CD Part 11

Nervous System Disorders

A. Definitions

The following definitions are for words used in this chapter and during the SSA disability process. If you need additional definitions, consult a good medical dictionary, available in most bookstores and libraries. You can also look at online medical dictionaries like the one at www.medlineplus.gov.

Aneurysm (of cerebral artery). Enlarged, weakened areas in a cerebral artery.

Angiography. Any technique to produce images of arteries, such as by x-rays or MRI scans. Usually involves injection of contrast material into the artery to make it visible. Also known as *arteriography*.

Anticonvulsants. Drugs used to treat *epilepsy*.

Aphasia. Decrease or loss of ability to know or express things, as a result of brain damage.

Arteriovenous malformation (AVM). Abnormal tangle of arteries and veins involving an area of the spinal cord or brain.

Articulation. To speak (utter, enunciate, and pronounce). The quality of articulation is reflected by the distinctness or clarity of speech.

Asphyxia. Lack of oxygen.

Astrocytoma. *Malignant* brain tumors arising from the astrocyte cells of the brain; may be of varying degrees of malignancy.

Ataxia. General term for uncoordinated movement of either the arms or legs. The word is seen most often in reference to an "ataxic gait," meaning the person has difficulty walking in a normal, smooth manner.

Athetosis. Involuntary, slow, writhing motion of the limbs.

Atrophy. An abnormal decrease in the size of a muscle or organ.

Auditory. Pertaining to hearing.

Auditory brain stem response (ABR). The brain's electrical activity in response to hearing sounds, which is then computer-analyzed. ABR is not under voluntary control and provides information about the function of the auditory pathways between the ears and the brain. Also known as *brain stem auditory evoked response (BAER)* and *auditory evoked response (AER)*.

Aura. Any subjective sensation or motor abnormality that sometimes comes before an attack of some type of nervous system disorder. For example, an aura may precede the appearance of a migraine headache or an epileptic seizure. Auras can be of many different types—visual, auditory, smells, weakness, nausea, and the like.

Autonomic nervous system. That part of the nervous system that carries out its activities without conscious will—such as glandular secretions, heartbeat, and movement of the digestive tract.

Benign. Noncancerous.

Biopsy. The process of taking a sample of tissue for detailed analysis of various kinds. Biopsy specimens are observed grossly with the eyes, microscopically with a variety of possible tissue stains, and in some cases may involve specific chemical and DNA analyses.

Bradykinesia. Slowed movements resulting from a neurological disorder.

Brain scan. Any test involving injection of a radioactive isotope (radionuclide) to evaluate brain metabolism or blood flow. Scanners pick up radioactivity and make images of the pattern and degree of uptake in various areas of the brain.

Brain stem. A transitional area between the upper spinal cord and the brain. The brain stem has important functions in sleep and maintenance of consciousness and is the origin of the cranial nerves. It holds numerous important regulatory centers, such as those involving the heart and breathing. The brain stem is delicate and is always manipulated as little as possible during brain operations; pressure or trauma to the brain stem can result in coma or death.

Broad-based gait. Walking with feet wide apart so as to maintain balance.

Bulbar signs. Weakness of the muscles needed for breathing, swallowing, chewing, and speaking. Difficulty handling oral secretions (saliva) should be considered a bulbar sign because it means the person cannot swallow adequately. Bulbar signs result from disorders that damage the brain stem motor nerve cells which control these activities. See *brain stem* and *cranial nerves*.

Cardiomyopathy. Any disease of heart muscle.

Carotid arteries. Large arteries in the neck that supply the head and brain with blood. The internal carotid artery (ICA) branches from the common carotid artery to supply the brain, while the external

carotid artery (ECA) branches from the common carotid artery to supply the remainder of the head.

Carotid ultrasound. Test producing an image of the carotid arteries in the neck by means of reflected high-frequency sound waves. It is particularly useful in identifying fatty deposits that may decrease blood flow to the brain.

Cerebral angiography. Angiography of the brain; x-ray evaluation of the brain's blood circulation after injection of a contrast agent.

Cerebral cortex. The thin sheet of cells that makes up the outer surface of the brain and which is responsible for all higher thinking. See *gray matter*.

Cerebral hemispheres. The large bulges of brain tissue above the brain stem, which have fissures (sulci) and ridges (gyri). The cerebral hemispheres are covered with the cerebral cortex.

Cerebrospinal fluid (CSF). Clear, watery fluid that bathes the spinal cord and brain and circulates within the brain.

Cerebrovascular accident (CVA). Stroke. There are basically two kinds of stroke: *hemorrhagic strokes* caused by bleeding in the brain and *thrombotic strokes* caused by blockage of blood flow to a part of the brain.

Chorea. Involuntary jerking motion of the limbs.

Circumduction. Movement of a limb with a circular motion, such as swinging a partially paralyzed leg around to walk. A circumducting gait is common in stroke patients. See *hemiparetic gait*.

Clivus chordoma. Rare, slow-growing tumors arising from fetal remnant cells and occurring at the back and bottom of the skull. They can have varying degrees of malignancy.

Computerized axial tomography (CAT or CT) scan. X-rays taken under computer guidance that can show much greater detail than regular x-rays.

Contrast. Material that is injected during angiography, either for x-rays or MRI scans, to improve image quality.

Convulsion. Violent, involuntary contractions of muscles. Meaning is usually in reference to seizures that involve such involuntary muscle activity. See *seizures*.

Cranial nerves (CN). Nerves arising from the brain stem. The 12 cranial nerves that mainly supply the head are those for hearing, taste, smell, balance, tongue movement, swallowing, facial muscle movement, sight, movement of the eyes, upper back muscles, and larynx.

Deep tendon reflexes (DTRs). Brief involuntary muscle contractions caused by stimulation of nerve endings in muscle tendons. For example, tapping on the patella (the tendon below the kneecap) normally causes contraction of the quadriceps (upper thigh muscle) so that the leg extends in a brief kicking motion. This is called a knee-jerk (KJ). Biceps-jerks (BJ) and ankle-jerks (AJ) are other commonly tested deep tendon reflexes.

Dementia. Deterioration of intellectual capacity.

Demyelinating diseases. Disorders, such as multiple sclerosis, that involve damage to the insulating myelin substance that covers some kinds of nerve tracts. Demyelinating diseases may affect the white matter in the brain, as well as peripheral nerves.

Diplopia. Double vision. Diplopia should always cause a doctor to suspect a pituitary tumor pressing on the optic nerves or other tumors affecting the visual areas of the brain.

Discectomy. Removal of part of an intervertebral disc, often done with a laminectomy. Sometimes, a microdiscectomy is possible by making a small surgical incision in the back without performing a laminectomy.

Dysarthria. Inability to speak clearly.

Dysesthesias. Abnormal sensations, especially those involving the sense of touch. Dysesthesias involving a decreased sensitivity to touch are called *hypoesthesias*; those involving increased sensitivity to touch are *hyperesthesias*. Dysesthesias may be present without being touched.

Electroencephalogram (EEG). Recording made of the brain electrical activity, picked up by scalp electrodes and amplified. Unless performed during brain surgery, an EEG does not involve touching the brain.

Electromyogram (EMG). Recording of a muscle's electrical response to electrical stimulation. The size (amplitude), number (frequency), and shape of the electrical outputs from stimulated muscles provides important information that can be related to both nerve diseases and muscle diseases.

Endarterectomy. Surgical procedure to remove blood clots or fatty blockages from an artery. Endarterectomies on the carotid arteries of the neck

can help restore blood flow to the brain and prevent strokes.

Ependymal cells. Cells lining the ventricles of the brain.

Ependymoblastoma. Cancerous tumor arising from the ependymal cells.

Ependymoma. Benign tumor arising from the ependymal cells.

Epilepsy. Any of a number of possible disorders in which abnormal electrical activity in the brain produces sudden (paroxysmal) changes in consciousness, movements, sensations, mental state, or disturbances of the autonomic nervous system or combinations thereof. An episode of epilepsy is known as a seizure.

Festinating gait. A neurological abnormality characterized by an involuntary tendency to take small, increasingly fast steps in order to keep from falling forward.

Flaccid. Absent muscle tone, usually resulting from lack of nervous system stimulation.

Foot-drop. Inability to lift the front part of the foot when walking, so that the toes tend to drag. A foot-drop can be caused by injury to peripheral nerves in the leg, herniated discs or abnormalities that put pressure on certain nerve roots as they leave the spinal cord, injury to the spinal cord, or by damage to brain areas necessary to activate the muscles in the leg that are needed to flex the foot upward. See *steppage gait*.

Gait. The manner in which a person walks.

Gray matter. Tissue that contains nervous system cells, such as the cerebral cortex of the brain.

Hemiparetic gait. A gait that occurs with a weak arm and leg, such as caused by a stroke. The weak arm has a short arm swing movement and the weak leg is swung around in a circle (circumducted). See *circumduction*.

Hemiplegia. Paralysis of an arm and leg on the same side of the body.

Herniated nucleus pulposus (HNP). Protrusion of the cartilage-like central part of an intervertebral disc through its fibrous covering. Herniated nucleus pulposus is a frequent cause of radiculitis and back pain and is commonly called a *herniated disc*.

Hydrocephalus. Accumulation of excessive cerebrospinal fluid in the ventricles of the brain. Hydrocephalus may be associated with increased pressure in the ventricles or with normal pressures. The latter is known as *normal pressure hydrocephalus (NPH)*.

Hyperesthesia. Increased skin sensitivity, especially to being touched. For example, a painful burning sensation caused by being touched normally on a certain area of skin would be described as a painful burning hyperesthesia. Hyperesthesia is a type of dysesthesia.

Hyperreflexia. Abnormally fast deep tendon reflex responses, such as would occur in the limb affected by a stroke. Also known as *hyperactive reflexes*.

Hypoesthesia. Decreased sensitivity of touch sensation on a particular area of skin. For example, a decreased ability to feel being touched (numbness) in an arm after a stroke would be described as a hypoesthesia in that arm. Hypoesthesia is a type of dysesthesia.

Hysterical seizures. Fake epileptic seizures. Also known as *pseudoseizures* and *psychogenic seizures*.

Idiopathic. Of unknown cause.

Innervating. Reference to nerve supply to a body part.

Intervertebral disc. Discs that separate and cushion the vertebrae.

Intracranial pressure (ICP). The pressure inside the skull. Increased ICP, as from a tumor or bleeding inside the head, can distort the brain with resulting unconsciousness and death.

Intraventricular hemorrhage (IVH). Bleeding inside a brain ventricle. IVH is most commonly seen in premature infants, but can also result from head trauma.

Laminectomy. Surgery to remove of a part of a vertebra known as its lamina. Laminectomies are done to relieve pressure on spinal nerve roots that often results from a herniated nucleus pulposus or arthritic spurs.

Larynx. Voice box.

Lasègue's sign. See *straight leg raising test*.

Lesions. Abnormalities.

Magnetic resonance imaging (MRI). Method of producing pictures of internal body structures using magnetic fields and radiofrequency fields. MRIs do not utilize x-rays or other radiation.

Malignant. Cancerous.

