

chondria contain only a small number of genes, but some of these are functionally very important).

mitochondrial heredity The passing down of a → hereditary disease exclusively from *mothers* to their children, because the responsible → gene is located in → mitochondria rather than in the cell nucleus. (All mitochondria are inherited from the mother, because they are derived from the mitochondria of the maternal egg cell).

mixed epilepsy An imprecise term for an unclassifiable type of epilepsy consisting of more than one → seizure type.

mixed seizures An imprecise term for seizures of more than one type occurring in one person.

mnesic Pertaining to → memory.

mobile Moveable; opposite, → immobile.

mobile long-term EEG An → electroencephalographic (EEG) recording performed over a longer than usual period of time (typically 18-24 hours, sometimes longer), during which the subject need not stay in the hospital, but lives at home and can more or less go about his/her normal daily activities. The EEG is recorded on a tape cassette that is analyzed later. Also called → ambulatory long-term EEG, → cassette EEG, → long-term monitoring.

mobility Moveability; opposite, → immobility.

modality 1. The manner, fashion, or way that something is done.
2. One of the different qualities of sensation (e.g., touch, pain, vibration, etc.).

mode of action → mechanism of action

moderate mental retardation A moderately severe deficit of → intelligence, with → intelligence quotient (IQ) between 35 and 49; also called

moderate cognitive impairment or → imbecility.

modular Composed of modules.

Modular Service Package Epilepsy (abbreviated MOSES, an acronym for the original German name, *Modulares Schulungsprogramm Epilepsie*) An educational program for adults with epilepsy consisting of a number of → modules.

modulate To change, to bring about a change.

modulation Change, gradation; the changing of the volume and tone of speech.

modulator Something that brings about change.

module A building-block or interchangeable unit in a larger structure, e.g., → electronic apparatus or educational programs.

molecular Pertaining to → molecules or to → molecular weight.

molecular genetics → Genetics at the level of → molecules and → genes.

molecular weight The weight of a → molecule.

molecule The smallest particle of a particular chemical substance, made up of → atoms; a water molecule, for example, consists of two → hydrogen → atoms and one → oxygen → atom, whence the chemical formula, H_2O .

momentum In physics: mass times velocity (speed); a force acting on an object changes its momentum. (Newton's second law: force equals the rate of change of momentum.)

mongolism A term no longer in use for → Down syndrome, a → genetic disease named after J. L. H. Down, in which each cell of the body contains three copies of → chromosome 21, instead of the normal two copies.

There result → deformities of the eyes and bones, including the → epicanthic fold (so-called “mongoloid fold”), → mental retardation and → diminished intelligence of variable severity, and, in 12-40% of affected persons, epileptic seizures. Synonym, → trisomy 21. (Note: The 19th century term “mongolism” and all related terms are now obsolete in English-language use, having been rejected because of their invalid racial or racist implications.)

mongoloid fold A term no longer in use for → epicanthal fold, a sickle-shaped fold over the inner corner of the eye, seen in → Down syndrome.

monitor Control screen (as in → video-EEG).

monitoring Close observation and assessment:

1. As part of a → preoperative evaluation for epilepsy surgery; monitoring is performed in order to register epileptic seizures; monitoring can be either → type I or → type II (see separate definitions); see also → long-term monitoring (ITM).

2. Of → laboratory values: → complete blood count, → liver function tests, → serum concentrations of → antiepileptic drugs.

monitoring unit A hospital ward for the close observation and assessment of patients, usually with 4-8 beds, e.g., for → preoperative evaluation for epilepsy surgery.

mono- Prefix: one. Opposites, → poly-, multi-.

monoamine oxidase inhibitor (MAO inhibitor, MAOI) One of a class of → antidepressant drugs that exert their effects by inhibiting the degradation of → catecholamines.

monochromatic Of one color.

monocular Pertaining to one eye; opposite, → binocular.

monocytes A subclass of → leukocytes (→ white blood cells); see → complete blood count (Table 19, p. 127).

monofactorial Caused by only one factor; alternative term, → unifactorial; opposite, → multifactorial.

monogenic Based on only one → gene (as of a → hereditary trait).

monogenic inheritance → Inheritance based on a single → gene; also called → Mendelian inheritance; opposite, → polygenic inheritance.

monograph A scientific work (usually a book) that deals with a single topic in detail.

monomorphic Regular, unchanging, of constant form or appearance; opposite, → polymorphic.

monophasic Having, or pertaining to, only a single phase; associated with only a single phase in a process with multiple phases, e.g., a → potential in the → electroencephalogram (EEG). Opposites, → biphasic, → polyphasic.

monopolar Having one pole. In → electroencephalography (EEG): a → recording of the potential difference between an → electrode and a so-called zero-point, collective, or “neutral” electrode. Opposite, → bipolar.

monotherapy (Fig. 9) (Table 43) The treatment of a disease with only one medication; some 60-70% of all cases of epilepsy can be treated successfully with monotherapy. Opposites: → one-and-a-half therapy, → bitherapy / double therapy, → tritherapy / triple therapy, → combination therapy, → polytherapy.

monotonous Unchanging, of constant form, characterized by → monotony. (In popular speech, “boring.”)



