or limitation of motion of joint due to bony changes;

(c) Constitutional changes such as emaciation, anemia, muscular and bone atrophy, skin complications, gastrointestinal symptoms, capillary stasis, imbalance in water metabolism (dehydration), vascular changes, cardiac involvement, dry joints, low renal function, postural deformities, and low grade edema of the extremities.

When evaluating rheumatoid arthritis as an active process, the rating should not be combined with the residual ratings for limitation of motion or ankylosis, but rather, assign the higher evaluation of the more appropriate diagnostic code. As an active process, a 100 percent evaluation is warranted when the evidence shows constitutional manifestations associated with active joint involvement, causing total incapacitation. If not considered totally incapacitating, a lesser 60 percent evaluation may be assigned if the evidence shows weight loss and anemia productive of severe impairment of health, or severely incapacitating exacerbations occurring *four* or more times a year, or a lesser number if over prolonged periods.

As an inactive process, the condition should be rated based on chronic residuals, such as limitation of motion or ankylosis, under the appropriate diagnostic codes of the Rating Schedule for the specific joint(s) involved. Limitation of motion should be objectively confirmed by findings such as swelling, muscle spasm or satisfactory evidence of painful motion. However, if the level of limitation of motion is not of a compensable level (at least 10 percent or more), a rating of 10 percent may be assigned for each such major joint or group of minor joints affected by limitation of motion, to be combined, not added, under DC 5002.

**Degenerative Arthritis (hypertrophic or osteoarthritis)**

Degenerative arthritis, also known as osteoarthritis or hypertrophic arthritis, DC 5003, is marked by degeneration of the joint cartilage or hypertrophy of the bone. X-ray evidence should be used to substantiate a diagnosis. The condition may be manifested by pain, stiffness and limitation of motion of affected joints. Degenerative arthritis established by x-ray findings will be rated on the basis of limitation of motion under the appropriate diagnostic codes for the specified joint or joints involved (DC 5200 etc.), except when the level of limitation of motion of the specific joint or joints involved is not compensable under the appropriate diagnostic codes. In these cases, a rating of 10 percent will be assigned for each such major joint or group of minor joints affected, to be combined, not added, under DC 5003. Again, in order to assign the 10% for each major joint, the limitation of motion must have shown findings such as swelling, muscle spasm, or satisfactory evidence of painful motion described by the examiner.

In the absence of limitation of motion, a 20 percent evaluation may be assigned for x-ray evidence of involvement of two or more major joints or two or more minor joint groups, with occasional incapacitating exacerbations. A 10 percent evaluation may be assigned with x-ray evidence of involvement of two or more major joints or 2 or more minor joint groups, *without* occasional incapacitating exacerbations. The Rating Schedule notes that the 20 and 10 percent evaluations based on x-ray findings should *not* be combined with ratings based on limitation of motion. The 20 and 10 percent evaluations based on x-ray findings as noted above, will not be applicable for rating conditions under DC 5013 to 5024, inclusive (such as osteoporosis, benign bone growths, gout, bursitis, synovitis, tenosynovitis, etc.).

**Disposition of Arthritis Cases Previously Rated as a Single Disability**

RVSRs may encounter cases where arthritis of multiple joints was previously rated as a single disability. These cases will be *re-rated* as follows:

(1) If the separate evaluation of the arthritic disability results in no change in the combined degree previously assigned and if a rating is required, re-rate using the new procedure (that is, a separate evaluation for each affected joint, as applicable) with the same effective date as previously assigned.

(2) If re-rating using the new procedures results in an increased combined evaluation, apply 38 CFR 3.105(a) to retroactively increase the evaluation. NOTE: This is actually not a *correction* of the previous decision, but a re-rating called for under a change in procedures.

(3) If re-rating using the new procedure results in a reduced combined evaluation, apply 38 CFR 3.105(a) and (e), unless the assigned percentage is protected under 38 CFR. 3.951.

**Other Types of Arthritis**

Gonorrheal, pneumococci, typhoid, syphilitic, streptococcic, and other types of arthritis, DC 5004 through 5009, are not truly rheumatoid arthritis, but the Rating Schedule provides they will be evaluated (that is, rated) as for rheumatoid arthritis. Each of these conditions results from pyogenic or microbial organisms associated with an underlying disease process. For example, gonorrheal arthritis, also known as urethral arthritis, is due to invasion of the joint by the gonococcus and is usually associated with gonorrheal urethritis. Pneumococci arthritis is due to pneumococcus, syphilitic arthritis is associated with or due to syphilis, etc. Medical evidence will establish the etiology, or root cause, of the type of arthritis present. Symptoms are usually of sudden onset, most often found in large, weight-bearing joints and the wrists.

Arthritis due to trauma, DC 5010, is caused by a direct wound or injury. Like degenerative arthritis, it should be substantiated by x-ray findings, however, it differs from degenerative arthritis in that degenerative arthritis may affect other joints over the passage of time, whereas arthritis due to trauma is limited to the injured joint. Arthritis due to trauma will be evaluated, or rated, as degenerative arthritis.

**Arthritis due to Strain**

When there is a service incurred lower extremity amputation or shortening, a disabling arthritis developing in the same extremity, or in *both* *lower* extremities; including arthritis of the lumbosacral joints and lumbar spine, if associated with the leg amputation or shortening; will be considered as service incurred. This will generally require separate evaluation of the arthritis in the joints directly subject to strain.

**Medical Examinations**

The VA examiner will report evidence of additional loss of range of motion due to such factors as weakness, fatigue, incoordination, and pain as outlined in 38 CFR 4.45. Examiner will furnish a medical history of the injury and fully describe clinical findings. In addition, the examiner will often request additional x-rays, lab work, MRI or CT scan for evaluating the condition at issue as needed or as directed by the Rating Specialist. The examination report should include the findings from these x-rays and other studies and the examiner’s correlation of such studies. Often, the exam report will be released to the Regional Office *before* the examiner’s comments on the results of those x-rays or tests have been included. If an examiner’s correlation is necessary, follow local procedures for requesting an addendum to the exam report to ask for the examiner’s comments based on review of the x-ray or other test findings.

Complete range of motion studies are required to properly evaluating disabilities of the musculoskeletal system. Accurate measurement of the length of stumps, dimensions and location(s) of scar(s), and, if necessary, range of motion studies in terms of degrees should be reported where required. A goniometer is an instrument that may be used for the measurement of limitation of motion. Examiners are to describe fully and accurately any scar so that residual level of disability may be evaluated. The scar location, length, width, and depth; whether such scar is painful, inflamed, adherent to the underlying tissue, causes limitation of motion, is exceptionally disfiguring, etc., is required. Evaluate these scars separately and even compensably. (38 CFR 4.44 through 4.46, 4.59, 4.61, and 4.71). The Rating Schedule provides diagrams of normal range of motion studies for major joints (Plates I and II, available as attachments in this guide) in the chapter on evaluating disabilities of the musculoskeletal system. *The Disability* *Examination Worksheets* also provide information on range of motion limits.