Masked facies. Mask-like appearance of the face—decreased facial expression.

Medulla. One of the parts of the brain stem.

Medulloblastoma. Cancerous tumor arising in the medulla of the brain.

Meninges. Membranes covering the brain and spinal cord. The thickest, outer meningeal membrane is called the dura mater. Surgical or other medical reports usually just list it as simply the "dura."

Meningioma. Tumor of the meninges, rather than of the brain itself, which can, however, put dangerous pressure on the underlying brain tissue. Most meningiomas are benign.

Meningomyelocele. Congenital bag-like defect of the meninges and spinal cord.

Motor dysfunction. Abnormal motor function.

Motor function. Abilities related to movement, such as walking and use of the hands and arms.

Motor nerves. Nerves that stimulate muscle contraction and are therefore necessary for movement.

Muscle spasm. Involuntary contraction of a muscle that cannot be relaxed by an act of will.

Muscle tone. State of contraction of a muscle. A muscle with a complete absence of tone is flaccid, while the most extreme tone, hypertonicity, is a muscle spasm.

Myelin. The protective material that sheaths some nerve fibers. See *white matter*.

Myelography. X-ray technique for seeing pressure put on the spinal cord or nerve roots by herniated discs, arthritis, or tumors. X-ray contrast material must be injected into the cerebrospinal fluid that surrounds the spinal cord and nerve roots.

Narcolepsy. Nervous system disorder associated with an irresistible desire to sleep. There are three important features of narcolepsy: (1) Cataplexy—loss of muscle tone, possibly with physical collapse, but without loss of consciousness; (2) Hypnagogic hallucinations—images that occur between waking and falling sleep; and (3) Sleep paralysis—a temporary feeling of being unable to move while falling asleep or just before awakening. There is no listing for narcolepsy, but if severe enough in disrupting daily activities narcolepsy could be considered by the SSA as being of equivalent severity to one of the epilepsy listings.

Nerve conduction study (NCS). Test that measures the ability of nerves to carry electrical impulses. Injured nerves may have a decreased nerve conduction velocity. Also known as *nerve conduction velocity (NCV)*.

Nerve root. The first part of a nerve as it is formed from the spinal cord.

Neurological. Pertaining to the nervous system.

Neuron. Nervous system cell.

Neuropathy. Any disease of peripheral nerves. Peripheral nerves are those connecting the spinal cord to the various organs and tissues of the body. There are many possible causes of neuropathy including drugs, diabetes mellitus, vitamin deficiencies, and kidney disease. Neuropathy is best demonstrated by weakness, decreased reflexes, loss of sensation, and decreased nerve conduction velocity (NCV). Motor neuropathy means affecting the motor nerves, while sensory neuropathy means affecting the sensory nerves. Not every type of sensation need be affected for neuropathy to be present.

Neurotransmitter. Chemical that allows nerve cells to communicate with each other.

Nystagmus. Abnormal, rhythmic, oscillating movements of one or both eyes. The oscillations are usually horizontal in direction, but may be vertical.

Oligodendroglioma. Tumors arising from brain cells called oligodendrogliocytes, usually occurring in the white matter of the brain.

Optic atrophy. Degeneration of the optic nerve as a result of neurological disease, such as multiple sclerosis.

Optic nerve. Nerve carrying visual information from the eye.

Optic neuritis. Inflammation of the optic nerve.

Paralysis. Loss of muscle strength resulting from muscle or neurological disorders. Use of the word may mean either partial or complete paralysis, unless further clarified.

Paraplegia. Paralysis of the legs.

Paresis. Partial paralysis.

Peripheral neuropathy. See *neuropathy*.

Pituitary gland. Pea-sized gland that hangs from the bottom of the brain on a stalk and produces a wide range of hormones. Most pituitary tumors are benign types called adenomas.

Postictal. Occurring after an epileptic seizure.

Primary sarcomas. Cancers arising in connective tissue, such as blood vessels (hemangiosarcoma) or the myelin sheaths around nerves (schwannoma).

Proprioception. The position sense by which a person can position an arm or leg without looking at it, such as in normal walking.

Pseudoseizures. See *hysterical seizures.*

Psychogenic seizures. See *hysterical seizures.*

Quadriplegia. Paralysis of both arms and legs.

Radicular distribution. The specific body area served by a particular nerve root from the spinal cord.

Radicular signs. Neurological abnormalities in a limb that indicate irritation of a spinal nerve root innervating it. Radicular signs are decreased deep tendon reflexes, muscle weakness, pain, and decreased sensation.

Radiculitis. Inflammation of a spinal nerve root.

Remission. Improvement in a disorder.

Rigidity. Stiffness and inflexibility of muscles.

Romberg's test (Romberg's sign). Test of ability to maintain balance while standing with feet close together, with eyes open or closed.

Seizures. Attacks of abnormal mental and/or physical states that are caused by disturbed electrical activity in the brain. The most common disorder producing seizure is epilepsy. Also see *convulsion.*

Sensory nerves. Nerves that transmit sensory information (touch, pain, cold, and the like) from the body to the spinal cord and up to the brain.

Spasticity. Excessive involuntary muscle contraction that makes limbs stiff and movement uncoordinated, as in a *spastic gait.*

Sphincters. Small, circular muscles that control the size of an opening.

Spinal stenosis. Narrowing of the spinal canal, usually as a result of arthritis.

Spine. Bony vertebrae stacked on top of each other and separated by intervertebral discs that permit some degree of cushioning and flexibility. The seven vertebrae of the neck (C1–C7) are called the cervical spine. The 12 vertebrae in the chest are the thoracic spine (T1–T12), while the five vertebrae in the lower back are known as the lumbar spine (L1–L5). Beneath the lumbar spine is the sacrum, which consists of a triangular piece of bone of sacral vertebrae fused together (S1–S4). At the end of the spinal column is the tailbone (coccyx). The vertebrae forming the spine are overlaid and connected by many spinal muscles and ligaments. They also form small joints between each other called *facet joints.*

Station. The manner in which a person stands.

Steppage gait. Gait in which the foot tends to hang in a downward position due to foot-drop. Consequently, the affected leg is lifted high and carefully placed straight down without the normal push-off of the front of the foot and toes.

Straight leg raising (SLR) test. With the patient lying on the back, lifting the outstretched leg until complaint of pain. The SLR is used to detect pressure on spinal nerve roots as could be caused by an HNP, tumors, bone spurs, and the like. In normal individuals, the leg can be lifted 80 degrees or more without pain. An SLR test should not be considered positive if leg movement is limited by tight hamstring tendons behind the knee. Back pain shooting down the leg during SLR is stronger evidence of nerve root compression than back pain alone. Also known as *Lasègue's sign.*

Stroke. See *cerebrovascular accident.*

Tabes dorsalis. Disease of the spinal cord caused by syphilis.

Tandem gait. Ability to walk while placing one foot in front of the other. Tandem gait is a test of balance.

Transient ischemic attack (TIA). Decreased blood flow to a part of the brain that is not prolonged enough to cause permanent damage, as would be the case with stroke. The effects of a TIA depend on the size and location of the brain area affected and may produce numbness or weakness in an arm or leg. A TIA is a warning and it is important to quickly treat its cause to prevent a stroke.

Tremor. Involuntary trembling or shaking of a body part.

Ventricles (of brain). Cavities within the brain substance that hold cerebrospinal fluid. The largest are the *lateral ventricles.*

Ventriculoperitoneal shunt (VP shunt). A surgically placed tube running from one of the lateral ventricles of the brain, down through the neck to drain into the abdominal cavity. The shunt carries cerebrospinal fluid that can be absorbed through the peritoneal membrane lining the abdominal cavity. The purpose of a VP shunt is to decrease intracranial pressure by

removing excessive cerebrospinal fluid from the brain, as might be seen with hydrocephalus. The major possible complications are infection and blockage of the shunt. Some brain damage is inevitable with a VP shunt, since the tube has to be pushed down through the brain substance to reach the ventricle deep within the brain. As the number of complications requiring reoperation (shunt revisions) increases, so does the chance of more brain damage.

Visual evoked responses (VER). Measurements and computer analysis of electrical brainwaves produced in response to looking at a test pattern of light. Tests the health of the brain pathways involved in vision. It is completely safe and harmless.

White matter. Nervous system tissue consisting of those nerve fibers normally covered with an insulating substance called myelin. Nerve fibers carry information, in contrast to nervous system cells (neurons) that process information. See also *gray matter*.

B. General Information

The nervous system consists of a central nervous system (CNS) and a peripheral nervous system (PNS). The central nervous system includes the brain and spinal cord, while the peripheral nervous system is made up of the nerve cell clusters (ganglia) and nerves that supply the limbs and various organs of the body. Peripheral sensory nerves are responsible for carrying information from the body to the spinal cord for transmission to the brain. Peripheral motor nerves carry impulses from the brain, down the spinal cord and then to the muscles and various other organs.

There is also an autonomic nervous system (ANS) that carries out nonconscious functions, including muscular stimulation and glandular secretions. For example, the muscles in the esophagus, stomach, iris of the eye, and intestines contract and relax with an automatic rhythm that is not under conscious control. The autonomic nervous system can be further divided into the sympathetic and parasympathetic nervous systems. Actions of the sympathetic nervous system cause the contraction of muscles in arteries to increase blood pressure and cause the release of adrenal gland hormones to increase blood pressure and heart rate. Actions of the parasympathetic nervous system tend to decrease heart rate and blood pressure and are important in stimulating the digestive system. To put it in another way, the sympathetic nervous system is activated by fear and anger, while the parasympathetic nervous system has more of a vegetative function. However, this is a great simplification of what are actually complex interactions between the two systems.

There is a large number of diseases that can affect various parts of the nervous system. Vitamin deficiencies, infections, strokes, toxic substances, drugs, epilepsy, genetic disorders, benign and cancerous tumors, degenerative diseases, and trauma can all take their toll on the nervous system in different ways. However, the underlying common ground for disability determination is how a person's ability to function is affected. Strokes caused by untreated high blood pressure, as well as brain and spinal cord trauma resulting from motor vehicle accidents, are frequent causes of disability. Epilepsy is another common basis for allegations of disability. Numerous disability claims are also filed for infants with intraventricular hemorrhage. Serious malformations of the brain may occur in infants, but most result in death too soon for it to be worth filing a disability claim.

Some of the listings mention IQ scores. There are some acceptable, standardized IQ tests like the Wechsler Intelligence Scale for Children (WISC) or the Wechsler Adults Intelligence Scale (WAIS) that have more than one IQ score: verbal, performance, and full-scale. Whenever there are such multiple scores, the SSA must use the lowest valid score in determining if a listing is satisfied. However, the SSA is under no obligation to use IQ scores that appear invalid for some reason, such as inadequate cooperation during testing, or scores that don't match other facts about your life such as employment skills, education, and daily activities. When IQ tests are given, they should be the WAIS, WISC, or Stanford-Binet. In children too young for formal IQ testing, the SSA will use developmental testing and the scores as equivalent to an IQ score.

As with other types of impairments, fair and accurate disability determination involving disorders

of the nervous system requires evaluation of the evidence by medical doctors or osteopaths.

