

## GLOSSARY OF EPILEPSY-RELATED TERMS

**absence seizure** (formerly called petit mal) generalized seizure most common in children; a lapse in consciousness with a blank stare that begins and ends within a few seconds. May be accompanied by rapid eye blinking or chewing movements.

**adjunct therapy** (syn.: add-on therapy) treatment administered in addition to another therapy, as when one medication is taken with another.

**AED (anti-epileptic drug)** a seizure-preventing drug. AEDs are carried to the brain through the bloodstream.

**American Epilepsy Society (AES)** Founded 1946. The professional society for physicians dealing with epilepsy and closely related fields. AES focuses on treatment of biological, clinical and social aspects of epilepsy.

**amygdale** almond-shaped structure in the brain which, with the hippocampus, septum, and parts of the cortex, comprises the limbic system.

**anticonvulsant** preventing or arresting convulsions; agent that prevents convulsions.

**aphasia** temporary failure to understand speech or respond sensibly. Occasionally follows generalized tonic-clonic (convulsive) seizures and complex partial seizures.

**ataxia** inability to coordinate muscle movement.

**atonic seizure** (syn.: drop attack) generalized seizure where sudden complete loss of muscle control and balance results in collapse.

**aura** a sensation recognized by a patient that precedes or signals the beginning of a seizure. May include uneasiness, déjà vu, sensory illusions (odors, visual illusions or misconceptions, sounds), stomach discomfort, dizziness.

**autonomic seizure** seizures marked by nausea, fever, headache, stomach ache or any feelings resulting from disturbances in the medulla (part of the brain which controls involuntary actions).

**automatism** repetitive, undirected, purposeless actions not consciously controlled; automatisms occur most commonly in temporal lobe seizures. May include chewing, fumbling with clothes, blinking, etc.

**blood level monitoring** monitoring of levels of antiepileptic drugs in the blood stream. Blood samples are taken to ensure that proper amount of the drug is being metabolized.

**bioavailability** the amount of a drug in a capsule or tablet that is actually metabolized.

**bioequivalency** equal performance of two or more substances used as therapy.

**breakthrough seizures** seizures that occur despite drug therapy.

**CAT scan (computerized axial tomography)** (syn.: CT scan) imaging technique that creates three-dimensional images of the brain and shows possible abnormalities.

**chronic** affecting a person for a long period of time; a slowly progressing and continuing disorder.

**clonic** seizure involving muscle contractions and relaxations.

**compliance** the accuracy with which a patient follows prescribed medication schedules and instructions.

**complex partial seizure** usually starts with blank stare, followed by random activity. Person appears unaware of surroundings, seems dazed and mumbles, is unresponsive, clumsy. When seizure ends, post-ictal confusion often follows, and the person has no memory of what happened during the seizure. This type of seizure activity is localized mainly to one part of the brain.

**convulsion** involuntary muscle contractions common in generalized tonic-clonic seizures.

**corpus callosotomy** severing of nerve fibers that connect the two hemispheres of the brain in order to interrupt the spread of seizures from one side of the brain to the other. (*See surgery for epilepsy.*)

**depth electrodes** thin wires placed deep in the brain to detect seizure activity that cannot be recorded from the surface of the brain.

**diurnal seizures** seizures which occur routinely during daylight hours.

**EEG (electroencephalograph)** apparatus which records, in the form of brain waves, electrical discharge from neurons in the brain through electrodes attached to the scalp.

**epilepsy** chronic neurological disorder characterized by recurrent seizures; estimated to affect 2.5 million Americans.

**Epilepsy Foundation of America (EFA)** Founded 1968. Headquarters: Landover, MD. The national voluntary non-profit organization which provides information and services for people with epilepsy, funds research into causes and cures for the disorder, and serves state and local affiliates.

**epileptologist** a physician expert in the diagnosis and treatment of epilepsy.

**etiology** study of the cause of a disease or a condition.

**febrile seizures** seizures related to high fever in babies and children usually under age five. Most children who have a febrile seizure do not develop epilepsy.