**Amputation Rule**

38 CFR 4.68 of the Rating Schedule provides that the combined rating evaluation for disabilities of an extremity *shall not exceed* the rating for the amputation at the level, were amputation to be performed.

For example, the combined evaluation for disabilities affecting the area below the knee shall not exceed the 40 percent evaluation under DC 5165, which pertains to amputation below the knee, permitting prosthesis. This 40 percent evaluation may be combined with evaluations for disabilities above the knee, but may not exceed the above knee amputation at the elective level.

**Prosthetic Implants**

Prosthetic implants of joints are artificial, fabricated metal and plastic devices used to replace lost or severely impaired joints, and may also be used to relieve pain and restore function and mobility. Compensable evaluations may be assigned for prosthetic replacements of certain major joints. The Rating Schedule allows for assignment of a temporary total 100 percent evaluation for a one-year period following the replacement (prosthetic implant) of a shoulder, elbow, wrist, hip, knee, or ankle joint.

The one year period begins after the end of at least a one month total temporary convalescent period allowed under 38 CFR 4.30 following hospital discharge. At the conclusion of the one-year period (usually a total of 13 months at 100 percent when entitlement to paragraph 30 benefits is considered), an evaluation will be assigned based on residual level of disability.

The rating specialist should note that for DC 5051 through 5056, which correspond to replacement of the joints mentioned, a minimum compensable rating evaluation will be assigned.

Special monthly compensation may also be assigned during the period of total evaluation should the permanent use of crutches be required.

**Anatomical Loss and Loss of Use**

To determine the level of amputation may require medical evidence or x-ray studies. Although anatomical loss may not be present, the claimant may have a loss of use of the extremity. A painful neuroma (new growth around the amputation stump) shall be assigned the evaluation for the elective site of reamputation. The question of how high the re-amputation would have to be to remove the painful neuroma is a medical determination.

**Loss of Use of Hand or Foot**

38 CFR 4.63 provides that the loss of use of a hand or foot, for the purpose of special monthly compensation, will be held to exist when no effective function remains other than that which would be equally well served by an amputation stump at the site of election below the elbow or knee, with use of a suitable prosthetic appliance. This determination is to be made based on the actual remaining function of the hand or foot, such as whether the acts of grasping, manipulation, etc., in the case of the hand, or of balance and propulsion, etc., in the case of the foot, could be accomplished equally well by an amputation stump with prosthesis. In requesting examinations for determining loss of use, the rating specialist should not ask the examiner to state whether there is loss of use of an extremity, but rather, should ask for a description of the remaining function.

**Loss of Use of Both Buttocks**

The Rating Schedule, under 38 CFR 4.64, provides that loss of use of both buttocks, for the purposes of special monthly compensation, shall be deemed to exist when there is severe damage to Muscle Group XVII (DC 5317) and additional disability rendering it impossible for the disabled person, without assistance, to rise from a seated position and from a stooped position (fingers to toes position) and maintain postural stability (the pelvis head upon the head of femur). The assistance may be from the claimant’s own hands or arms, or by special appliance.

**Combinations of Anatomical Loss and Loss of Use Disabilities**

Diagnostic codes 5104 to 5111 provide for a total 100 percent evaluation based on combinations of disabilities related to the anatomical loss or loss of use of certain combinations of disabilities. Entitlement to higher special monthly compensation may result based on such combinations of anatomical loss or loss of use of these cited disabilities.

##### **Amputations of the Lower Extremities**

Diagnostic codes 5160 through 5173 are used for evaluating amputations of the lower extremities. The rating specialist should note that certain of these disabilities allow for entitlement to special monthly compensation.

**Evaluating Non-Amputation Disabilities of the Lower Extremities**

Diagnostic codes 5250 through 5274 may be used for evaluating disabilities of the hip, thigh, knee, leg, and ankle. Plate II of the Rating Schedule (also available on page 38 of this guide) provides figures with the normal ranges of motion for joints in the lower extremities. Evaluations may be based on ankylosis, limitation of motion, and weight bearing impairment. Assign entitlement to special monthly compensation when there is extremely unfavorable ankylosis of the hip, with the foot not reaching the ground, and crutches are needed for mobility.

**Anatomical or surgical neck of the femur** - is the short, constricted portion of the thigh bone, projecting at an obtuse angle between the upper end of the shaft of the femur to the head of the femur.

**Flail Joint** – is a joint where there is complete loss of motion without the ability to voluntary move the joint.

**Malunion** – refers to union of the fragments of a fractured bone in a faulty position.

**Nonunion** – is the failure of the fractured ends of a bone to unite fully.

**Genu Recurvatum** – is a hyperextension of the knee, back knee, resulting in the lower extremities having a forward curvature.

**Subastragalar or tarsal joint** – refers to the tarsal bones of the foot (the cuneiforms, navicular, cuboid, calcaneus, and talus bones).

**Os calcis or astragalus** – os calcis is the calcaneus, or heel bone, and the astragalus is the talus bone. It is the talus which articulates with the tibia and fibula above and the calcaneum below forming the ankle joint.

**Astragalectomy** – is the removal of the astragalus or talus bone.

**Shortening of the Lower Extremity**

When there is a shortening of the bones of the lower extremity, a separate evaluation may be assigned depending upon the degree of difference in length of the paired extremities. However, this evaluation is not to be combined with other ratings for fracture or faulty union in the same extremity. The veteran may be entitled to Special Monthly Compensation when there is more than a 3-1/2 inch difference in the extremity length.

**Other Disabilities of Bones and Joints**

**Fibromyalgia –** DC 5025, was added to the Rating Schedule effective May 7, 1996. Fibromyalgia is a syndrome characterized by chronic, widespread musculoskeletal pain associated with multiple tender or “trigger” points, and often with multiple somatic complaints, such as sleep disorders, anxiety, fatigue, headache, and irritable bowel symptoms. Other possible associated complaints include neurologic symptoms such as numbness and weakness, without objective neurologic findings, depression, Raynaud’s like syndrome (symptoms of cold extremities), and weakness. Widespread pain means pain in both the left and right sides of the body, that is both above and below the waist, and that affects both the axial skeleton (i.e., the cervical spine, anterior chest, thoracic spine, or low back) and the extremities. A minimum 10 percent evaluation is assigned when the evidence shows continuous medication is required for control of symptoms, with higher evaluations assigned based on more severe levels of disability.