Note: Technically, an upper extremity is the arm, forearm, and hand. Similarly, a lower extremity is a thigh, leg, and foot. However, the common meaning is that a lower extremity is a leg and an upper extremity an arm. For ease of reading in this chapter, an upper extremity may be referred to as an arm and a lower extremity as a leg.

C. Specific Listings and Residual Functional Capacity

The listings that follow are in the federal regulations. They have been interpreted and commented on for greater ease of understanding while explaining their requirements. It is impossible to discuss here all of the medical possibilities related to every kind of disorder, and you may need to seek help from your treating doctor to more fully understand how your particular impairment relates to these listings. The discussions of residual functional capacity do not apply to children.

1. Listing 11.02: Epilepsy—Convulsive (Grand Mal or Psychomotor) (Adults)

Epilepsy can refer to any of a large number of types of seizures that affect consciousness, emotions, or sensation, or that produce convulsions. Epilepsy is associated with abnormal electrical activity in the brain and is not fully understood. What is known is that areas of electrical instability, known as irritative foci, can trigger the spread of electrical abnormality through parts or all of the brain. For example, brain injuries may result in epilepsy as a result of irritative foci developing in areas of brain damage. However, many cases of epilepsy are classified as idiopathic. With epilepsy, the SSA and many claimants often make mistakes during the process of disability determination. Epilepsy is medically complex and the paperwork needed to make an accurate disability determination can also be complicated. If you have epilepsy, it is important that you understand the various factors that can make the difference between allowance and denial, so that you can both make and defend your claim.

Individual variation in the nature and severity of seizures cannot be overemphasized. To cite rare cases as examples, there are people who have seizures only with certain kinds of music or certain frequencies of flashing lights. One particularly unusual patient described in the medical literature only had a seizure when touched on a small spot on one shoulder. That spot was found to send sensations to an area in the brain where a blood vessel malformation had developed. This lesion made the brain electrically unstable and a seizure started when it received sensory impulses from the spot of skin on the shoulder.

A grand mal seizure is the type of epileptic event that most people know. In this type of seizure, convulsions affect the whole body, the victim loses consciousness and collapses. Such individuals may have nervous system or mental abnormalities that come before a seizure (aura), loss of bowel and urinary sphincter control resulting in incontinence, tongue biting, and a period of confusion when the seizure subsides. Under this listing the SSA is interested in major motor seizures; by far the most common type is grand mal epilepsy. The convulsions of major motor seizures are known as generalized tonic-clonic seizures, because they affect the whole body. During the tonic phase, muscles stiffen; during the clonic phase, muscles jerk. Motor seizures that involve tonic-clonic activity in only a part of the body, such as an arm, do not qualify under this listing.

The listing also mentions psychomotor seizures, which are most often associated with abnormal activity in one of the brain's temporal lobes. Psychomotor seizures are also called partial complex seizures. However, part Ⓐ of the listing requires loss of consciousness and convulsions, neither of which are associated with psychomotor seizures. Psychomotor seizures do involve alteration of consciousness and sometimes the performance of activities for which the patient later has no memory. The exact nature of the experience is highly individualized. Some psychomotor seizures are very brief, lasting only seconds, with rapid restoration of normal conscious awareness. Others may be more prolonged, lasting several minutes, and may be disruptive to a person's ability to perform normal daily activities. If you have such prolonged

psychomotor seizures and otherwise satisfy the listing, the SSA should consider an allowance on the basis of having an impairment of equivalent severity to major motor seizures like grand mal epilepsy, even though you don't have convulsions or lose consciousness.

There is an international seizure classification, but the SSA is not so much interested in the exact diagnostic name of the seizure as whether or not it falls into the category of a convulsive major motor seizure (adult Listing 11.02 and child Listing 111.02) or a convulsive minor motor seizure (adult Listing 11.03 and child Listing 111.03). There are certain types of information that are vital to every epilepsy case the SSA evaluates:

1. The SSA requires an exact description of the seizures by your treating doctor, not just a diagnostic name. Descriptions by friends and relatives are also helpful, but statements by the treating doctor are much more important. How long each manifestation of a seizure episode lasts is important. If you have epilepsy, it is quite possible that your doctor has never actually seen you have a seizure, so your doctor will describe to the SSA what you have said. The truth is that many treating doctors—even neurologists—often have very poor descriptions of a patient's seizures in their records. However, it is not only vital for good treatment but for disability purposes that your doctor include in your medical records a good description of your seizures. Therefore, if you are thinking of applying for disability, you should discuss your seizures thoroughly with your doctor and request that a detailed description be entered into your records. Also, when the SSA sends you forms to complete regarding your seizures, your description should not conflict with what you have told your doctor.
2. The SSA needs medical records from your treating doctor stating the number of epileptic seizures you are having. No doctor can competently treat epilepsy without knowing how many seizures are occurring. Otherwise, there is no way to make treatment decisions, such as trying changes in medication. Make sure that your doctor knows if you are having seizures. It often happens that a claimant will tell the SSA that they are having numerous seizures, even several times a day and yet their medical records will not contain this information. It is difficult for the SSA to believe the number of seizures claimants allege they have, when their own doctor's records do not back up what they say. The SSA should also be able to distinguish between the number of seizures you have during the day and those you have at night, since they involve different parts of the listing.
3. The SSA requires a statement by your treating doctor saying whether you have been cooperative with anticonvulsant drug therapy for your epilepsy. If you are not cooperative, the exact reason should be specified by your doctor—such as mental illness or lack of money. If you cannot afford the cost of anticonvulsant drugs, you should not be held responsible for your inability to follow prescribed therapy. However, the SSA can still deny your claim if it finds you a free source for drugs that control your seizures.

The SSA frequently sees claimants who have both epilepsy and a mental disorder. If the epilepsy is under poor control because of the claimant's failure to follow prescribed therapy, the question arises as to what extent the mental disorder can be blamed for such noncompliance. If a claimant is competent enough to be denied benefits under the mental disorders listings, then he has the mental capacity to take antiepileptic medication. Thus, noncompliance is no excuse.

On the other hand, if the mental disorder is so severe that the person can't take antiepilepsy medication without supervision, then he should be allowed benefits under one of the mental listings, so that his failure to follow the prescribed therapy for epilepsy becomes a nonissue. Alcohol use and abuse is one of the major reasons adult claimants with epilepsy fail to qualify under this listing. Alcohol interferes with the effectiveness of the anticonvulsant drugs used to treat epilepsy; claimants abusing alcohol are considered not to be cooperating with prescribed therapy as required by the listing. In fact, use of any alcohol can interfere with treatment and disqualify such a claimant. Another reason that alcohol abusers are not qualified under this listing is that seizures caused by withdrawal from alcohol are not epilepsy and

will not last the required 12 months if the claimant abstains from alcohol abuse.

4. The SSA requires objective information about whether you are cooperating with prescribed treatment regarding your epilepsy. One thing the SSA must do before you can be allowed under this listing is measure the levels of anticonvulsant drugs in your blood, if this has not been done recently by your treating doctor. If your blood levels are within the therapeutic range, this is strong evidence that you are following prescribed treatment. If your levels are low, it is possible that you have a fast metabolism for some of the drugs, interference between drugs, or a problem absorbing your medication. The SSA can check this by asking you to sign a release for your pharmacy records. If you have been getting your drugs regularly, it is a reasonable presumption that you have been taking them. Of course, if your anticonvulsant drug levels are low, your treating doctor should have detected that fact and either increased your dose of medication or changed drugs. However, the SSA does not get involved in whether they think your doctor is giving you the right treatment. You will not be faulted even if the person in the SSA reviewing your claim personally thinks there is a better way to treat your epilepsy. In fact, it is common for the SSA to see claimants with uncontrolled epilepsy who are taking older anticonvulsant drugs and have never been switched to newer medications by their treating doctor. If you are one of these people, don't expect the SSA to tell you so—they can't interfere. If the SSA does deny your claim on the grounds that you could get better treatment than you are receiving, then whoever made your disability determination has personally added a requirement that is not in this listing or other federal regulations or laws. Remember, however, that "prescribed treatment" as used by the listing refers to treatment by a licensed medical doctor or osteopath. If you are under the treatment of some other kind of health care practitioner, the SSA will not consider you to be under prescribed treatment.
5. Measurement of the brain's electrical activity or electroencephalogram (EEG), is a standard part of the diagnosis and treatment of epilepsy of all types. The EEG will often be abnormal during a true epileptic seizure, the type of abnormality depending on the type of epilepsy. Grand mal epilepsy, for example, will produce high voltage spikes. So if a claimant happens to be undergoing an EEG when seeming to have a convulsive seizure and the EEG remains normal, they are not having a real seizure. However, such hysterical seizures can occur in patients who also have true epilepsy. Since hysterical seizures sometimes occur in people who also have real epilepsy, it can be difficult for the SSA to determine the number of true seizures.

   Most real seizures do not conveniently occur during an EEG, but some degree of abnormal electrical activity on an EEG done between seizures adds weight to the legitimate diagnosis of epilepsy. On the other hand, it is very important to know that a normal EEG done between seizures does not rule out epilepsy, and the SSA should not use the presence of a normal EEG done between seizures as an argument to deny your claim.

   In summary, EEG results are helpful but are not diagnostic of epilepsy unless run during an actual seizure. A normal EEG during a "seizure" is strong evidence for hysterical seizures.
6. Any injuries sustained by the claimant during an epileptic seizure and his or her response to treatment.

   Epilepsy claims are difficult for the SSA to evaluate. To make accurate determinations regarding epilepsy, detailed and high-quality information is needed. Unfortunately, such information is frequently not available from treating doctors.

a. Listing Level Severity

For your condition to be considered severe enough to meet this listing, you must provide documentation including a detailed description of a typical seizure and all associated factors such as aura and postictal manifestations. Your seizures must occur more often than once a month, in spite of at least three months of prescribed treatment. Additionally, you must satisfy Ⓐ or Ⓑ, below.

Ⓐ Daytime seizures, consisting of convulsions and loss of consciousness. If major seizures occur more than once monthly, the SSA assumes that they

interfere with your ability to carry out normal daily activities, making them sufficient for allowance.

Ⓑ Nocturnal seizures with residual effects that significantly interfere with activity during the day. "Significantly interfere" means more than a slight disruption in ability to carry out normal daily activities. Excessive daytime sleepiness, inability to think clearly, excessive irritability, or other emotional disturbances, are all examples of postictal residuals that can affect ability to function during the day. The difficulty the SSA frequently has regarding part Ⓑ is lack of documentation of postictal residuals in medical records. If you have nocturnal seizures with daytime residuals, try to discuss your problems with your treating doctor before you apply for disability. Ask that your doctor record your difficulties in your records.

b. Residual Functional Capacity

If you have had even one major epileptic seizure during the 12 months prior to the date of disability determination, you have a significant impairment that should receive environmental restrictions on an RFC. These restrictions are: no work in high places where you could fall in the event of seizures, no driving any kind of vehicle (cars, trucks, or other heavy equipment), and no work around or using hazardous machinery. Depending on the exact nature of the seizures, other restrictions also might be appropriate. The SSA does not give exertional restrictions for epilepsy—there are no limitations on the amount of weight you could lift or carry or in your ability to stand or walk.