Fig. 9: “Monotherapy”

● **Table 43: Advantages of monotherapy** (see also → **individual definitions**)

- effects and side effects easy to ascribe to single drug used
- usually better tolerated than combination therapy
- low risk of drug interactions
- often better compliance
- often cheaper

monotony Constancy, lack of change. (In popular speech, “boringness.”)

monozygotic Derived from a single egg; of twins, derived from a single fertilized egg and thus having the same → genetic material, i.e., identical as opposed to fraternal twins.

monozygotic twins Twins derived from a single fertilized egg, which therefore have the same → genetic material; identical twins.

montage (Fig. 10) Arrangement, array; a → recording scheme with a

particular arrangement of → electrodes and → channels in the → EEG.

mood A longer-lasting (in contrast to → affect), → subjectively relatively → stable emotional state or → emotional experience (such as anger or → depression).

morbid Diseased, pathological.

morbidity Disease, pathological state (of any kind, e.g., epilepsy, cardiovascular disease, cancer).

morbidity rate The frequency of a particular disease.

morbidity risk The risk of developing a particular disease.

morbilliform Resembling the measles; a term used for certain types of → allergic exanthem (rash), e.g., in reaction to → antiepileptic drugs, in which the skin eruption looks like that of the measles, although the face and oral mucosa are usually not affected.

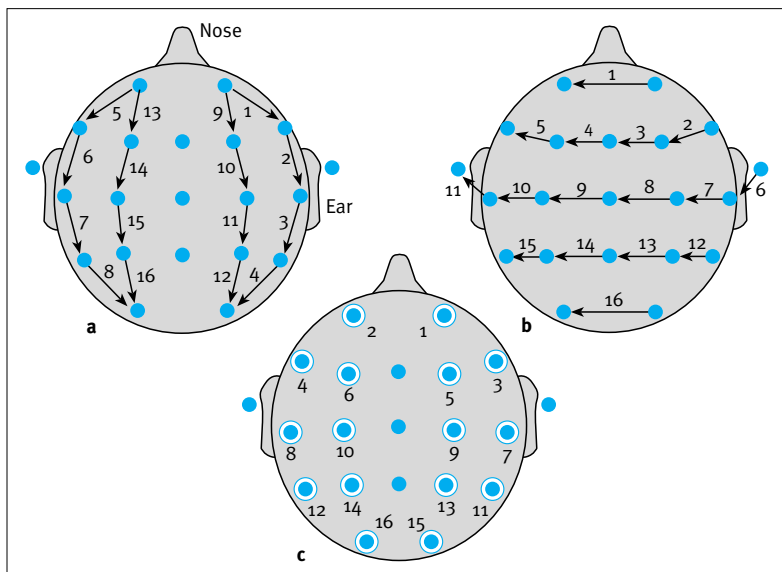


Fig. 10: Three electrode montages for the electroencephalogram (EEG): longitudinal rows (a, “double banana”), transverse rows (b), and a so-called unipolar or reference recording (c; see also → individual definitions)

morbus comitialis Latin: “the disease of the people’s assembly.” A term used for epilepsy in ancient Rome, based on the custom at that time of breaking off popular assemblies (comitiae), such as elections, etc., if anyone present had an epileptic seizure.

morbus sacer Latin: “the holy disease.” An ancient, and now thoroughly obsolete, term for epilepsy based on its supposed religious significance.

morphine A medication derived from the opium poppy, in use since ancient times and highly effective as a painkiller (analgesic), but with significant → side effects, including sedation and respiratory depression. It is highly addictive when used without a medical indication and counts, in such cases, as a → hard drug. Mor-

phine addiction is associated with an elevated risk of epileptic seizures.

morphological Pertaining to shape, form, and → structure.

morphological lesion An abnormal alteration of shape, form, or → structure, e.g., of bodily tissues.

morphology Shape, form, and → structure (or, strictly speaking, the study of shape, form, and structure); e.g., of bodily tissues, or of → potentials in the → electroencephalogram (EEG).

mortality The possibility of death, e.g., as the result of a particular disease or condition.

mortality rate The frequency of death, e.g., as the result of a particular disease or condition; see → standardized mortality rate (SMR).

mother's milk → Breast milk, for the → nursing of infants; women taking → antiepileptic drugs who are considering breast-feeding their babies should discuss with their physicians whether these drugs pass into breast milk and might be harmful to the baby.

motion artefact An → artefact caused by movement, usually of the patient. In the → electroencephalogram (EEG): an → artefact, mimicking brain → activity, consisting of a deflection in the → EEG curve caused by movement of the brain.

motor Pertaining to movement; in → epileptic seizures: involving the → musculature, with either an increase or a decrease (→ negative → myoclonus) of the muscular → contractions that produce movement.

motor cortex The portion of the → cerebral → cortex containing the → neurons responsible for movement.

motor evoked potentials (MEP) → Potentials usually produced by → magnetic stimulation.

motor function Movement; the ability of the body to move its various parts, and to move as a whole by walking, etc.

motor manifestations (Table 44)
Signs and symptoms of a disturbance of the → motor portion of the → nervous system.

motor stereotype See → stereotype, → movement stereotype.

