(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 electrodiagnostic 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 U.S.C. 1155

[62 FR 30238, June 3, 1997]

§4.57 Static foot deformities.

It is essential to make an initial distinction between bilateral flatfoot as a congenital or as an acquired condition. The congenital condition, with depression of the arch, but no evidence of abnormal callosities, areas of pressure, strain or demonstrable tenderness, is a congenital abnormality which is not compensable or pensionable. In the acquired condition, it is to be remembered that depression of the longitudinal arch, or the degree of depression, is not the essential feature. The attention should be given to anatomical changes, as compared to normal, in the relationship of the foot and leg, particularly to the inward rotation of the superior portion of the os calcis, medial deviation of the insertion of the Achilles tendon, the medial tilting of the upper border of the astragalus. This is an unfavorable mechanical relationship of the parts. A plumb line dropped from the middle of the patella falls inside of the normal point. The forepart of the foot is abducted, and the foot everted. The plantar surface of the foot is painful and shows demonstrable tenderness, and manipulation of the foot produces spasm of the Achilles tendon, peroneal spasm due to

adhesion about the peroneal sheaths, and other evidence of pain and limited motion. The symptoms should be apparent without regard to exercise. In severe cases there is gaping of bones on the inner border of the foot, and rigid valgus position with loss of the power of inversion and adduction. Exercise with undeveloped or unbalanced musculature, producing chronic irritation, can be an aggravating factor. 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.

§4.58 Arthritis due to strain.

With service incurred lower extremity amputation or shortening, a disabling arthritis, developing in the same extremity, or in both lower extremities, with indications of earlier, or more severe, arthritis in the injured extremity, including also arthritis of the lumbosacral joints and lumbar spine, if associated with the leg amputation or shortening, will be considered as service incurred, provided, however, that arthritis affecting joints not directly subject to strain as a result of the service incurred amputation will not be granted service connection. This will generally require separate evaluation of the arthritis in the joints directly subject to strain. Amputation, or injury to an upper extremity, is not considered as a causative factor with subsequently developing arthritis, except in joints subject to direct strain or actually injured.

§4.59 Painful motion.

With any form of arthritis, painful motion is an important factor of disability, the facial expression, wincing, etc., on pressure or manipulation, should be carefully noted and definitely related to affected joints. Muscle spasm will greatly assist the identification. Sciatic neuritis is not uncommonly caused by arthritis of the spine. The intent of the schedule is to recognize painful motion with joint or periarticular pathology as productive of disability. It is the intention to recognize actually painful, unstable, or malaligned joints, due to healed injury, as entitled to at least the minimum

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compensable rating for the joint. Crepitation either in the soft tissues such as the tendons or ligaments, or crepitation within the joint structures should be noted carefully as points of contact which are diseased. Flexion elicits such manifestations. The joints involved should be tested for pain on both active and passive motion, in weight-bearing and nonweight-bearing and, if possible, with the range of the opposite undamaged joint.

§4.60 [Reserved]

§4.61 Examination.

With any form of arthritis (except traumatic arthritis) it is essential that the examination for rating purposes cover all major joints, with especial reference to Heberden's or Haygarth's nodes.

§4.62 Circulatory disturbances.

The circulatory disturbances, especially of the lower extremity following injury in the popliteal space, must not be overlooked, and require rating generally as phlebitis.

§4.63 Loss of use of hand or foot.

Loss of use of a hand or a 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 elbow or knee with use of a suitable prosthetic appliance. The determination will be made on the basis of the actual remaining function of the hand or foot, 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.

(a) Extremely unfavorable complete ankylosis of the knee, or complete ankylosis of 2 major joints of an extremity, or shortening of the lower extremity of $3\frac{1}{2}$ inches (8.9 cms.) or more, will be taken as loss of use of the hand or foot involved.

(b) Complete paralysis of the external popliteal nerve (common peroneal) and consequent, footdrop, accompanied by characteristic organic changes including trophic and circulatory disturbances and other concomitants confirmatory of complete paralysis of this nerve, will be taken as loss of use of the foot.

 $[29\ FR\ 6718,\ May\ 22,\ 1964,\ as\ amended\ at\ 43\ FR\ 45349,\ Oct.\ 2,\ 1978]$

§4.64 Loss of use of both buttocks.

Loss of use of both buttocks shall be deemed to exist when there is severe damage to muscle Group XVII, bilateral (diagnostic code number 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 to maintain postural stability (the pelvis upon head of femur). The assistance may be rendered by the person's own hands or arms, and, in the matter of postural stability, by a special appliance.

§4.65 [Reserved]

§4.66 Sacroiliac joint.

The common cause of disability in this region is arthritis, to be identified in the usual manner. The lumbosacral and sacroiliac joints should be considered as one anatomical segment for rating purposes. X-ray changes from arthritis in this location are decrease or obliteration of the joint space, with the appearance of increased bone density of the sacrum and ilium and sharpening of the margins of the joint. Disability is manifest from erector spinae spasm (not accounted for by other pathology), tenderness on deep palpation and percussion over these joints, loss of normal quickness of motion and resiliency, and postural defects often accompanied by limitation of flexion and extension of the hip. Traumatism is a rare cause of disability in this connection, except when superimposed upon congenital defect or upon an existent arthritis; to permit assumption of pure traumatic origin, objective evidence of damage to the joint, and history of trauma sufficiently severe to injure this extremely strong and practically immovable joint is required. There should be careful consideration of lumbosacral sprain, and the various