2. Listing 111.02: Epilepsy—Major Motor Seizure Disorder (Children)

See comments under adult Listing 11.02. Also, children may have febrile seizures, occurring with high fever. Such seizures are not generally considered to be epilepsy, and improve without any treatment. Since febrile seizures are the most frequent type of seizures in children, the SSA also commonly encounters this type of seizure in child disability cases. The prognosis for febrile seizures is good and they usually cannot qualify as epilepsy under this listing. If febrile seizures have occurred along with epileptic seizures, the SSA should carefully distinguish the two different disorders.

Nothing in this listing should be taken to mean that a child requires an abnormal EEG for allowance.

a. Listing Level Severity

To meet the listing a child must satisfy Ⓐ or Ⓑ, below.

Ⓐ In a child with an established seizure disorder, the occurrence of at least one major motor (convulsive) seizure per month despite at least three months of prescribed treatment, with 1 or 2.

1. Daytime episodes (loss of consciousness and convulsive seizures). See part Ⓐ in adult Listing 11.02.
2. Nocturnal episodes with residual effects that interfere with activity during the day. See part Ⓑ in adult Listing 11.02.

Ⓑ In a child with an established seizure disorder, the occurrence of at least one major motor (convulsive) seizure in the year prior to application, despite at least three months of prescribed treatment.

Additionally, 1, 2, 3, or 4 must be present.

1. IQ of 70 or less.
2. Significant interference with communication due to a speech, hearing, or visual defect. Concerning speech, the child would have to have a problem like dysarthria or stuttering that poses more than a mild problem in understanding the child's speech. If the child has a speech impairment, she should be evaluated by a speech pathologist. The SSA can arrange such testing, if it has not been done.

Concerning hearing, an ability to hear only sound of more than 40 decibels (dB) intensity or speech discrimination worse than 60% would almost certainly produce the required significant communication problem. These numbers are offered only as guidelines; they are not official SSA policy regarding this listing.

Concerning vision, a visual acuity in the child's better eye somewhere in the 20/50 to 20/70 range would probably be needed to produce significant interference with communication. An acuity of 20/50 or worse in adults is considered significant in relation to a work environment, but that doesn't necessarily

translate to a significant difficulty in a child's communication ability. Similarly, a child with one eye blind and the other normal would have no significant communication or developmental difficulties, although it would be a significant impairment in an adult because of visual field limitations relevant to certain kinds of work.

CD Part 2 offers much more information about evaluating hearing, speech, and visual disorders in both adults and children. This information can be helpful in deciding if a child qualifies under part Ⓑ2.

3. Significant mental disorder. This leaves a lot of room for medical judgment. To make this judgment, the child will need a formal evaluation for a mental disorder, which means a thorough mental status examination by a psychiatrist or psychologist. The SSA can arrange for this testing, if it has not been done. CD Part 12 contains information about the evaluation of mental disorders that can be useful in deciding if part Ⓑ3 is satisfied.
4. Significant side effects of medications that interfere with major daily activities. Examples of possible side effects include nausea, dizziness, headaches, depression, and sleepiness. The important thing about part Ⓑ4 is that the child's symptoms and daily activities be clearly recorded by the parents (or other caregiver) so that the SSA can evaluate them. The observations of teachers, day care center workers, etc. can also be helpful. If the child's medication side effects are significant, it is reasonable for the SSA to ask if they have been reported to the treating doctor and what actions may have been taken by the doctor to correct them. If the child's parents say there is a problem but the child's medical records do not reflect their concern, it is quite possible the SSA would deny the child's claim.

Note: In sections 2 through 4, above, the term significant means more than mild or slight, which is a decision requiring medical judgment. These judgments must be made by a medical professional familiar with the disorder and how it is evaluated in both physical and mental terms.

3. Listing 11.03: Epilepsy—Nonconvulsive (Petit Mal, Psychomotor, or Focal) (Adults)

See comments under Listing 11.02 regarding epilepsy in general and the type of documentation needed. This listing is for seizures that are not individually as severe as the major motor (convulsive) seizures described in Listing 11.02.

Petit mal seizures are genetically caused, brief seizures lasting up to about 30 seconds. They are also called absence seizures, because they appear to make the person mentally absent for a brief period of time with no other evidence of anything being wrong. A characteristic spike and wave pattern is seen on an EEG during such a seizure. During a petit mal seizure, the person suddenly has a blank expression and loses awareness of their surroundings even though they don't fall or convulse. Full awareness returns quickly after most petit mal seizures. Some patients with petit mal epilepsy have hundreds of seizures daily and these people are more likely to have significant after effects (postictal manifestations).

As described in the comments under Listing 11.02, most psychomotor seizures start in the temporal lobes (temporal lobe epilepsy). Focal seizures are those involving only a part of the body, such as the jerking of an arm.

After a minor motor (nonconvulsive) seizure, people may engage in unusual behavior. These behaviors could be almost anything, as long as they are obviously out of the normal social context. For example, one claimant during a psychomotor seizure would undress in public. There could be other aftereffects that are not unconventional behavior, but which cause interference with ability to go about daily activities, such as confusion, sleepiness, or memory problems.

To qualify under this listing, claimants do not have to have convulsions affecting their whole body, fall down, bite their tongue, lose control of their urine or bowels, or have other manifestations found in major motor seizures. But because minor motor seizures are not as severe as major motor seizures, they have to occur more frequently than the major seizures described under Listing 11.02.

a. Listing Level Severity

For your condition to be considered severe enough to meet this listing, you must provide documented data including a detailed description of a typical seizure pattern and anything else associated with a seizure. Your seizures must occur more frequently than once a week in spite of at least three months of prescribed treatment. You must experience either loss of consciousness or at least a change of consciousness. Additionally, you must have some aftereffect that significantly interferes with your ability to perform activities during the day or your seizure must be followed by some kind of temporary unconventional behavior.

b. Residual Functional Capacity

All adult claimants who have had a significant number of minor motor seizures during the 12 months prior to the date of disability determination have a significant impairment that should receive some restrictions on an RFC. There is no exact number that would qualify; this is a matter of medical judgment based on the type and duration of seizures, along with the probability of complete seizure control at the time of disability determination.

Appropriate restrictions for seizures are: no work in high places without protection against falling, no driving any kind of vehicle (cars, trucks, or other heavy equipment), and no work around hazardous machinery of any kind. Depending on the exact nature of the seizures, other restrictions also might be appropriate.

4. Listing 111.03: Epilepsy—Nonconvulsive (Children)

See comments under adult Listing 11.03 regarding description of minor motor seizures. Also see comments under Listing 11.02 regarding epilepsy in general and the type of documentation needed.

This listing for children is easier to meet than the corresponding one for adults (11.03), because it doesn't require interference with daily activities or unconventional behavior. However, in children, EEG evidence must support the abnormalities characteristic of the seizure, such as the spike and wave pattern seen in peitit mal epilepsy. In addition to the minor motor (nonconvulsive) seizures mentioned under adult Listing 11.03 (petit mal, psychomotor, or focal), children may also have myoclonic seizures that qualify as minor motor seizures under this listing.

a. Listing Level Severity

For the child's condition to be severe enough to meet this listing, the child must have a minor motor seizure disorder with more than one minor motor seizure per week and with alteration of awareness or loss of consciousness. These incidences must occur despite at least three months of prescribed therapy.

5. Listing 11.04: Cerebrovascular Accidents (CVAs) (Adults)

Cerebrovascular accidents (CVAs)—strokes—are not only common, but increasing in the United States because of the growing numbers of people with poorly controlled high blood pressure. This is a tragedy, since high blood pressure is a treatable disorder. Some claimants have had single strokes, others multiple strokes. Multiple small strokes in the white matter of the brain are known as lacunar strokes.

There are numerous ways mistakes can be made in evaluating your claim based on a CVA. Therefore, some important issues need to be covered regarding this listing.

Because recovery from a stroke is highly unpredictable, the SSA requires that a disability determination be delayed until three months following the stroke. However, in cases of massive brain damage and coma, where there is no question that a claimant will be significantly crippled, the SSA could make an earlier determination. But these claims are the exception rather than the rule.

The effect of strokes depends on where in the brain they occur. CVAs affecting visual nerve pathways in the brain or affecting the visual cortex in the back of the brain can affect visual acuity or peripheral vision. Visual limitations that can result from strokes are discussed in detail in CD Part 4.

Strokes may also affect your ability to breathe, because of paralysis of the respiratory muscles between the ribs, or paralysis of the diaphragm. The diaphragm consists of right and left sheets of muscle

between the chest and abdomen that move to assist breathing. Breathing disorders are discussed in CD Part 3. This is an area that can easily be overlooked after a CVA, both by treating doctors and the SSA.

Strokes in adults frequently involve branches of the middle cerebral artery and can damage brain areas important for sensation and movement. Therefore, many adults with CVAs applying for disability have some degree of paralysis, usually an arm and a leg. Strokes affect the side of the body opposite the side of the brain where the stroke occurred. For example a CVA in the right side of the brain often causes numbness and weakness of the left arm and left leg.

a. Listing Level Severity

For your condition to be severe enough to meet this listing, you must have had a cerebrovascular accident (CVA). Additionally, Ⓐ or Ⓑ must be satisfied more than three months after the CVA.

Ⓐ Sensory or motor aphasia resulting in ineffective speech or communication. This concerns the fact that CVAs in the left hemisphere of the brain may damage language centers and produce aphasia. Receptive aphasias involve knowing, while motor aphasias involve expression through writing or speaking. Motor aphasia is also commonly known as expressive aphasia. Various combinations of receptive and motor aphasia are possible, both regarding severity and specific type of aphasia. A complete (global) aphasia refers to a combination of both receptive and expressive aphasia.

Aphasias can be extremely specific. For example, a receptive aphasia may only involve the inability to understand written words even though they can be seen, inability to identify common objects by touch alone (tactile aphasia), inability to understand spoken words (auditory aphasia), or inability to name objects seen (optic aphasia). Expressive aphasias may involve inability to speak although one knows what to say or inability to write words although one knows what to write. CVAs can also interfere with speech communication by producing dysarthria.

Ⓑ Significant neurological abnormalities in two extremities (weakness, lack of coordination, etc.) that result in:

- persistent difficulty standing and walking, or
- persistent difficulty using the hands, including both gross and dexterous movements of the fingers.

Part Ⓑ involves motor function: the ability to move or coordinate movement. In addition to paralysis, stroke victims often have decreased sensation in the body parts affected—especially numbness—and such sensory abnormalities can also affect motor function. Additionally, lack of coordination in using the arms or hands can result in significant limitations even if there is no loss of strength. For example, loss of strength or coordination in the legs may lead to problems with balancing and walking. The "two extremities" that must be involved for part Ⓑ can be both arms, both legs, or one arm and one leg combined. If your legs are involved, it is important to be aware that part Ⓑ of the listing does not require you to need an assistive device like a cane or crutch to walk. Some more specific considerations regarding your ability to use your arms and legs after a stroke are given in the following several paragraphs.

