

evaluating specific conditions affecting joints under specific diagnostic codes and in § 4.59, as discussed later in this document.

Section 4.45 also defines major and minor joints and their rating significance. It states that for the purpose of rating disability from arthritis, the shoulder, elbow, wrist, hip, knee, and ankle are considered major joints, and that multiple involvements of the interphalangeal, metacarpal, and carpal joints of the upper extremities, the interphalangeal, metatarsal and tarsal joints of the lower extremities, the cervical vertebrae, the dorsal vertebrae, and the lumbar vertebrae, are considered groups of minor joints, ratable on a parity with major joints. It also states that the lumbosacral articulation and both sacroiliac joints are considered to be a group of minor joints, ratable on disturbance of lumbar spine functions.

Since this information is necessary for rating, we propose to retain regulatory definitions of major and minor joints for purposes of evaluating arthritis, but to revise them for clarity. We propose to retitle this section "Major and Minor Joints for Arthritis Evaluations," which better describes the content. We propose to include two paragraphs, with paragraph (a) (Major joints) stating that for purposes of rating disability from arthritis, each shoulder, elbow, wrist, hip, knee and ankle joint is a major joint, and all other joints are minor joints. Paragraph (b) (Groups of minor joints) would state that a group of minor joints with arthritis will be rated as a major joint. A group of minor joints is defined as any combination of three or more interphalangeal or metacarpophalangeal joints of a single hand, any combination of three or more interphalangeal, metatarso-phalangeal, tarso-metatarsal, or tarso-tarsal (or intertarsal) joints of a single foot; any combination of two or more cervical vertebral joints; any combination of two or more thoracolumbar vertebral joints; or a combination of the lumbosacral joint and both sacroiliac joints. This revision would resolve ambiguity in the current language by clearly indicating, for example, that the combination of minor joints in different parts of the body, such as two interphalangeal joints of one hand and a single cervical or thoracolumbar intervertebral joint, does not constitute a major joint and that the combination of one interphalangeal, one metatarso-phalangeal, and one intertarsal joint of a single foot would constitute a group of minor joints. These issues have been a source of confusion in applying the current schedule. This revision would also remove the vague

term "multiple involvements" and specify the number of minor joints in various areas that would constitute a group of minor joints. The revision would also name specific joints, rather than naming bones, in order to eliminate confusion about determining, for example, whether or not the term "carpal joints" includes the radiocarpal joint (between the radius and the carpal bones) the carpo-carpal (or intercarpal) joints (between two or more carpal bones), and the carpo-metacarpal joints (between the carpals and the metacarpals). Since all of these joints are involved in wrist motion, we propose to consider them all part of the wrist joint, and therefore part of a major joint.

Section 4.46, "Accurate Measurement," points out the importance of accurate measurements of the length of stumps, excursion of joints, and dimensions and locations of scars with respect to landmarks, in the disability examination process. It also states that a goniometer is indispensable in measuring limitation of motion. The importance of an adequate examination, which this section attempts to set forth, is already stated in § 4.2, "Interpretation of examination reports". Disability examination worksheets for examiners give detailed guidelines for examining and measuring in the musculoskeletal system. We propose to put the requirement for use of a goniometer to measure joint range of motion in revised § 4.42. We therefore propose to delete the contents of § 4.46 because the material is redundant.

We propose to retitle § 4.46, "Evaluation of muscle strength," and to state that, for VA rating purposes, muscle strength or weakness will be evaluated using a standard muscle grading table that is provided in paragraph (a). This will assure that assessment of muscle strength will be consistent and based on the system recommended by the consultants as the system used most widely by orthopedic surgeons, neurologists, physiatrists, and physical therapists. This system uses six levels of muscle grading: Absent (0): No palpable or visible muscle contraction; Trace (1): Palpable or visible muscle contraction, but muscle produces no movement, even with gravity eliminated; Poor strength (2): Muscle produces movement only when gravity is eliminated; Fair strength (3): Muscle produces movement against gravity but not against any added resistance; Good strength (4): Muscle produces movement against some, but no more than moderate, resistance; and Normal strength (5): Muscle produces movement against full or "normal"

resistance. This system is derived from "Aids to the Investigation of the Peripheral Nervous System," published by the Medical Research Council of Great Britain in 1945. The consultants pointed out that, although it is largely subjective, it has some objectivity in measuring strength by using gravity resistance in the assessment, and the term "normal" resistance is generally understood in medical usage. This table can be used for assessing both muscle and (motor) nerve disability. For convenience of use in assessing both musculoskeletal and neurologic disabilities, we also plan to add the table to the neurologic portion of the rating schedule when it is revised. We propose to add a second paragraph to § 4.46 to provide a guide to the use of the results of the muscle grading system in assessing loss of muscle function, as follows: complete, no motor function (muscle grading system 1 or 0); incomplete, severe, marked weakness associated with muscle atrophy (muscle grading system 2); incomplete, moderate, weakness (muscle grading system 3); and incomplete, mild, weakness (muscle grading system 4). In our judgment, this material would assist raters in making consistent determinations of muscle strength or weakness, based on the muscle grading system, and it is in general accord with the recommendations of the consultants.

Section 4.57, "Static foot deformities," discusses in detail how to clinically differentiate flatfoot (pes planus) that is congenital from flatfoot that is acquired and discusses when flatfoot should be service-connected. Material that pertains more to a determination of service connection than to evaluation is not appropriate in the rating schedule, which is a guide to the evaluation of disabilities, and we propose to delete this material. Section 4.57 also states that in the absence of trauma or other definite evidence of aggravation, service connection is not in order for pes cavus, a foot deformity that is typically a congenital or juvenile disease. Differentiating congenital from acquired foot deformities is more of a medical determination than a rating determination. None of the information in this section is pertinent to how raters should evaluate flatfeet or pes cavus, and we therefore propose to delete this section.

Current § 4.58, "Arthritis due to strain" discusses when it is appropriate to service connect, on a secondary basis, arthritis of joints that are subject to direct strain when there has been amputation or shortening of a lower extremity, or amputation or injury of an upper extremity. This material also