**New Growths of Bones**

Malignant growth of bony structures, DC 5012, is treated similarly to malignancies of other body systems. A malignancy is a cancerous condition, as opposed to a benign is non-cancerous. For malignancies of the bones under this diagnostic code, allow an assignment of a total 100 percent evaluation for one year following the cessation of surgical, x-ray, antineoplastic chemotherapy, or other therapeutic procedure. At this point, if there has been no local recurrence or metastases, the rating evaluation will be based on residual disability.

Benign new growths of bones, DC 5015, are non-cancerous, and will be evaluated based on limitation of motion of affected parts, or as degenerative arthritis.

**Caisson Disease of Bones**

This condition, DC 5011, is also known as decompression sickness, diver’s paralysis, or tunnel disease. It is very rare today, but when found, should be rated based on chronic residual disabilities, such as arthritis, spinal cord involvement, or deafness, depending on the severity of the disability and its manifestations. The condition may be present in those working under high-pressure conditions, such as in caissons, diving bells or tunnels, or even in scuba divers. It may occur when there is a rapid ascent to normal pressure from depths of greater than 27-30 feet, but it is may also be found when there is a rapid ascent from sea level to high altitudes, without adequate pressurizing protection. The causative factor is the release of bubbles of atmospheric gasses in the body.

**Other Disabilities of the Bones and Joints**

Diagnostic codes 5013 through 5024, except Gout (DC 5017), will be rated as degenerative arthritis (DC 5003) based on limitation of motion of affected part(s). The 10 and 20 percent evaluations for x-ray findings do not apply (see Note (2) under DC 5003). Gout, which is discussed below, will be rated as for DC 5002, rheumatoid arthritis.

**Osteoporosis** – DC 5013, is an abnormal porousness or rarefication caused by the enlargement of bone canals or the formation of abnormal bone spaces. It may be due to the aging process and usually occurs from age 60 and following. It is often causative of hip fractures in the elderly or post-menopausal women.

**Osteomalacia** – DC 5014, is a softening of the bones (*osteo*- of or pertaining to the bones, and -*malacia* a softening), and may be due to a calcium/phosphorous deficiency. This condition may be manifested by muscular weakness, listlessness, aching and bowing of the bones.

**Osteitis** **Deformans** – DC 5016, is also known as Paget’s disease. It is a chronic and progressive bone disease characterized by enlargement and deformity of body parts, including the skull and bones of the arms and legs, pelvis, vertebrae, shoulder blades, a spreading of the lower thorax, and forward bowing of the legs. In advanced cases, there will be a shortened stature and waddling gait. There may be abnormally frequent fractures with minimal trauma.

**Gout** – DC 5017, is to be evaluated as rheumatoid arthritis (DC 5002). Gout is a disturbance of uric acid metabolism resulting in an excess of uric acid in the blood, with recurrent attacks of acute arthritis that may become chronic and deforming. The attacks are frequently nocturnal, and any or all joints may be affected, though usually the lower extremities, especially the great toe.

**Hydrarthrosis**, **intermittent** – DC 5018, is a disease process characterized by a periodic swelling of one or several joints without the presence of fever, and is often accompanied by pain. The knee is most commonly affected, but this condition may also affect other joints. Attacks usually occur at regular intervals and may last several hours to several days. Swelling tends to develop with such great rapidity that there may be a sensation of water rushing into the joint.

**Bursitis** – DC 5019, is a condition of an inflamed bursa. The bursa is a sac or sac-like cavity filled with a fluid situated at joints where friction would otherwise develop. It may be manifested by pain, swelling, tenderness, muscle weakness, and limitation of motion.

**Synovitis** – DC 5020, is an inflammation of a synovial membrane, which is the thin layer of tissue covering a surface, lining a cavity, or dividing a space or organ and which secretes synovial fluid.

**Myositis** – DC 5021, is an inflammation of voluntary muscles.

**Periostitis** – DC 5022, is the inflammation of the periosteum, which is the tough, fibrous membrane surrounding bone. It may be manifested by swelling and tenderness of the bone at the site of the inflammation, as well as by an aching pain.

**Myositis** **Ossificans** – DC 5023, is the inflammation of a voluntary muscle and may be characterized by bony deposits or ossification of the muscles. It may be limited to one muscle, or may involve many muscles. It may be sudden in onset and may result in fever and extreme exhaustion.

**Tenosynovitis** – DC 5024, is the inflammation of the tendon sheaths, which are the structures enclosing the fibrous cord by which the muscle attaches to bone.

**Muscle Injuries**

Disability from injuries of muscles presents a special problem. Injuries may result in damage to muscles, bones and nerves. 38 CFR 4.14 provides that pyramiding, or the evaluation of the same disability under various diagnoses, is to be avoided. Disability from injuries to the muscles, nerves and joints of an extremity may overlap so that special rules are included in the appropriate body system for their evaluation.

The principles of combined ratings for muscle injuries is explained in 38 CFR 4.55 to deal exclusively with the principles of rating muscle injuries as follows:

(a) A muscle injury rating will not be combined with a peripheral nerve paralysis rating of the same body part unless the injuries affect entirely different functions.

(b) For rating purposes the skeletal muscles of the body are divided into 23 muscle groups in 5 anatomical regions: 6 muscle groups for the shoulder girdle and arm (DC 5301 through 5306); 3 muscle groups for the forearm and hand (DC 5307 through 5309); 3 muscle groups for the foot and leg (DC 5310 through 5312); 6 muscle groups for the pelvic girdle and thigh (DC 5313 through 5318); and 5 muscle groups for the torso and neck (DC 5319 through 5323).

(c) There will be no rating assigned for muscle groups which act upon an ankylosed joint, with the following exceptions:

(1) In the case of an ankylosed knee, if muscle group XIII is disabled, it will be rated but at the next lower level than that which would otherwise be assigned.

(d) The combined evaluation of muscle groups acting upon a single unankylosed joint must be lower than the evaluation for unfavorable ankylosis of that joint except in the case of muscle groups I and II acting upon the shoulder.

(e) For compensable muscle group injuries which are in the same anatomical region but do not act on the same joint, the evaluation for the most severely injured muscle group will be increased by one level and used as the combined evaluation for the affected muscle groups.

(f) For muscle group injuries in different anatomical regions that do not act upon ankylosed joints, each muscle group injury shall be separately rated and the ratings combined under the provisions of §4.25.

For evaluating muscle disabilities, 38 CFR 4.56 provides a description of slight, moderate, moderately severe, and severe level of disability as applies to DC 5301 through 5323.

The Rating Schedule provides that an open comminuted fracture with muscle or tendon damage will be rated as a severe injury of the muscle group involved unless, for locations such as in the wrist or over the tibia, evidence establishes that the muscle damage is minimal.

A through and through injury with muscle damage shall be evaluated as no less than a moderate injury for each group of muscles damaged.