When a doctor examines you, he or she should carefully test the muscle strength in your lower extremities. The doctor should subjectively test major muscle groups in one leg by having you exert effort with various muscles and then comparing your strength to your other, normal leg. The doctor should also wrap a tape measure around each leg and measure muscle sizes at the thigh and calf. You might have some muscle atrophy from weakness and disuse. Your muscle tone should be noted by the doctor—are any muscles spastic or flaccid? Do you have enough strength in your thigh muscles to arise from a squatting position? Is there enough strength in your calf muscles for you to lift yourself on your toes and walk that way? Are the muscles in the front of your leg strong enough for you to lift your foot and walk on your heels? There are also machines that can reliably measure the force exerted by various muscles. Unfortunately, most doctors don't have this equipment for exact testing of lower extremity muscle strength, nor is it required for the listing. The doctor should also test your ability to maintain balance by observing your tandem gait—how well you can walk placing one foot in front of the other.

Gross movements of the hands are the ability to handle larger objects in lifting, carrying, and grasping. For example, grasping a doorknob or other object about the size of a tennis ball or picking up a chair would be a gross movement. Although not required by the listing, grip strength can easily be measured by squeezing a hand ergometer. Unfortunately, most doctors do not use such machines for exact testing. Dexterous movements are those that require more coordination and speed, such as manipulating small objects with good separate control of each individual finger. For instance, playing a musical instrument, sewing, typing, picking up coins, and buttoning clothes are all dexterous movements. During physical examinations, you should be able to quickly and easily touch each of your fingertips to your thumb in rapid succession, if your dexterous abilities are intact. The doctor should also observe whether you have any tremors in your hands or arms.

b. Residual Functional Capacity

It is important that stroke cases not qualified under the listing receive careful RFCs that take into account all of the problems you may have after a CVA: muscle weakness, lack of coordination, difficulty with balance, difficulty reading or understanding the spoken word, memory or personality problems, etc. All of these factors can influence your ability to return to prior work or find other work. Whether you have enough lower extremity strength to stand six to eight hours daily is always an important question, because inability to do so will automatically reduce your RFC to no higher than sedentary work. If you have a weakened leg, take notes on how long you can stand, how far you can walk, and what other difficulties you might have, like walking up steps. If you can walk a block, is it at a normal speed? Also, note limitations you have with your hands. If you have a weakened arm, what objects have you noticed are too heavy to grasp and lift? Can you button your shirt with the affected hand? Pick up coins? Insert a key in a lock? Do you have difficulty coordinating your affected arm and hand—for example, are you no longer able to play a musical instrument or perform some other task requiring good control? Also, if you have a weak arm or leg, you might have difficult using arm or leg controls on machinery. When the SSA asks about your symptoms, give them this information. Don't assume that your treating doctor knows all about your limitations. Have your doctor record your limitations in your medical records. If you are depressed or have other emotional problems associated with your stroke, the SSA should evaluate those difficulties under the mental impairment listings (CD Part 12) and perhaps make a separate mental RFC determination.

Cerebral Aneurysms

A significant number (perhaps several %) of people have aneurysms in the cerebral arteries supplying the brain. Rupture of a cerebral artery aneurysm is extremely dangerous and may result in death or crippling brain damage. In fact, a major cause of strokes is rupture of a cerebral artery aneurysm. The best hope is to detect large aneurysms and surgically clip them to prevent rupture. Claimants who have cerebral aneurysms that have not been operated on should never receive a residual functional capacity assessment (RFC) for more than light work, even if the aneurysm has not bled and there are no other abnormal findings. The SSA may decide that no restrictions are needed (no RFC) after a successful operation on a cerebral aneurysm, especially since some professional organizations of neurosurgeons have advised the SSA that no restriction is needed. However, cases should be considered on an individual basis—how big was the aneurysm, where was it located, and has it bled before? Was previous bleeding related to some type of exertion? Is there untreated high blood pressure? These are the types of questions that should be asked and weighed by a doctor before a decision is made regarding whether an RFC should be given for an operated aneurysm.

If you can't stand and walk six to eight hours daily, your RFC cannot be higher than sedentary work. Sedentary work requires the good use of both upper extremities, including the ability to carry out fine manipulations such as the coordinated use of the hands and fingers in handling small objects. That

means if you have any significant problems in doing fine manipulations with either hand, you cannot do even sedentary work and should have been allowed to meet the above listing. Such a difficulty with your hands wouldn't necessarily have to be neurological in origin.

6. Listing 11.05: Benign Brain Tumors (Adults)

Cancerous brain tumors are always a serious matter, but even benign tumors can cause significant problems. For example, benign tumors can grow and put pressure on other parts of the brain. Small tumors that are easily accessible and can be completely removed with surgery or radiation have the best prognosis. Depending on the tumor's size and location, the patient may have headaches, paralysis, or personality changes even after treatment. Seizures and strokes are another potential complication of benign tumors. Even after surgical removal of a benign tumor involving the substance of the brain, there may be residual scarring of the brain substance that serves as a focus for starting seizures. Cancerous brain tumors are considered under Listing 13.13 (CD Part 13).

Although technically not within the brain substance, tumors arising from the meningeal coverings of the brain (meningiomas) can be considered "brain tumors" for purposes of this listing. They can be either malignant or benign, but are usually benign. Meningiomas are often operable without brain damage, but it depends on the location. Some meningiomas that cannot be surgically approached may put pressure on underlying brain structures as they grow.

Another common type of benign brain tumor the SSA frequently sees are pituitary tumors. These tumors are frequently removable with surgery, but large ones can put pressure on the optic nerves and interfere with peripheral vision. Tumors or surgery on the pituitary gland can also affect the secretion of some hormones that require artificial replacement. Problems occurring as a result of such hormone replacement vary on a person by person basis. Hormone disorders are discussed in CD Part 9.

Less common brain tumors that are sometimes benign are ependymomas and chordomas.

a. Listing Level Severity

This listing has no special criteria. It simply refers to evaluation of benign brain tumors under the listings dealing with epilepsy, strokes, or other disorders as appropriate.

b. Residual Functional Capacity

Considering the large number of possible complications from brain tumors, medical judgment must be applied on a case-by-case basis in order to determine the correct RFC. Mental and physical residual impairments must both be considered. For example, if epilepsy is a complication of the tumor, then the RFC considerations under Listing 11.02 would be appropriate. If the tumor was associated with a stroke or produced similar limitations, see the discussion of strokes and RFCs for strokes under Listing 11.04. A mental disorder might require a mental RFC as discussed under the listings dealing with mental orders (CD Part 12). If you have had a pituitary tumor, you should have your peripheral vision tested (CD Part 2).

7. Listing 111.05: Benign Brain Tumors (Children)

See comments under adult Listing 11.05. Cancerous brain tumors in children are evaluated under Listing 113.13 (CD Part 13).

a. Listing Level Severity

This Listing has no special criteria. It simply refers to evaluation of benign brain tumors under the listings dealing with epilepsy (111.02, 111.03), motor dysfunction such as paralysis (111.06), communication impairment (111.09), or other disorders as appropriate.

8. Listing 11.06: Parkinsonian Syndrome (Adults)

Parkinsonian syndrome is a disorder caused by a chemical abnormality in areas of the brain called the basal ganglia. The missing brain chemical is the neurotransmitter dopamine and treatment is aimed at replacement with levodopa (L-dopa) and sometimes other drugs. Some cases are so severe that drug therapy is not sufficiently effective and brain surgery with or without electrode implantation

may be necessary for a person to function. The injection of donor brain cells has also been tried, but a completely satisfactory cure has not been achieved. Infection, chemicals, and drugs can all damage the basal ganglia and result in parkinsonism at any age. The specific cause of parkinsonism occurring in older people is still under study.

Parkinsonism is characterized by rigidity, bradykinesia, and resting tremors in the hands. These tremors disappear during sleep and also improve with movement. They are often called "pill-rolling" tremors, because the movements look like the person is rolling pills between their forefinger and thumb. Such tremors are worsened by emotion. A festinating gait and a masked facies may be present, as well as dysarthria. The loss of functional ability is the same as for a stroke. Therefore, the comments about part Ⓑ of Listing 11.04 would also be appropriate here.

a. Listing Level Severity

For your condition to be severe enough to meet this listing, you must have parkinsonian syndrome with significant rigidity, bradykinesia, or tremor in two extremities, either alone or in combination, that results in:

- persistent difficulty standing and walking, or
- persistent difficulty using the hands, including both gross and dexterous movements of the fingers.

b. Residual Functional Capacity

Even if your case does not qualify under the listing, make sure you receive a careful RFC, taking into account all of the problems you may have: tremors, lack of coordination, difficulty with balance or walking or speaking clearly, or emotional problems such as depression. All of these factors can influence your ability to return to prior work or find other work. Whether you are able to stand six to eight hours daily is always an important question, because inability to do so will automatically reduce your RFC to no higher than sedentary work. If you have difficulty standing, take notes on how long you can stand, how far you can walk, and what other difficulties you might have, like walking up or down steps. If you can walk a block, is it at a normal speed or slow? Although parkinsonism doesn't affect muscle strength itself, slowness and poor balance could affect the amount of weight you can lift and carry. Is there any specific information you can provide the SSA when asked about your symptoms? Also, make note of the limitations you have with your hands, such as from tremors. Can you button your shirt with the affected hand? Pick up coins? Insert a key in a lock? Do you have difficulty coordinating your affected arm and hand—for example, are you no longer able to use it to play a musical instrument or perform some other task requiring good control? Also, if you have a weak arm or leg, you might have difficulty using arm or leg controls on machinery. When the SSA asks about your symptoms, give them this information. Don't assume that your treating doctor knows all about limitations in your ability to carry out daily activities. Talk to your doctor about recording your limitations in your medical records.

If you have dysarthria, the SSA should not try to say you can do a job requiring frequent or clear speaking skills. If you are depressed or have other emotional problems in association with your parkinsonism, the SSA should evaluate those difficulties under the mental impairment listings and a separate mental RFC might be necessary (CD Part 12).

If you can't stand and walk six to eight hours daily, your RFC cannot be higher than sedentary work. Sedentary work requires the good use of both upper extremities, including the ability to carry out fine manipulations such as the coordinated use of the hands and fingers in handling small objects. That means if you have any significant problems in doing fine manipulations with either hand, you cannot do even sedentary work and should have been allowed to meet the above listing. Unless your resting tremor is very well controlled, the SSA should not consider you capable of fine manipulations with your hands. Such a difficulty with your hands wouldn't necessarily have to be neurological in origin.

9. Listing 111.06: Motor Dysfunction (Due to Any Neurological Disorder) (Children)

This listing applies to any type of nervous system impairment that decreases a child's motor function.

Motor dysfunction could be related to weakness from paralysis, but can be caused by lack of coordination, poor balance, tremors, ataxia, spasticity, athetosis, or abnormalities of sensation (such as numbness) that interfere with the ability to use the arms or legs.