Mount-Reback syndrome → Familial paroxysmal choreoathetosis.

mouth bit A wedge (usually of rubber) for insertion between the teeth. It used to be recommended that a bit should be inserted between the teeth of a person having a → generalized → tonic-clonic (→ grand mal) seizure. This is now discouraged, because it is almost never possible to

● Table 44: Possible motor manifestations of an epileptic seizure

- abnormal posture of parts of the body or of the entire body
- automatisms
- turning movements (head, body)
- vocalization of sounds, syllables, words, or formed language
- running around or away
- twitching

put the bit between the teeth early enough to prevent tongue-biting; when the bit is inserted in later stages of a seizure, the risk of injury to the patient, and to the person inserting it, outweighs any possible benefit. Other terms: → bit, → rubber bit, → tongue bit.

movement artefact → Motion artefact.

movement disorder A disorder of body movement, usually involving → involuntary → excessive movement (→ hyperkinesia) or → reduced movement (→ hypokinesia); some common types are → dystonia, → Parkinson's disease, and → restless legs syndrome.

movement stereotype A pattern of movement that is repeated, e.g., an → automatism in a → focal seizure with → impairment of consciousness.

movement storm Suddenly appearing, excessive, uncontrolled movements, e.g., flailing, striking out, kicking, or "bicycling" in the air; in epilepsy, usually a manifestation of a → frontal lobe seizure.

movement-induced seizure A rare type of → tonic epileptic seizure (or, occasionally, → clonic, → myoclonic, or → tonic-clonic epileptic seizure) with preserved → consciousness that

is usually restricted to a single → extremity but may spread to the trunk or face, and that is usually precipitated by sudden, individual (or, rarely, repeated) movements. May occur in → juvenile myoclonic epilepsy (in about half of all affected persons), or in → nonketotic hyperglycemia in → diabetics. Also called → praxis-induced seizure.

moya-moya (Japanese, “puff of smoke”: from the appearance of the → cerebral blood vessels in an → angiogram.) A disease that occurs most frequently in Japan, and only rarely in most other countries, with progressive narrowing of the major → arteries feeding the brain, resulting in the generation of a network of supplementary, but anatomically abnormal, blood vessels; can cause → focal seizures, and, in children, → alternating focal seizures; also called moya-moya disease or syndrome. Alternative spelling, moyamoya.

MRI-negative Without evidence of pathological change in → magnetic resonance imaging (MRI).

MRI-positive With evidence of pathological change in → magnetic resonance imaging (MRI).

mu (μ) rhythm / mu (μ) waves Sawtooth waves at a → frequency of 6-8 → Hertz that appear in the → electroencephalogram (EEG) particularly over the → centroparietal region and can be suppressed by clenching the opposite fist; may be mistaken for → epileptiform → potentials; also called “wicket rhythm” or “rythme en arceau.”

mucopolysaccharides → Complex → carbohydrates with many different → functions; the mucopolysaccharides are bound to → protein in the tissues of the body and are impor-

tant structural elements of the brain and other → organs.

mucopolysaccharidosis A type of → lysosomal storage disease in which there is a → hereditary disturbance of the → metabolic breakdown of a → mucopolysaccharide; one such disease is → Sanfilippo disease.

multi- Prefix: many. Opposites, mono- and uni-.

multiarmed study A → study involving (at least) two different treatments (e.g., different medications or → different doses of medication) that are to be compared with one another.

multicausal Due to more than one cause.

multicenter Of a → study: performed in more than one center (institution).

multicenter study / trial A trial or → study of a new method of treatment (e.g., a new medication) that is carried out in multiple hospitals or in a number of different places at once, according to a uniform → protocol (Table 70, p. 378).

multichannel recording The simultaneous → recording of → bioelectrical or magnetic → potentials at multiple sites for spatial analysis and interpretation; e.g., in → electroencephalography (EEG).

multichromosomal → Inherited through more than one → chromosome; e.g., → benign familial neonatal seizures are inherited through chromosomes 8 and 20.

multidimensional Possessing, or pertaining to, more than one dimension.

multidirectional In more than one direction; opposite, → unidirectional.

multidisciplinary Pertaining to several different disciplines or areas of