For VA rating purposes the cardinal signs and symptoms of muscle disability are loss of power, weakness, lowered threshold of fatigue, fatigue-pain, impairment of coordination and uncertainty of movement.

Evaluate muscle injuries as slight, moderate, moderately severe, or severe. Under DC 5301 through 5323, disabilities resulting from muscle injuries are classified as follows:

***Slight disability of muscles***

(i) *Type of injury*. Simple wound of muscle without debridement or infection.

(ii) *History and complaint*. Service department record of superficial wound with brief treatment and return to duty. Healing with good functional results. No cardinal signs or symptoms of muscle disability as defined in paragraph (c) of this section.

(iii) *Objective findings*. Minimal scar. No evidence of fascial defect, atrophy, or impaired tonus. No impairment of function or metallic fragments retained in tissue.

***Moderate disability of muscles***

(i) *Type of injury*. Through and through or deep penetrating wound of short track from a single bullet, small shell or shrapnel fragment, without explosive effect of high velocity missile, residuals of debridement, or prolonged infection.

(ii) *History and complaint*. Service department record or other evidence of in-service treatment for the wound. Record of consistent complaint of one or more of the cardinal signs and symptoms of muscle disability as defined in paragraph (c) of this section, particularly lowered threshold of fatigue after average use affecting the particular functions controlled by the injured muscles.

(iii) *Objective findings*. Entrance and (if present) exit scars, small or linear, indicating short track of missile through muscle tissue. Some loss of deep fascia or muscle substance or impairment of muscle tonus and loss of power or lowered threshold of fatigue when compared to the sound side.

***Moderately severe disability of muscles***

(i) *Type of injury*. Through and through or deep penetrating wound by small high velocity missile or large low-velocity missile, with debridement, prolonged infection or sloughing of soft parts, and intermuscular scarring.

(ii) *History and complaint*. Service department record or other evidence showing hospitalization for a prolonged period for treatment of wound. Record of consistent complaint of cardinal signs and symptoms of muscle disability as defined in paragraph (c) of this section and, if present, evidence of inability to keep up with work requirements.

(iii) *Objective findings*. Entrance and (if present) exit scars indicating track of missile through one or more muscle groups. Indications on palpation of loss of deep fascia, muscle substance, or normal firm resistance of muscles compared with sound side. Tests of strength and endurance compared with sound side demonstrate positive evidence of impairment.

***Severe disability of muscles***

(i) *Type of injury*. Through and through or deep penetrating wound due to high-velocity missile, or large or multiple low velocity missiles, or with shattering bone fracture or open comminuted fracture with extensive debridement, prolonged infection, or sloughing of soft parts, intermuscular binding and scarring.

(ii) *History and complaint*. Service department record or other evidence showing hospitalization for a prolonged period for treatment of wound. Record of consistent complaint of cardinal signs and symptoms of muscle disability as defined in paragraph (c) of this section, worse than those shown for moderately severe muscle injuries, and if present, evidence of inability to keep up with work requirements.

(iii) *Objective findings*. Ragged, depressed and adherent scars indicating wide damage to muscle groups in missile track. Palpation shows loss of deep fascia or muscle substance, or soft flabby muscles in wound area. Muscles swell and harden abnormally in contraction. Tests of strength, endurance, or coordinated movements compared with the corresponding muscles of the uninjured side indicate severe impairment of function. If present, the following are also signs of severe muscle disability:

(A) X-ray evidence of minute multiple scattered foreign bodies indicating intermuscular trauma and explosive effect of the missile.

(B) Adhesion of scar to one of the long bones, scapula, pelvic bones, sacrum or vertebrae, with epithelial sealing over the bone rather than true skin covering in an area where bone is normally protected by muscle.

(C) Diminished muscle excitability to pulsed electrical current in electro diagnostic tests.

(D) Visible or measurable atrophy.

(E) Adaptive contraction of an opposing group of muscles.

(F) Atrophy of muscle groups not in the track of the missile, particularly of the trapezius and serratus in wounds of the shoulder girdle.

(G) Induration or atrophy of an entire muscle following simple piercing by a projectile. (Authority: 38 USC 1155)

**Muscle Groups**

For rating purposes, the muscles of the lower body are divided into groups identified by Roman numerals, as follows:

**Muscle Group Location**

X - XII Foot and Leg

XIII - XV Thigh

XVI - XVIII Pelvic Girdle

XIX - XXI Trunk

The term “Muscle Group” may be abbreviated as “MG” on the Rating Code sheet. For example, disability affecting the muscles in Group II might be seen abbreviated as “Residual of injury to MG II.”

**Schedule for Rating Muscle Injuries**

The Rating Schedule breaks down the muscle groups into five anatomical regions: the shoulder girdle and arm (DC 5301 through 5306), the forearm and hand (DC 5307 through 5309), the foot and leg (DC 5310 through 5312), the pelvic girdle and thigh (DC 5313 through 5318), and the torso and neck (DC 5313 through 5318). Under each section, the muscle groups are shown by Roman numerals, identified Group I through XXIII, each having its own diagnostic code. It should be noted that muscles do not usually work in isolation, but may have overlapping functions, working in conjunction with other groups of muscles, and this should be considered in determining evaluations for muscle disabilities.

Under diagnostic codes 5310 through 5323, disabilities resulting from muscle injuries of the lower musculoskeletal system, are classified as slight, moderate, moderately severe, or severe. (Refer to the previous discussion of 38 CFR 4.56 under the lesson for muscle injury considerations for a description of the evaluation of muscle disabilities criteria.)

**The Foot and Leg**

**5310 Group X** These muscles function in the movements of the forefoot and toes and provides the propulsion thrust in walking.

**5311 Group XI** These muscles function in propulsion, and plantar flexion of the foot.

**5312 Group XII** These muscles function to extend the toes and stabilize the arch.

**The Pelvic Girdle and Thigh**

**5313 Group XIII** These muscles extend the hip and flex the knee, provide outward and inward rotation of the flexed knee.

**5314 Group XIV** These muscles extend the knee, also simultaneously flex the hip and knee.

**5315 Group XV** These muscles provide abduction and flexion of the hip and flexion of the knee.

**5316 Group XVI** These muscles provide flexion of the hip.

**5317 Group XVII** These muscles function in extension of the hip, abduction of the thigh, elevation of the opposite side of the pelvis.

**5318 Group XVIII** These muscles provide outward rotation of the thigh and stabilizes the hip joint.

Topic 2: Disabilities of the Lower Extremities

**The Spine**

The spine is the centerpiece of the body’s skeletal framework and is the means through which the body's communication network of nerves operates. It houses the central nervous system spinal cord. The spine is flexible to permit bodily movement and very strong to provide body support. The spine is susceptible to many types of injuries. If any injury is severe enough to crush the spinal cord or sever the spinal nerve cord, the use of the body from the site of the injury downward could be completely lost.