The requirements of this listing are essentially the same as those for adults with loss of function due to a neurological disorder. See comments about adult Listing 11.04Ⓑ.

Do not assume that the child's treating doctor necessarily knows all about the child's limitations regarding daily activities, unless it has been brought to the doctor's attention. For example, an examining neurologist might find and write down in records that a child has a "weak grip" in one hand. Unless actual strength measurements have been made, it is hard for the SSA to interpret the statement regarding severity. But if the parent has detailed what things the child has difficulty doing, a more accurate disability determination can be made. Is the child unable to grasp and turn a doorknob with one hand, but able with the other? Is he or she unable to play ball because she can't hold a bat or throw a ball? Numerous examples could apply—the important thing is to make them specific for the SSA. If the treating doctor discusses the child's limitations in their medical records, it strengthens the credibility of the parent's statements about the child problems.

a. Listing Level Severity

For the child's condition to be severe enough to meet this listing, the child must have persistent motor dysfunction that involves two extremities and that despite treatment interferes with the child's ability to carry out major activities appropriate for her age. The parent or other caregiver must pay close attention to what the child can or cannot do. That will help the SSA evaluate the child's ability to perform activities that are appropriate for her age. For an infant, the range of normal age-appropriate activity is not all that vast.

Additionally, the child's condition must satisfy Ⓐ or Ⓑ, below.

Ⓐ Persistent difficulty standing and walking. An infant who is too young to walk can still be observed regarding crawling and moving the legs.

Ⓑ Persistent difficulty using the hands, including both gross and dexterous movements of the fingers. An infant is not expected to have fine motor skills (dexterous movements) involving the fingers, but can still be observed reaching and grasping.

10. Listing 11.07: Cerebral Palsy (Adults)

Cerebral palsy (CP) is not a specific disease, but refers to any nervous system problem dating from the time of birth that is not progressive and results from damage to the developing brain. The kinds of things that can cause brain damage are varied and include infection, toxins, birth trauma, genetic defects, and asphyxia. Cerebral palsy may involve either physical or mental abnormalities. CP can result in a wide range of neurological impairments, including epilepsy, mental retardation, paralysis (paraplegia, hemiplegia, or quadriplegia), spasticity, ataxia, and athetosis, as well as visual, hearing, and speech problems. Additionally, mental problems such as emotional instability, short attention span, and hyperactivity may be present. These broad categories are given as examples, and it should not be assumed that CP involves all of them. For example, individuals with CP may have normal intelligence. Also, it should not be presumed that all CP results in marked impairment: some people are only mildly limited.

a. Listing Level Severity

For your condition to be severe enough to meet this listing, you must have cerebral palsy that satisfies Ⓐ, Ⓑ, Ⓒ, or Ⓓ, below.

Ⓐ IQ of 70 or less.

Ⓑ Abnormal behavior patterns, such as destructiveness or emotional instability. This leaves a lot of room for medical judgment. If there appears to be a significant mental problem, a formal evaluation including a thorough mental status examination by a psychiatrist or psychologist will be needed. The SSA can arrange for such testing, if it has not been done. CD Part 12 contains information about the evaluation of mental disorders that can be useful in deciding if part Ⓑ is satisfied.

Ⓒ Significant interference in communication due to speech, hearing, or visual defect. Part Ⓒ

involves problems with speech, hearing, or vision. Regarding speech disorders, there would have to be some problem like dysarthria or stuttering that poses more than a mild problem in understanding the person's speech. If you have a speech impairment, it should be evaluated by a speech pathologist. The SSA can arrange testing, if it has not been done. In hearing disorders, an ability to hear only sound of more than 40 decibels (dB) intensity or speech discrimination worse than 60% would almost certainly produce the required significant communication problem. These numbers are offered only as guidelines; they are not official SSA policy regarding this listing. Regarding vision, an acuity of 20/50 or worse in adults is considered significant. With these cautions in mind, CD Part 2 offers much more information about evaluating hearing, speech and visual disorders in both adults and children. This information can be helpful in deciding if you qualify under part Ⓒ.

Ⓓ Disorganization of motor function as described in Listing 11.04Ⓑ. This requires the same functional loss as for a stroke.

b. Residual Functional Capacity

Considering the large number of possible complications with cerebral palsy, medical judgment must be applied on a case-by-case basis in order to determine the correct RFC. For example, if epilepsy is a complication of the CP, then the RFC considerations under Listing 11.02 would be appropriate. If the CP is associated with paralysis, see the discussion of strokes and RFCs for strokes under Listing 11.04. Note that significant speech, hearing, or visual problems would meet the listing, and if they are not significant (more than mild or slight), they would not be put on an RFC. Therefore, their consideration under RFC should not be an issue. Similarly, a significant mental problem would meet the listing and also would not be an issue for determining the RFC.

11. Listing 111.07: Cerebral Palsy (Children)

See the comments about the general nature of cerebral palsy under adult Listing 11.07.

a. Listing Level Severity

For the child's condition to be severe enough to meet this listing, the child must have cerebral palsy that satisfies Ⓐ or Ⓑ, below.

Ⓐ Motor dysfunction meeting the requirements of Listing 101.03 (CD Part 1) or 111.06.

Ⓑ Less severe motor dysfunction (but more than slight). Additionally, 1, 2, 3, or 4 must be satisfied.

1. IQ of 70 or less.
2. Seizure disorder, with at least one major motor seizure in the year prior to application for disability.
3. Significant interference with communication due to speech, hearing, or visual defect. Regarding speech disorders, there would have to be some problem like dysarthria or stuttering that poses more than a mild problem in understanding the child's speech. If the child has a speech impairment, he should be evaluated by a speech pathologist. The SSA can arrange such testing, if it has not been done. In hearing disorders, an ability to hear only sound of more than 40 dB intensity or speech discrimination worse than 60% would almost certainly produce the required significant communication problem. These numbers are offered only as guidelines; they are not official SSA policy regarding this listing. Regarding vision, it would probably take a visual acuity in the better eye somewhere in the 20/50 to 20/70 range to produce significant interference with communication. An acuity of 20/50 or worse in adults is considered significant in relation to a work environment, but that doesn't necessarily translate to a significant difficulty in a child's communication ability. Similarly, a child with one eye blind and the other normal would have no significant communication or developmental difficulties, although it would be a significant impairment in an adult because of visual field limitations relevant to certain kinds of work. With these cautions in mind, CD Part 2 offers much more information about evaluating hearing, speech, and visual disorders in both adults and children.
4. Significant mental disorder. Part Ⓑ4 requires a significant mental disorder, which leaves a

lot of room for medical judgment. To make this judgment, the child will need a formal evaluation for a mental disorder, which means a thorough mental status examination by a psychiatrist or psychologist. The SSA can arrange for such testing, if it has not been done. CD Part 12 contains information about the evaluation of mental disorders that can be useful in deciding if part Ⓑ4 is satisfied.

12. Listing 11.08: Spinal Cord or Nerve Root Disorders (Adults)

The spinal cord, protected by the spine, connects the brain to the rest of the body. It is only about the diameter of a pencil, which is remarkable considering the amount of information it must carry. Nerve roots branch in right and left pairs from the spinal cord at regular intervals and become peripheral nerves. The peripheral nerves carry impulses from the brain through the spinal cord to muscles, glands, and other organs. Similarly, the peripheral nerves constantly transfer information about the state of the body's tissues back to the brain. Many factors can damage the spinal cord or the nerve roots near it: tumors, trauma, infection, neurological diseases, vitamin deficiencies, genetic or congenital malformations, toxic substances, bone pressure from spinal arthritis, herniated intervertebral discs, etc. Trauma from automobile and motorcycle accidents is the most common cause of severe spinal cord injury the SSA sees.

See the comments about Listing 11.04Ⓑ to better understand the requirements of this listing.

a. Listing Level Severity

For your condition to be severe enough to meet this listing, you must have spinal cord or nerve root lesions, due to any cause, with disorganization of motor function as described in Listing 11.04Ⓑ.

b. Residual Functional Capacity

If you have a spinal cord injury or other disorder that doesn't qualify under the above listing, the SSA should carefully consider your degree of muscle weakness, lack of coordination, difficulty with balance, spasticity, or other problems. All of these factors can influence your ability to return to prior work or find other work. Whether you have enough lower extremity strength to stand six to eight hours daily is always an important question, because inability to do so will automatically reduce your RFC to no higher than sedentary work. If you have weakened legs, take notes on how long you can stand, how far you can walk, and what other difficulties you might have, like walking up steps. If you can walk a block, is it at a normal speed or slow? Also, make note of the limitations you have with your hands. If you have weakened arms, what objects have you noticed are too heavy to grasp and lift? Can you button your shirt with the affected hand? Pick up coins? Insert a key in a lock? Do you have difficulty coordinating your affected arm and hand—for example, can you no longer use it to play a musical instrument or do some other task requiring good control? Also, if you have a weak arm or leg, you might have difficult using arm or leg controls on machinery. When the SSA asks about your symptoms, give them this information. Don't assume that your treating doctor knows all about your limitations in carrying out your daily activities. Talk to your doctor about recording these limitations in your medical records.

As stated above, if you can't stand and walk six to eight hours daily, your RFC cannot be higher than sedentary work. Sedentary work requires the good use of both upper extremities, including the ability to carry out fine manipulations such as the coordinated use of the hands and fingers in handling small objects. That means if you have any significant problems in doing fine manipulations with either hand, you cannot do even sedentary work and should meet the above listing. Such a difficulty with your hands wouldn't necessarily have to be neurological in origin.

13. Listing 111.08: Meningomyelocele (and Related Disorders) (Children)

A meningomyelocele is a congenital bag-like defect of the spinal cord and membranes covering it. Meningomyeloceles may be associated with other nervous system disorders such as hydrocephalus and

mental retardation. The listing also covers related disorders, meaning any kind of spinal cord defect present at birth could be considered under this listing.

a. Listing Level Severity

The child's condition must satisfy part Ⓐ, Ⓑ, Ⓒ, or Ⓓ despite prescribed treatment.

Ⓐ Motor dysfunction meeting the requirements of Listing 101.03 (CD Part 1) or 111.06.

Ⓑ Less severe motor dysfunction (but more than slight). Additionally, 1 or 2 must be satisfied.

1. Urinary or fecal incontinence when inappropriate for age. This part concerns the fact that defects in the spinal cord can cause inability to control bowel or bladder. The SSA has no guidelines regarding whether incontinence must be complete or partial or how frequently it must occur. This is a matter of medical judgment for the person evaluating the child's claim, but it would have to be more than slight to be a meaningful limitation.
2. IQ of 70 or less.

Ⓒ The involvement of four extremities. Involvement should be interpreted to include spasticity as well as weakness or paralysis.

Ⓓ Noncompensated hydrocephalus producing interference with normal mental or nervous system development. This part deals with hydrocephalus in which cerebrospinal fluid pressure remains abnormally high inside the brain. It must be severe enough to interfere with the child's mental or neurological development, but the SSA has no policy guidelines regarding the severity of delayed development. The child's development can be measured with tests and the SSA should purchase such testing if it is not part of the child's medical records. It would be reasonable to assume that developmental delays would have to be more than slight, although this is not stated by the listing. Developmental testing is frequently purchased by the SSA.