**focus** (syn.: focal point) area of the brain where seizure activity begins.

**frontal lobe** located in upper region of the head, behind the forehead; frontal lobe controls decision-making, problem solving or planning, and motor movement. (*See also lobe, parietal lobe, temporal lobe, occipital lobe.*)

**generalized seizure** an epileptic seizure which involves the whole brain. (*See types of generalized seizures: tonic-clonic and absence.*)

**grand mal** (*See tonic-clonic.*)

**hemispherectomy** surgical removal of one hemisphere of the brain; with epilepsy, performed almost exclusively in children for whom severely damaged tissue spanning one hemisphere produces uncontrollable seizures. (*See surgery for epilepsy.*)

**hippocampus** with the amygdala, the septum, and parts of the cortex, comprises the brain's limbic system; hippocampus is partly responsible for memory.

**hyperventilation** diagnostic method for absence seizures in children. Rapid, deep breathing results in depletion of carbon dioxide in the blood and triggers seizures.

**ictus** a seizure; a stroke.

**ictal** relating to or caused by a seizure or stroke; phenomena surrounding a seizure are often identified as pre-ictal or post-ictal; e.g., post-ictal confusion.

**idiopathic** of unknown cause. About 70% of all cases of epilepsy have no known cause; of the remaining 30%, frequent causes are: head trauma, brain tumor, stroke, poisoning, infection maternal injury.

**International Classification** developed by the International League Against Epilepsy, a periodically updated classification of seizure types, behaviors, and causes used to characterize seizure disorders and epileptic syndromes. ILAE classifies seizures according to the location in the brain where the seizure activity takes place: generalized or

partial. (*See generalized seizure and partial seizure.*)

***International League Against Epilepsy (ILAE)***

Founded 1909. Headquarters: Bethesda, MD. The international professional organization for physicians which encourages scientific research on epilepsy and the exchange of information.

International Bureau for Epilepsy (IBE) Founded 1961. The international lay organization concerned with medical, social, and scientific aspects of epilepsy which exchanges information and experience on care of patients with seizures.

***infantile spasms*** myoclonus seizures; generalized seizures causing the clonic spasms of a muscle or muscle group in an infant.

***intractable seizures*** seizures resistant to medication; refractory; obstinate. Affects approximately 30% of people with epilepsy.

***ketogenic diet*** high fat, low carbohydrate diet believed to control seizures in some patients.

***Lennox-Gastaut syndrome*** debilitating epileptic syndrome in children characterized by myoclonic, absence, and tonic-clonic seizures.

***lesion*** wound or injury which results in pathological change in tissue (e.g. head injury which results in seizure-causing lesions in the brain). Lesions are sometimes surgically removed to reduce or prevent recurring seizures.

***lobe*** any rounded, projecting part of the anatomy; components of the brain. (*See frontal lobe, parietal lobe, temporal lobe, and occipital lobe.*)

***lobectomy*** surgical removal of a lobe; surgical removal of all or part of the lobe of the brain bearing abnormal seizure-causing tissue (e.g., temporal lobectomy). (*See surgery for epilepsy.*)

***MRI (magnetic-resonance imaging)*** a detailed diagnostic computerized brain scan which identifies abnormal brain tissue.

***march*** progression of muscular convulsions from one muscle or muscle group to another.

***monotherapy*** use of a single anti-epileptic drug for control of seizures, which may have the advantage of limiting side effects.

***myoclonus*** usually generalized seizures causing massive rapid clonic spasms of muscle or group of muscles.

***neurologist*** a specialist in the diagnosis and treatment of nervous system diseases and disorders such as epilepsy.

***nocturnal seizures*** seizures which occur routinely in evening hours.

***occipital lobe*** brain lobe at the rear of the head identified with vision.

***parietal lobe*** brain lobe which interprets sensory input and the body's relation to space.

***partial seizure*** seizure involving only one part of the brain, categorized as either simple partial or complex partial.

***perinatal*** in development of a fetus, the period from the 28<sup>th</sup> week of gestation to 7 days after delivery; the period during which complications such as prolonged lack of oxygen or other trauma may result in epilepsy for a newborn.

***PET (positron emission tomography)*** computer imaging of physiological functions and metabolism in the brain.

***petit mal*** (*See absence seizure.*)

***phenobarbital*** common AED; trade name Luminal.

***photosensitivity*** a reflex epilepsy in which seizures are triggered by flashing lights or patterns (e.g., strobe lights, video games, or flipping and rolling of a television screen). An estimated 3 % of people with epilepsy are photosensitive.

***polytherapy*** (syn.: polypharmacy) the use of two or more antiepileptic medications for control of seizures.

***Post-ictal confusion*** temporary incoherence, inability to respond to contact or unfamiliarity with

environment which commonly follows tonic-clonic, complex partial, and atonic seizures.