**Evaluation Considerations**

**Low Back Pain (LBP), Lumbosacral Strain (LS), and Subsequently Developing Herniation of a Nucleus Pulposus (HNP).**

A common theme in low back claims exists where the veteran establishes service connection for LS with LBP (DC 5237) and develops after service herniation of nucleus pulposus, leading potentially to more severe complications as contemplated under DC 5243, intervertebral disc syndrome.

The rating specialist should not rush to disassociate the two conditions and deny HNP as "remote from service." A service connected LS or LBP disablement certainly may progress causing muscle spasm, spinal listing and degenerative changes (DC 5237). As herniation of nuclear material usually occurs after the onset of degenerative changes, there should be no hesitancy to associate HNP with an established progressive LBP-LS syndrome.

However, in claims where the service connected LS-LBP has long been asymptomatic, without a clinical record of complications, and a subsequent post-service injury precipitates HNP, the rating specialist may deny the disc syndrome in the absence of medical findings objectively demonstrating a causal relationship.

**Residuals of Fracture of Vertebra**

Evaluate a fracture of a vertebra or dislocation under DC 5235. X-ray evidence is usually required to show evidence of vertebral deformity. A 10 percent evaluation should be assigned for a vertebral deformity alone when there is evidence of vertebral body fracture with loss of 50 percent or more of the height.

**Sacro-Iliac Injury and Weakness**

An injury or weakness at the point of articulation between the sacrum and the ilium (the wide upper portion of the hip bone) should be rated under DC 5236. This revised evaluation criteria became effective September 26, 2003 under the general rating formula for diseases and injuries of the spine.

**Lumbosacral Strain**

A lumbosacral strain involves injury to the associated muscles, ligaments or tendons of the lumbosacral spine, and will be rated under DC 5237. This revised evaluation criteria became effective September 26, 2003 under the general rating formula for diseases and injuries of the spine.

**Removal of the Coccyx**

Diagnostic code 5298 is for removal of the coccyx. The coccyx is the tailbone, located at the base of the spine. For partial or complete removal, a 10 percent evaluation is assigned when there are painful residuals. Assign a 0 percent evaluation in the absence of painful residuals.

**Ankylosis and Limitation of Motion of the Spine**

Ankylosis is the abnormal immobility of a joint. Complete ankylosis means there is no movement possible. Diagnostic codes 5235 through 5243 apply the same criteria when considering limitation of motion and ankylosis in the evaluation criteria of the spine.

Plate V of the Rating Schedule (also available as an attachment on page 41 of this guide) provides figures with the normal ranges of motion for the spine as follows:

*Thoracaolumbar spine*

Forward Flexion 0 to 90 degrees

Extension 0 to 30 degrees

Left Lateral Flexion 0 to 30 degrees

Right Lateral Flexion 0 to 30 degrees

Left Lateral Rotation 0 to 30 degrees

Right Lateral Rotation 0 to 30 degrees

*Cervical spine*

Forward Flexion 0 to 45 degrees

Extension 0 to 45 degrees

Left Lateral Flexion 0 to 45 degrees

Right Lateral Flexion 0 to 45 degrees

Left Lateral Rotation 0 to 45 degrees

Right Lateral Rotation 0 to 80 degrees

**Intervertebral Disc Syndrome (IVDS)**

IVDS is a group of signs and symptoms resulting from displacement of an intervertebral disc or disc fragments at any level of the spine. There are usually pain and other signs and symptoms at or near the site of the disc, and there may be pain referred to more remote areas, plus neurologic abnormalities due to irritation or pressure on adjacent nerves or nerve roots.

A slipped, herniated, ruptured, prolapsed, bulging, or protruded disc, degenerative disc disease (DDD), sciatica, discogenic pain syndrome, herniated nucleus pulposus, pinched nerve, etc., are other names for IVDS. There may be some differences, but these terms are not well defined and are often used interchangeably.

IVDS commonly includes back pain and sciatica (pain along the course of the sciatic nerve) in the case of lumbar disc disease, and neck plus arm or hand pain in the case of cervical disc disease. It may also include scoliosis, paravertebral muscle spasm, limitation of motion of the spine, tenderness over the spine, limitation of straight leg raising, and neurologic findings corresponding to the level of the disc. If the disc compresses the cauda equina (the collection of nerve roots extending from the lower end of the spinal cord), bowel or bladder sphincter functions or sexual function may also be affected.

The evaluation criteria for rating disabilities under IVDS (formerly DC 5293) was revised effective September 23, 2002. Under the new criteria IVDS that is primarily disabling because of periods of acute symptoms that require bed rest according to the cumulative amount of time over the course of a year that the patient is incapacitated, i.e., requires bed rest and treatment by a physician, is evaluated at 60 percent if there are incapacitating episodes of at least six weeks total duration during the past 12 months; at 40 percent if there are incapacitating episodes of at least four but less than six weeks total duration during the past 12 months; at 20 percent if there are incapacitating episodes of at least two but less than four weeks total duration during the past 12 months; and at 10 percent if there are incapacitating episodes of at least one but less than two weeks total duration during the past 12 months.

IVDS that is disabling primarily because of chronic orthopedic manifestations (e.g., painful muscle spasm or limitation of motion), chronic neurologic manifestations (e.g., footdrop, muscle weakness or atrophy, or sensory loss), or a combination of both, is evaluated by assigning separate evaluations for the orthopedic and neurologic manifestations, using DC 5243 hyphenated with the appropriate orthopedic (musculoskeletal) or neurologic code.

When IVDS is disabling both because of incapacitating episodes and persistent orthopedic or neurologic manifestations, whichever alternative method of evaluation results in a higher evaluation is used.

**Hip Conditions**

The hip is a ball-and-socket joint, formed by the femoral head and the acetabulum.

Common hip related diagnoses include, but are not limited to:

* Ankylosis (DC 5250)
* Impairment of motion (DC 5251 – 5252)
* Hip, flail joint (DC 5254)
* Impairment of the femur (DC 5255)

However, regardless of the diagnosis; functional impairments routinely involve limitation of flexion, limitation of extension and instability.

**Ankylosis**

Ankylosis of the hip refers to joint immobility, which may be congenital, hereditary, or may be the result of disease, trauma, or contractures due to immobility. The signs and symptoms may begin with arthritis and include stiffness, limited motion, structural changes and pain.

**Impairment of Motion**

The portion of the body lying between the hip joint and the knee refers to the thigh. Normal hip extension is at 0 degrees. Birnak fkexuib if the thigh is from 0 to 125 degrees. Limitation falling outside of these degrees results in an impairment of motion.