14. Listing 11.09: Multiple Sclerosis (Adults)

Multiple sclerosis (MS) is a nervous system disease of unknown cause. It is one of the demyelinating disorders, which are diseases affecting the insulating covering of nerves called myelin sheaths. Multiple sclerosis is an unpredictable disease characterized by periods of setbacks and improvement. Along with fluctuation in severity, there may also be an underlying chronic component of the disease that grows more severe over time. Therefore, the evaluation of multiple sclerosis must take into account the frequency of flare-ups, the length of remissions, and the severity of any permanent residual impairment. Patients with multiple sclerosis may have pain, visual loss, fatigue, weakness, abnormalities of sensation, spasticity, lack of coordination, bowel or bladder dysfunction, sexual dysfunction, or mental disturbances like anxiety or depression. Fatigue is especially common. There is no one drug that can effectively treat MS and there is no cure. Various medications and other treatments must be adjusted to the needs of the particular patient.

a. Listing Level Severity

For your condition to be severe enough to meet the listing for multiple sclerosis, you must have Ⓐ, Ⓑ, or Ⓒ, below.

Ⓐ Disorganization of motor function as described in Listing 11.04Ⓑ.

Ⓑ Visual or mental impairment as described under the criteria in Listings 2.02, 2.03, 2.04, or 12.02 (see CD Parts 2 and 12). Part Ⓑ deals with the fact that multiple sclerosis can result in visual loss. When MS attacks an optic nerve, the resulting optic neuritis can then lead to optic atrophy and visual loss. When looking in the eyes of a patient with multiple sclerosis, an examining doctor may be able to see optic atrophy, if it is not early. One or both eyes could be affected. Visual evoked responses (VER) should be abnormal when MS has significantly affected the optic nerve, even if a doctor cannot see abnormality in the optic nerve. The SSA should take into account the fact that visual acuity can wax and wane in multiple sclerosis patients and may become worse with certain types of visual activity like reading or close work. Reference should be made to the visual listings (CD Part 2) for more information about evaluating visual impairments.

This part also recognizes that MS can result in various mental disturbances, because of its

effect on the brain. With the advent of magnetic resonance imaging (MRI) scans, the diagnosis of MS has become much easier by revealing the white matter lesions in the brain that are characteristic of this disorder. However, there are no absolutely diagnostic tests available for multiple sclerosis. If there is mental impairment, evaluation would be done under Listing 12.02 ("Organic Mental Disorders," CD Part 12).

Ⓒ Substantial, increasing muscle weakness with repetitive exercise, as demonstrated on physical examination by a doctor. The weakness must be related to areas of the brain known to be involved with multiple sclerosis and must be "reproducible" between physical examinations. This part is meant to identify those claimants with MS who have increasing weakness with exercise that is not detectable during the usual resting physical examination. The patient must meet all the following criteria:

1. A documented diagnosis of multiple sclerosis.
2. A description of fatigue considered to be characteristic of multiple sclerosis.
3. Evidence that the claimant actually becomes fatigued.

The evaluation of the severity of the impairment must consider the degree of exercise and the degree of the resulting muscle weakness. In actual disability cases this part is basically useless. First, examining doctors, including neurologists, almost never test for increasing weakness with exercise over a period of time. Secondly, the SSA has never set any test standards for what qualifies as increasing muscle weakness. Finally, it is almost impossible to tell from MRI or other scans or tests exactly what part of the body will be weak as a result of multiple sclerosis. Also, according to the SSA, this part is only to be used to evaluate increased weakness with exercise when it does not exist at rest. If there is resting weakness, part Ⓐ should be applied.

b. Residual Functional Capacity

The same considerations discussed under Listing 11.04 apply here, except for the comments about cerebral aneurysms. Also see the discussion of mental RFC under Listing 12.02 (CD Part 12) or visual RFCs (CD Part 2), as appropriate.

15. Listing 111.09: Communication Impairment (Children)

This listing concerns communication difficulties associated with documented nervous system disorders such as cerebral palsy. This listing does not apply to difficulties in communication that arise from a mental disorder. Communication includes the ability to speak, hear, and understand speech. The SSA states that documentation of the child's problems must involve a thorough evaluation done near enough to the time of disability application that it is still valid. The evaluation must be done by qualified professionals as discussed under specific parts of the listing below.

a. Listing Level Severity

In order to be considered severe enough to meet the listing, the child's condition must match Ⓐ, Ⓑ, or Ⓒ, below.

Ⓐ Documented speech deficit that significantly affects the clarity and content of speech. This part involves speech deficits, such as dysarthria, that are best evaluated by speech therapists. Whether the speech deficit is significant is a matter of medical judgment by the person evaluating the child's claim. If the child's speech is more than slightly difficult to understand, allowance under part Ⓐ would be appropriate, provided that the content of speech is also significantly decreased from the normal level. Content refers to the quality of information conveyed by the speech, but the SSA offers no more specific guidance in this regard. If the child uses speech with words and meanings more characteristic of a younger child, then it could be argued that the content is affected.

Ⓑ Documented comprehension deficit resulting in ineffective verbal communication for age. This part deals with comprehension deficits severe enough to make it impossible for the child to engage in age-appropriate communication. Such deficits would arise from damage to the areas of the brain dealing with processing auditory information.

These comprehension deficits related to neurological impairment would best be evaluated by a child psychiatrist or a child psychologist with special training in the medical aspects of such disorders.

Ⓒ Impairment of hearing as described in Listing 102.08 ("Hearing Loss," CD Part 2).

16. Listing 11.10: Amyotrophic Lateral Sclerosis (Adults)

Amyotrophic lateral sclerosis (ALS) is nearly always fatal. About 5–10% of cases are genetic. There is also a more common sporadic form that may be genetic or viral in origin, but whose cause remains obscure. In rare instances, children may have ALS. ALS usually affects those who are middle-aged or older, more frequently men. There is no curative treatment or therapy that can stop the progression of the disease. ALS only affects nerve cells involved in motor activity, so that the afflicted person is able to think and feel sensations even though there is loss of motor function. While some authorities emphasize that thinking (cognition) is spared, others see common abnormal mental functions involving the frontal lobes of the brain. Some authorities describe a number of types of ALS, caused by specific genetic mutations. While these variants of ALS may differ somewhat in their neurological manifestations, advanced cases would all have the types of problems described by this listing. Muscles become progressively weaker and atrophy from this disease. Death most often results from respiratory failure, when the muscles needed for breathing are too weak to function.

ALS is usually a fatal disorder. In people under age 65, there is a 50% mortality in three years and only 20% survive over five years. If you have ALS and are denied benefits, you should consider whether the SSA either thinks the diagnosis is wrong or made an error.

a. Listing Level Severity

The SSA considers a diagnosis of ALS sufficient to allow a finding of disability, regardless of how severe your illness is.

Although no specific test exists with which to diagnose ALS, it is normally identified through the presence of bulbar signs (weaknesses in certain muscles—see definitions for details). Your test results (such as electromyograms (EMG) and nerve conduction studies (NCS)) may be normal, especially in the early stages of the disease. No negative test result of any kind can ever be used to state with certainty that you don't have ALS. The diagnosis of ALS depends mainly on your history and physical examination, as a matter of medical judgment. If your treating doctor has made a diagnosis of ALS, the SSA should give this a great deal of weight, especially if your treating doctor is a neurologist.

b. Residual Functional Capacity

Since all cases of ALS are automatically considered disabling, residual functional capacity is not an issue.

17. Listing 11.11: Poliomyelitis (Adults)

A highly contagious virus that enters the body through the mouth and the bloodstream through the small intestine causes poliomyelitis (popularly known as polio). The early infection does not cause symptoms, but in cases where the virus destroys the motor nerves in the spinal cord necessary for movement, paralysis follows. Since polio has nearly been eradicated from the planet, the SSA does not see active cases of this disorder. However, residual weakness to some degree sometimes appears in older claimants who were affected many years ago; these cases are not generally severe enough to qualify under the listing.

Also, there is a disorder known as post-polio syndrome that is not a new infection, but a worsening in people who had polio years ago. Apparently, in this disorder, there are some nerve cells that seemed to recover from the original infection, but later relapse into a damaged state. Post-polio syndrome can result in pain, weakness, fatigue, and intolerance for cold. If sufficiently severe, impairment can be considered of equal severity to the requirements of this listing.

a. Listing Level Severity

For your condition to be severe enough to meet this listing, it must match Ⓐ, Ⓑ, or Ⓒ, below.

Ⓐ Persistent difficulty with swallowing or breathing. This is satisfied by bulbar signs of difficulty swallowing or breathing. Respiratory failure is a common cause of death in active polio.
Ⓑ Unintelligible speech. This is bulbar signs severe enough to make speech unintelligible. Such an effect could result from involvement of the tongue, larynx, throat, or other parts of the mouth.
Ⓒ Disorganization of motor function as described in Listing 11.04Ⓑ.

b. Residual Functional Capacity

Most older claimants who have persistent residual effects of polio infection have some degree of muscle weakness in one leg. Also, weakness or other symptoms of post-polio syndrome can recur after apparent recovery from polio many years ago. When present, medical judgment should take these abnormalities into account in determining the RFC. The comments about RFC under Listing 11.08 would also be relevant here.

18. Listing 11.12: Myasthenia Gravis (Adults)

Myasthenia gravis is an immune disorder characterized by the production of antibodies that block nerve receptors in muscles. Weakness results from inability of the nervous system to activate various muscles. Since movement of any body structure requires muscular contraction, myasthenia can be quite devastating. A frequent cause of death is respiratory failure. The severity and prognosis of this disorder is highly variable. Some patients have minimal symptoms or other abnormalities that can be treated with drugs to improve the ability of the nervous system to stimulate muscles. Others have rapidly progressive disease that is difficult to control. In myasthenia, muscle strength may decrease with repeated activity of the muscles affected. It is also possible to have a limited form of myasthenia mainly affecting the muscles of the eyelids and sparing the rest of the body.

a. Listing Level Severity

For your condition to be severe enough to meet this listing, it must match Ⓐ or Ⓑ, below.

Ⓐ Significant difficulty with speaking, swallowing, or breathing while on prescribed therapy. Bulbar signs that are more than slight in severity satisfy this part. Since muscles fatigue rapidly in myasthenia, there may be an inability to reasonably sustain good speech. It is not necessary that all possible bulbar signs be present; one is sufficient. The SSA should also consider that multiple mild bulbar signs could collectively be considered significant. Because myasthenia might be greatly improved with treatment, there is an additional requirement that the abnormalities be present despite prescribed therapy.
Ⓑ Significant muscle weakness in the arms or legs with repetitive activity against resistance and while on prescribed therapy. This part takes into account that the weakness in myasthenia gravis is progressive during use of muscles. Although increasing weakness occurs in a normal muscle as it is used, it is accelerated greatly in myasthenia. Therefore, it would not be reasonable for the SSA to judge muscle strength without considering how fast strength decreases with repetitive use. Since myasthenia can often be improved with drugs, the abnormalities must be present despite treatment.

The SSA provides no specific guidelines to test for increasing muscle weakness. In the absence of specific objective test requirements by the SSA, the examining doctor's subjective opinion regarding increasing muscle weakness is acceptable. For example, the claimant could push against the examining doctor's opposing arm strength on multiple tries or the doctor could give an opinion about weakening grip strength with repeated squeezing. If the calves of the legs are affected, the claimant should be increasingly unable to raise himself on his heels. If the doctor can provide objective measurements, such as the claimant's grip strength in pounds of force on multiple tries, that information would be preferable, since it would clearly show the decline in strength with repeated effort.

b. Residual Functional Capacity

The comments about RFC under Listing 11.08 would also be relevant here. Additionally, the SSA should

also take into account the easy fatigability of your muscles. When you are carrying out activities, take careful note of the duration of the activity or number of repetitions that weaken you—whether it is walking up steps, pushing, pulling, grasping something, or speaking. The more specific information the SSA has, the more likely you are to get an accurate determination.

19. Listing 11.13: Muscular Dystrophy (Adults)

Muscular dystrophy is a group of hereditary disorders of muscle tissue, rather than of the nervous system. However, the functional loss is similar to that of neurological diseases and that is why the disorders are considered in the nervous system listings. Electromyograms can be useful in establishing the presence of a muscular disorder, but are not used to diagnose muscular dystrophy. A detailed history and physical examination are most important for diagnostic and functional evaluation.

Evaluation of muscular dystrophy cases must take into account the specific type of disorder. Duchenne muscular dystrophy (pseudohypertrophic muscular dystrophy) is a rapidly progressive disease in young boys that quickly results in a waddling gait and then inability to walk. Limb-girdle muscular dystrophy may start at any age up to about 30 years and usually has slowly progressive involvement of the shoulder and pelvic muscles.

Fascioscapulohumeral muscular dystrophy has an onset up to about age 20 years and is manifested by a slowly progressive weakness in shoulder and facial muscles; the legs may also be involved, but complete inability to walk usually does not occur in most cases. There is also associated cardiomyopathy in most cases, although life span may be normal.

Myotonic dystrophy (also known as myotonia atrophica) is the most common type of muscular dystrophy seen in adults; it is characterized by progressive muscular weakness and a prolonged inability to relax a hand grip once started. Because of the difficulty relaxing muscles, activities can be greatly slowed even if strength is fairly intact. Myotonic dystrophy is frequently accompanied by abnormalities in other organs, such as the heart, eyes, and endocrine system. Such multiorgan involvement frequently leads to death by middle age. Mental retardation is present in some cases when the onset of myotonic dystrophy is early in life; if so, evaluation under the mental disorder listings (CD Part 12) would be appropriate.

a. Listing Level Severity

Muscular dystrophy with disorganization of motor function as described in Listing 11.04®.

b. Residual Functional Capacity

The discussion of RFC under Listing 11.08 would also apply here. In myotonic dystrophy it is important for the SSA to take into account that slowness in using the hands (releasing grip) can be greatly restrictive even when significant grip strength remains. A slow grip release is dangerous when operating heavy equipment or other forms of hazardous machinery.

20. Listing 11.14: Peripheral Neuropathies (Adults)

One of the most common causes of peripheral neuropathy is diabetes mellitus, which is considered under Listing 9.08 (CD Part 9). Another common neuropathy is carpal tunnel syndrome (CTS) caused by pressure on the median nerve in the wrist. The SSA often sees CTS in claimants who have performed jobs requiring repetitive wrist movement, such as in the chicken processing industry. CTS can often be markedly improved by a simple surgical decompression of the median nerve in the wrist and forgoing the activity that caused the pressure on the nerve. Some other cases of carpal tunnel syndrome—especially those resulting from inflammatory disorders like rheumatoid arthritis and those that have been ignored for years without treatment—may be much more difficult to treat.

Neuropathies can also be caused by toxic substances, drugs, infections, nutritional deficits such as insufficient vitamins (rare in the United States), diseases of the immune system, heredity, cancer, kidney failure, or trauma, or they may be of unknown cause. The success of treatment depends on the

cause. Neuropathy caused by kidney failure would be evaluated under the kidney impairment listings (CD Part 6).

Motor neuropathy can decrease strength in the arms and legs. Sensory neuropathy causing numbness or confusion about the position of the legs can make standing and walking difficult or interfere with ability to work with the hands. So, even though sensory neuropathy concerns sensation rather than strength, it can still interfere with motor function as required by the listing. Therefore, either sensory or motor neuropathy can qualify or a mixture of the two. Peripheral neuropathy is best demonstrated by weakness, decreased reflexes, loss of sensation, and abnormal nerve conduction studies (NCS).

a. Listing Level Severity

For your condition to be severe enough to meet this listing, you must have peripheral neuropathy with disorganization of motor function as described in Listing 11.04Ⓑ, despite prescribed therapy.

b. Residual Functional Capacity

The discussion of RFC under Listing 11.08 would also apply here.

21. Listing 11.16: Subacute Combined Spinal Cord Degeneration (Adults)

This listing refers to degeneration of the spinal cord as a result of vitamin B_{12} deficiency. This is a problem the SSA rarely sees. It is more likely in vegetarians, since vitamin B_{12} does not exist in vegetables. Also, there are various medical disorders, like pernicious anemia, that involve the inability of the body to absorb vitamin B_{12} from food that is eaten. These disorders include parasitic or bacterial infection in the small intestine or surgery on the stomach or small intestine. Vitamin B_{12} is easily administered. All vegetarians have to do is swallow B_{12} tablets for supplementation. People who can't absorb B_{12} from their food because of gastrointestinal problems are easily treated with periodic injections of the vitamin.

a. Listing Level Severity

For your condition to be severe enough to meet this listing, you must have subacute combined cord degeneration that produces disorganization of motor function as described in Listing 11.04Ⓑ or 11.15Ⓑ, not significantly improved by prescribed treatment.

b. Residual Functional Capacity

The comments about RFC under Listing 11.08 would also be relevant here. Special attention should be given to restrictions from working at unprotected heights or under any other conditions requiring good balance.

22. Listing 11.17: Degenerative Brain and Spinal Cord Diseases (Adults)

This listing concerns all degenerative nervous system diseases that are not mentioned in other listings. The SSA specifically gives the examples of Huntington's chorea, Friedreich's ataxia, and spinocerebellar degeneration.

Huntington's chorea is a slowly progressive degenerative brain disease caused by a defect in chromosome #4. Although rare cases can start in children, most begin after age 35. Magnetic resonance imaging (MRI) shows the characteristic shrinkage of a part of brain known as the caudate nucleus. Prominent features are dementia, chorea, and a broad-based gait resulting from involvement of the cerebellum of the brain. Epileptic seizures may also be present. There is no cure and no effective treatment for Huntington's chorea. Death usually occurs 10–15 years after onset.

Friedreich's ataxia is a genetic disorder that usually manifests before age ten. It is a degenerative nervous system disease that may be accompanied by numerous abnormalities including unintelligible speech, nystagmus, cardiomyopathy, deformities of the spine and feet, and difficulty walking. Intelligence is not affected. Most patients die from heart failure.

Spinocerebellar degeneration refers to any of several degenerative disorders of the nervous system that affect the spinal cord and cerebellum. Difficulty walking secondary to cerebellar damage is a principle feature of these disorders. In olivopontocerebellar atrophy, for example, there is an uncoordinated gait. Epileptic seizures, dysarthria, and nystagmus may also be present. The nystagmus can interfere with visual acuity. If so, see the discussion of the visual impairment listings (CD Part 2).

a. Listing Level Severity

For your condition to be severe enough to meet this listing, you must have Ⓐ or Ⓑ, below.

Ⓐ Disorganization of motor function as described in Listing 11.04Ⓑ or Listing 11.15Ⓑ. **Note:** The SSA intends to eliminate reference to Listing 11.15Ⓑ as unnecessary.

Ⓑ Chronic brain syndrome. Evaluate under mental disorder Listing 12.02. Part Ⓑ refers evaluation of dementia or other mental disturbances resulting from degenerative brain disease to Listing 12.02 ("Organic Mental Disorders," CD Part 12).

c. Residual Functional Capacity

Disregarding the comments about cerebral aneurysms, the same considerations of RFC discussed under Listing 11.04 would apply here. Also see the discussion of mental RFC under Listing 12.02 (CD Part 12) or visual RFCs (Chapter 17), as appropriate.

23. Listing 11.18: Cerebral Trauma (Adults)

Cerebral trauma means brain damage from some physical force. Examples would be gunshot wounds to the head, getting hit in the head numerous times such as in boxing matches or other fights, getting hit in the head by heavy equipment, or accidents with automobiles or motorcycles. The brain is an extremely delicate structure, softer than Jello, and any substantial blow to the head is likely to damage it.

Brain damage from trauma might be a slow process. It can be caused over time by tiny bleeding spots in the brains of boxers that increase in number with each blow to the head. Or it could result from being in an accident while driving a car without a seat belt or riding a motorcycle without a helmet, in which case the damage can be quick and catastrophic. The SSA sees numerous cases of accidental cerebral trauma.

There are no specific requirements for brain trauma that will result in allowance of disability benefits. Evaluation is done under whatever criteria apply to the complications in a claim, such as the presence of epilepsy, stroke, or organic brain syndrome (Listing 12.02, CD Part 12). The SSA should not deny a claim involving severe brain trauma with the prediction that it will improve to a denial level severity within 12 months. Such predictions are unreliable. If there is any question about whether a brain trauma case will remain severe for 12 months, the SSA should not make any final determination for at least six months after the injury so that an accurate medical assessment can be done.

a. Listing Level Severity

For your condition to be severe enough to meet this listing, you must have brain trauma. Evaluate under the provisions of Listings for epilepsy (11.02, 11.03), stroke (11.04), or chronic brain syndrome (12.02).

b. Residual Functional Capacity

Disregarding the comments about cerebral aneurysms, the same considerations of RFC discussed under Listing 11.04 would also apply here. Also see the discussion of mental RFC under Listing 12.02 (CD Part 12) or epilepsy, as appropriate.

24. Listing 11.19: Syringomyelia (Adults)

Syringomyelia is a disease of unknown cause in which cavities replace parts of the spinal cord or brainstem. Severe neurological abnormalities can result, depending on the location and size of cavities. Arthritis can result from joint damage caused by lack of sensation. If arthritis is present, it should be evaluated under the musculoskeletal listings (CD Part 1).

a. Listing Level Severity

For your condition to be severe enough to meet this listing, you must have Ⓐ or Ⓑ, below.

Ⓐ Significant bulbar signs. This part is satisfied by bulbar signs that are more than slight in severity. It is not necessary for all possible bulbar signs to be present; one is sufficient. The SSA should also consider that multiple mild bulbar signs could collectively be considered significant.

Ⓑ Disorganization of motor function as described in Listing 11.04Ⓑ.

b. Residual Functional Capacity

The discussion of RFC under Listing 11.08 would also apply here. ■