**Hip, flail joint**

A joint with excessive mobility, usually due to the paralysis of the muscles that control it, refers to a flail joint. Excessive mobility may be caused by an infected joint replacement, chronic osteom yelitis, muscle paralysis, muscle deterioriation or lack of nerve supply (denervation).

**Impairment of the femur**

The femur refers to the thigh bone, which extends from the hip to the knee. Impairment is usually caused by fractures or nonunion, resulting from trauma, disease or repeated bone stress.

**Ankylosis and Limitation of Motion of the hip**

Ankylosis is the abnormal immobility of a joint. Complete ankylosis means there is no movement possible. Diagnostic codes 5251 through 5253 apply the same criteria when considering limitation of motion of the hip.

Attachment A of this guide provides figures with the normal ranges of motion for the hip as follows:

Flexion 0 to 125 degrees

Extension 0 to 30 degrees

Abduction 0 to 45 degrees

Adduction 0 to 25 degrees

External Rotation 0 to 60 degrees

Internal Rotation 0 to 40 degrees

**Knee Conditions**

The knee is a major, hinged joint, that connects the thigh and lower leg. It is formed by the femur, the tibia, and the patella.

As RVSRs, we need to know how to properly evaluate these disabilities.

Common knee related diagnoses include, but are not limited to:

* Bursitis (DC 5019)
* Synovitis (DC 5020)
* Degenerative joint disease / traumatic arthritis (DC 5010)

Regardless of diagnosis, functional impairments native to knee conditions routinely involve limitation of flexion, limitation of extension, and/or instability.

**Bursitis**

Bursitis is defined as inflammation of the bursae which are synovial fluid filled, closed sacs located at sites where friction occurs. The bursae serve to facilitate the motion of muscles and tendons over bony projections. While the exact cause of the condition is unknown, it may occur after trauma, chronic overuse, and inflammatory arthritis.

**Synovitis**

Synovitis is defined as inflammation of the membrane lining the capsule of a joint. It may result from an aseptic wound; injuries beneath the skin, such as a bruise, irritation from damaged cartilage, or exposure to cold and dampness.

**Ankylosis and Limitation of Motion of the knee**

Ankylosis is the abnormal immobility of a joint. Complete ankylosis means there is no movement possible. Diagnostic codes 5256 and 5257 apply the same criteria when considering limitation of motion of the knee.

Attachment A of this guide provides figures with the normal ranges of motion for the knee as follows:

Flexion 0 to 140 degrees (normal endpoint is 140 degrees)

Extension 140 to 0 degrees (0 indicates no limitation of extension)

**Separate Evaluations for Knee Disabilities**

A General Counsel Opinion of July 1, 1997 (VAOPGCPREC 23-97) held that a claimant who has arthritis and instability of the knee may be rated separately under DC 5003 (for degenerative arthritis) *and* DC 5257 (for knee instability).

The question presented to the General Counsel asked whether a claimant might receive multiple ratings for the same knee, under DC 5003 and DC 5257 for both arthritis and instability involving the left knee.

These questions arose from appeals in which the claimant was seeking a separate evaluation for arthritis under DC 5003 (degenerative arthritis) as well as DC 5257 for knee recurrent subluxation or lateral instability.

The General Counsel opinion explains that DC 5257 provides for evaluation of instability of the knee *without reference* to any limitation of motion. Whereas, DC 5003 refers to degenerative arthritis established by x-ray findings to be rated on the basis of limitation of motion under the appropriate diagnostic codes for the specific joint or joints involved (DC 5200 etc.) The General Counsel determined that the reference to DC “5200, etc.” means *only those codes* directly involving limitation of motion. As DC 5257 was not among those codes, it was thereby *not* associated with DC 5003.

The provisions of 38 CFR 4.14 prohibit the evaluation of the same disability under various diagnoses. Separate evaluations of disorders having the *same disabling manifestations* are prohibited as “pyramiding” under this paragraph of the Rating Schedule. The General Counsel determined that since the plain terms of DC 5257 and DC 5003 suggest that these codes apply either to different disabilities or different manifestations of the same disability, the evaluation of knee dysfunction under both codes would not constitute pyramiding under 38 CFR 4.14, and was therefore not prohibited. The General Counsel opinion cites a Court of Veterans Appeals precedent as supporting the use of separate rating diagnostic codes for different manifestations of a single injury. In *Esteban v. Brown*, (1994), the Court held that residuals of injury to the face should be rated separately under DC 7800 (disfigurement), DC 7804 (painful scars), *and* DC 5325 (facial muscle damage) because “none of the symptomatology for any one of these three conditions is duplicative of or overlapping with the symptomatology of the other two conditions.”

The General Counsel determined that a separate rating assigned if there is additional disability. When a knee disorder rated under DC 5257 for instability, the veteran must also have limitation of motion under DC 5260 or 5261 in order to obtain a separate rating for arthritis. If the veteran does not at least meet the criteria for a 0 percent rating under either of these codes, there is no additional disability. Where additional disability is shown, a veteran rated under DC 5257 may also be compensated under DC 5003 vice versa.

In evaluating disabilities where secondary arthritis develops, it is important to consider possible separate evaluation of the arthritis, if applicable, under the provisions of this General Counsel Opinion.

A General Counsel Opinion of September l7, 2004 (VAOPGCPREC 9-2004) held that separate ratings under DC 5260 (leg, limitation of flexion) and DC 5261 (leg, limitation of extension) could be assigned for a disability of the same knee.

The question presented to the General Counsel asked whether a veteran could receive separate ratings under DC 5260 (leg, limitation of flexion) and DC 5261 (leg, limitation of extension) for disability of the same joint. Considering DC 5260 and DC 5261 together with 38 CFR 4.71, they concluded that a veteran may receive a rating for a limitation in flexion only, or a limitation in extension only, or the veteran may receive separate ratings for limitations in both flexion and extension.

The General Counsel Opinion cites a Court of Veterans Appeals precedent as supporting the use of separate rating diagnostic codes for different manifestation of a single injury (*Esteban v. Brown, 1994).* See reference in previous segment on Separate Evaluation for Arthritis. In applying section 4.14 in *Esteban v. Brown,* 6 Vet. App. 259, 262 (1994) the United States Court of Appeals for Veterans Claims held that separate ratings under different diagnostic codes may be assigned where “none of the symptomatology for any of the conditions is duplicative of or overlapping with the symptomatology of the other conditions.”

###### **Key Points**

Where a veteran meets the requirements for a 0% or higher evaluation under DC 5260 (limitation of flexion) and under DC 5261 (limitation of extension), an evaluation under each diagnostic code may be assigned.

You must ensure that all knee examinations record range of motion findings in both flexion and extension in accordance with the Disability Examination Worksheets.

Although it is permissible to assign multiple evaluations under multiple diagnostic codes for a single knee, you must always abide by the amputation rule (38 CFR 4.68).

###### **38 CFR 4.40, 4.45, and 4.59**

As always, when evaluating knee function, the provisions of 38 CFR 4.40, 4.45, and 4.59 must be considered.

Where knee motion is actually impeded by pain, fatigability, weakness, etc., the evaluation assigned based on limitation of motion must consider the level at which motion is limited. For example, if on examination, a veteran has full range of knee motion, but on repetitive motion, the knee is actually limited to 10 degrees extension and 45 degrees flexion due to fatigue, a 10% evaluation would be warranted under DC 5260 and a separate 10% evaluation would be warranted under DC 5261.

However, where joint motion is not limited but there is objective evidence of pain on motion (whether in flexion, extension, or both) only one compensable evaluation would be warranted under either DC 5260 or DC 5261. To assign a compensable evaluation based solely on painful motion under two separate diagnostic codes would be in violation of the rule of pyramiding. (38 CFR 4.14)

Similarly, if there is compensable limitation of flexion and extension with objective evidence of pain on motion, but such pain does not actually impede motion, consider elevating one of the compensable evaluations—if it is determined that the painful motion results in additional disability beyond that reflected in the measured limitation of motion. Again, to elevate both evaluations based solely on painful motion would constitute pyramiding.

###### **Effective Dates**

This General Counsel Opinion is not a liberalizing interpretation of the rating schedule, and the provisions of 38 CFR 3.114(a) do not apply. As such, this opinion applies to claims that are pending, i.e., claims that have not been decided, and claims that have been decided and not finally adjudicated (the appeal period has not expired).

Effective dates are to be established based on the date of claim rather than the date of the opinion (38 USC 5110(a)).

**Ankle Conditions**

The ankle is a major joint, made up of three bones; the tibia, fibula and talus, which connects the leg and the foot.

The most common disability relating to the ankle is limited range of motion, and refers to a point or line beyond which motion is restricted. When evaluating the ankle, note that flexion is the process of bending. Dorsiflexion involves moving the toes up when standing only on the heels, and plantar flexion is moving the toes down when standing on the toes.

**Ankylosis and Limitation of Motion of the ankle**

Ankylosis is the abnormal immobility of a joint. Complete ankylosis means there is no movement possible. Diagnostic code 5271 applies the same criteria when considering limitation of motion of the ankle.

Attachment A of this guide provides figures with the normal ROM for the ankle as follows:

Ankle dorsiflexion 0 to 20 degrees

Ankle plantar flexion 0 to 45 degrees

**Moderate vs. Marked**

The ankle is evaluated through the determination of marked or moderate limitation of motion.

Moderate limitation of ankle motion will be present when there is less than 15 degrees dorsiflexion or less than 30 degrees plantar flexion.

Marked limitation of motion is demonstrated when there is less than five degrees dorsiflexion or less than 10 degrees plantar flexion.

**Foot Conditions**

**Flat Foot (pes planus) - Developmental vs. Acquired**

Grant service-connection for *acquired* flat feet, or pes planus, DC 5276, but not for the *congenital* variant. The rating specialist should carefully review 38 CFR 4.57 to distinguish between the two. Simple flattening of the arches without evidence of abnormal callosities, areas of pressure, strain or demonstrable tenderness, is a congenital abnormality. In the acquired condition, there is depression of the longitudinal arch, but this is not the essential feature. There would also be associated anatomical changes, such as the inward rotation of the superior portion of the os calcis, medial deviation of the insertion of the Achilles tendon, or a medial tilting of the upper border of the astragalus. The plantar surface of the foot would be painful and show demonstrable tenderness, and manipulation of the foot would produce spasm of the Achilles tendon, peroneal spasm due to adhesion about the peroneal sheaths, and other evidence of pain and limitation of motion.

**Other Foot Conditions**

**Weak Foot -**Weak foot, DC 5277, is sometimes the diagnosis given a veteran that has immersion foot or trenchfoot. However, these disabilities should be separately rated under DC 7122. Weak foot may also be characteristic of the early stage of flat foot.

**Claw Foot (Pes Cavus) –** Claw foot, or pes cavus, DC 5278, is a condition characterized by hyperextension of the metatarsophalangeal joint and flexion at the interphalangeal joints in a fixed contracture. Atrophy and distortion of the foot is present, and the condition may be manifested by hammertoes and marked varus deformity (bow-legged). 38 CFR 4.57 provides that in the absence of trauma or other definite evidence of aggravation, service-connection is not in order for pes cavus, which is a typically congenital or juvenile disease.

**Metatarsalgia (Morton's disease) –** Metatarsalgia, also referred to as Morton’s disease, DC 5279, is characterized by pain in the forefoot and in the region of the heads of the metatarsals.

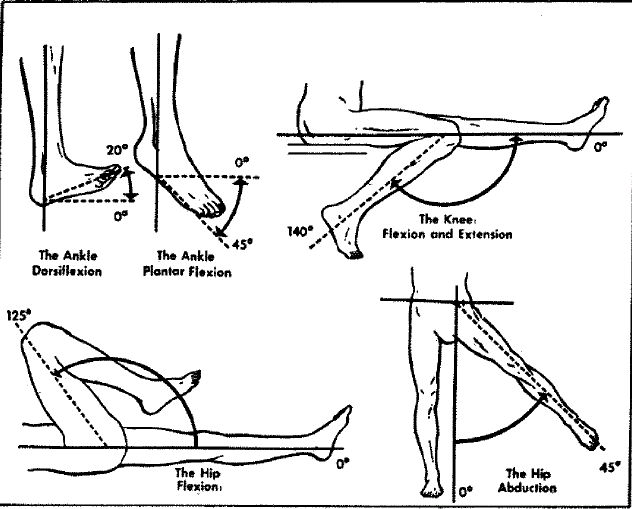
**Hallux Valgus –** Hallux valgus, DC 5280, is a characterized by a one sided deviation of the great toe toward the other toes.

**Hallux Rigidus –** Hallux rigidus, DC 5281, is a condition in which there is stiffness in the first metatarsophalangeal joint. Arthritis may be present at the site.

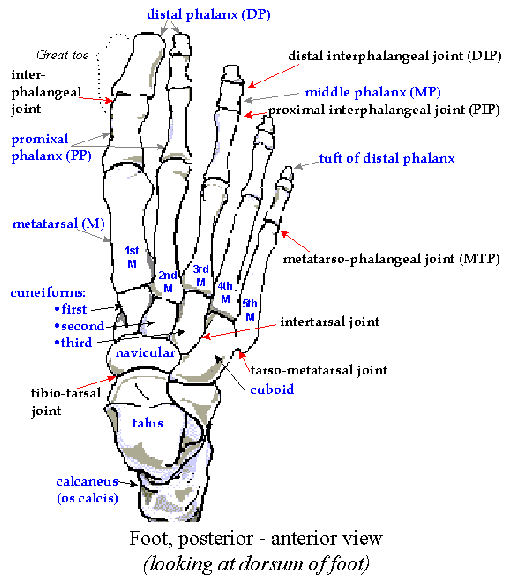
**Hammer Toes –** Hammer toes, DC 5282, is a deformity in which the proximal phalanx of a toe, most often the second toe, is extended and the second or distal phalanges are flexed.

**Other Foot Injuries –** Other foot injuries may be rated under DC 5284, based on moderate, moderately severe or severe level of disability. When there is actual loss of use of the foot, this condition will be evaluated as 40 percent disabling.

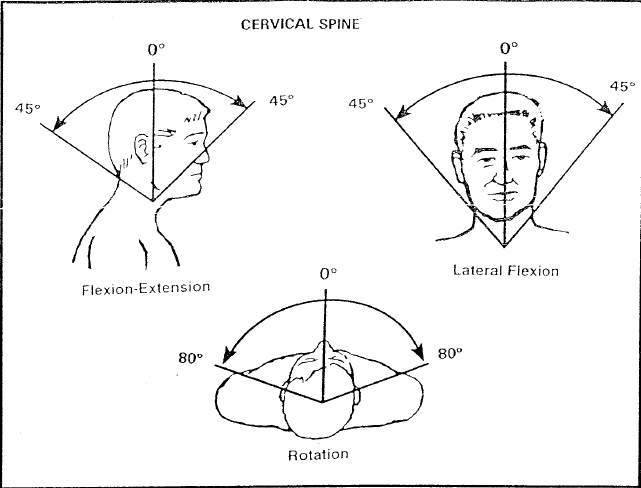
Attachment A: Plate II – Joint Range of Motion, Lower Extremities



Attachment B: Plate IV – Bones of the Foot



**Attachment C: Plate V – Range of Motion, Cervical and Thoracolumbar Spine**



Practical Exercise

Directions: Answer the following questions based on the training provided.

1. X-ray confirmation of a vertebral body fracture with loss of 50 percent or more of the height but with no limitation of motion found on physical examination will result in what rating action?

a. Elevation of the rating to the next higher evaluation.

b. Assignment of a 10% rating.

c. Assignment of a 20% rating.

2. Normal flexion and abduction of the shoulder is from 0 degrees to 180 degrees.

a. true

b. false

3. Dupuytren's contracture is evaluated based on limitation of:

a. wrist movement

b. elbow movement

c. finger movement

4. Gout is rated as:

a. rheumatoid arthritis

b. degenerative arthritis

c. bursitis

d. osteomalacia

5. What rating is provided for fibromyalgia when it requires continuous medication for control?

a. 0%

b. 10%

c. 20%

d. 30%

6. A minimum 10% rating will be established for lumbosacral arthritis when there is objective evidence of pain on motion.

a. true

b. false

Given the scenarios below, describe the actions you as the RVSR of record would take.

1. The veteran tore his right knee anterior cruciate ligament. He underwent arthroscopic repair of the torn ligament, and scraping of the patella. X-ray showed no arthritic changes. Physical examination showed that the veteran’s knee is slightly unstable, subject to recurring episodes of swelling and heat. No evidence of a recurring tear was shown. Arthroscopy scar was noted. Private physician report noted an acute exacerbation of the veteran's right knee condition, with pain on motion, slight swelling and clicking in the knee joint.

Based on the above fact pattern, what diagnostic code and evaluation would you assigned for the disability?

2. The service medical records show the veteran suffered a blow to his mid-low back area in November 1993 aboard ship when a refueling winch handle spun out of control. SMR's show that routine therapy and medication were not successful in easing the pain. He was boarded out on TDRL by a Physical Evaluation Board with a 10 percent disability. Current VA examination continued the diagnosis of lumbosacral strain. Range of motion studies showed slight limitation of the lumbosacral spine, with complaints of pain. He takes Motrin daily for control of the pain. Flexion of the lumbar spine was 85 degrees. Extension was 30 degrees. Lateral bending was 30 degrees, left and right. Rotation was 30 degrees, left and right.

Based on the above fact pattern, what diagnostic code and evaluation would you assigned for the disability?

3. Medical records note straight leg raising to 50 degrees on left. The veteran complains of low back pain radiating down the left leg with intermittent relief by Motrin. Diagnostic testing revealed no neurologic abnormalities. Private medical record gives history of lifting injury and confirms MRI finding of HNP. The veteran’s Physician indicates that he prescribed one week of bed rest during the past 12 months.

Based on the above fact pattern, what diagnostic code and evaluation would you assigned for the disability?

4. The veteran is service connected for right knee instability. The condition was rated 10% disabling from 02-22-89, under DC 5257. VAE at the time of the evaluation revealed mild instability of the right knee and complaints of pain on overuse.

On 06-21-00, the veteran filed a claim for increase. VAE of 07-26-00, revealed the veteran to complain of continued right knee pain and instability. The exam revealed decreased flexion of the knee to only 110 degrees as compared to 140 degrees on the left. There was pain on motion and mild swelling present. The examiner indicated mild instability of the right knee joint. Diagnosis was traumatic arthritis, right knee, following review of x-ray. Examiner stated the veteran has post-traumatic arthritic changes of the right knee with pain on motion, mild instability, and slight swelling.

How should the disability be evaluated?

5. A veteran is already service-connected for diabetes mellitus develops an ulcerated lesion on his right foot. The sore did not heal and gangrene developed necessitating a right below the knee amputation of the right leg.

What diagnostic code would you use for the right leg amputation? What evaluation would you assign?

Is the veteran entitled to special monthly compensation? If so, at what level would this be assigned and why?

6. If a major joint reveals x-ray evidence of arthritis and the veteran has pain on motion but the schedule fails to support a compensable evaluation under the appropriate diagnostic code for limitation of motion what evaluation should be assigned?

7. Furnish evaluation and diagnostic code or codes for the following disability. The veteran is suffering from residuals of fracture vertebra at L-3. Exam shows range of motion of lumbar spine to be forward flexion to 85 degrees, extension to 30 degrees, lateral flexion to 30 degrees and rotation to 30 degrees. X-ray at exam reveals evidence of spurring of L-3 vertebra and evidence of old fracture.

1. The veteran has a service connected multiple finger injury. Exam findings reveal an amputation of the ring finger through the middle phalanx and amputation of little finger through proximal phalanx. Determine the level at which this single hand multiple finger disability should be evaluated.
2. The veteran files a claim for a right knee disability on January 12, 2005. On examination he has full range of motion; but on repetitive motion, the knee is actually limited to10 degrees extension and 45 degrees flexion due to fatigue.

How should the disability be evaluated?