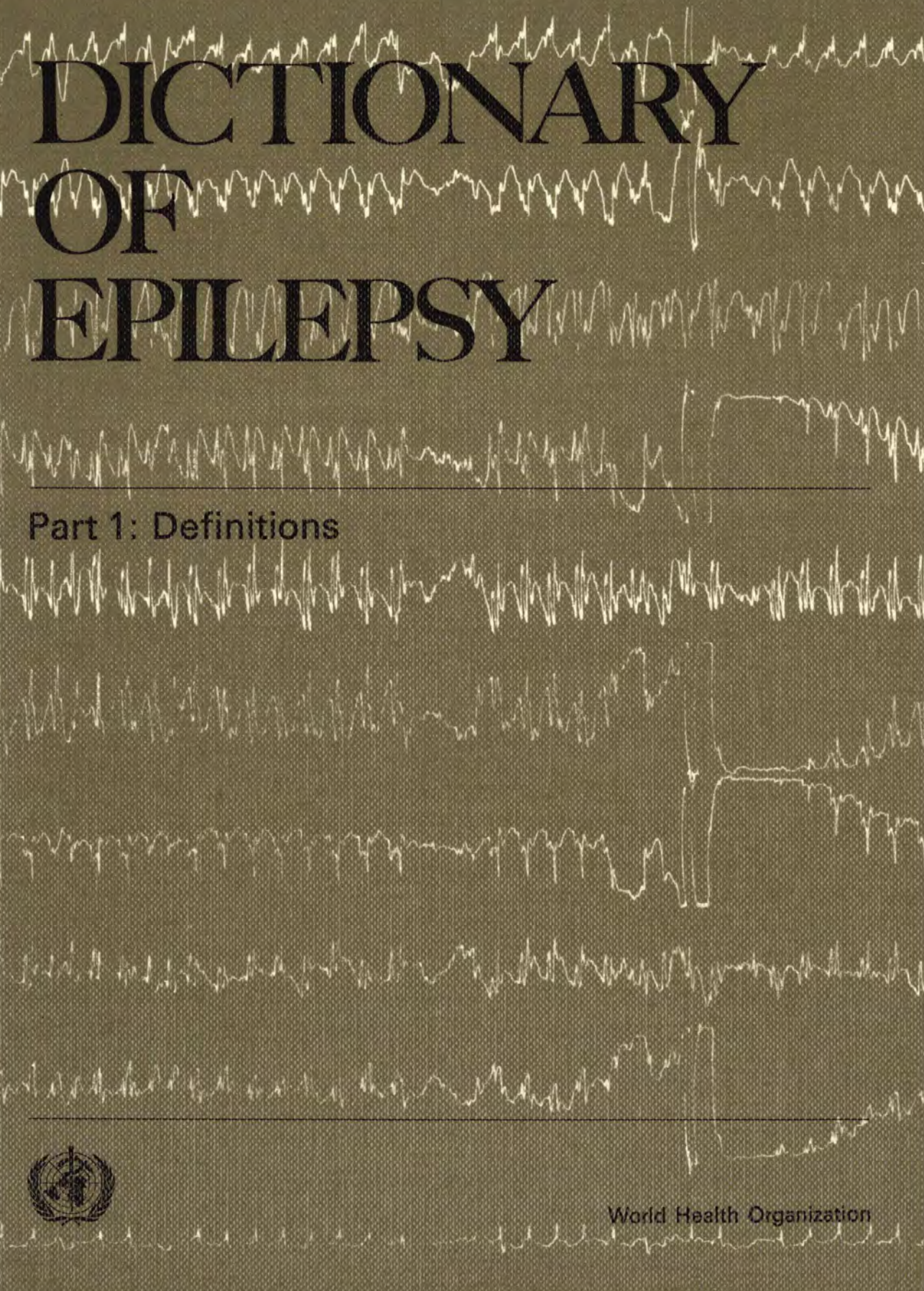
DICTIONARY OF EPILEPSY

Part 1: Definitions



World Health Organization

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PART I: DEFINITIONS

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in collaboration with
an international group of experts

WORLD HEALTH ORGANIZATION
GENEVA
1973

PRINTED IN SWITZERLAND

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INTRODUCTION

Although considerable advances have been made in recent years in understanding the etiology and pathogenesis of disorders of the nervous system, there are many areas in which knowledge is still lacking. Further progress requires critical re-examination of the available data and comparative research on a large scale, and here problems of terminology are of great significance. In the past almost every school of neurology or of psychiatry produced its own definitions, which were accepted by some and rejected by others. This has led to the same definition being used for different concepts, or to the same concept being defined in different ways.

The situation has deteriorated with the growth of published information ; terms used are frequently not defined and may have different meanings for author and reader. With present-day acceptance of the desirability of epidemiological investigations of neurological and mental disorders, the need for accuracy and comparability in reporting the primary data is therefore becoming increasingly urgent.

Although dictionaries already exist in some fields of neurology and psychiatry, as a rule they tend to reflect the personal ideas of the authors and ignore the terminology in use elsewhere by other specialists. An international group of experts convened in Paris by the Council for International Organizations of Medical Sciences (15-17 November 1965) stressed the urgent need for action to reduce the growing confusion in medical and scientific terminology. It was suggested that general agreement on terminology could be achieved through the efforts of international organizations because they can best assemble and coordinate the efforts of experts in any specific field. The present publication is WHO's response to this suggestion. Out of the vast field of neurology and psychiatry, epilepsy was chosen for the following reasons :

1. Recent studies have shown that epilepsy is of unexpectedly high frequency and severity in many parts of the world. In developing countries, where medical care has been insufficient, the total prevalence may reach 8 per 1000 of the population, and frequent severe seizures have been reported in 3 per 1000. Epilepsy presents an important mental health and public health problem, not only because of its serious economic implications but also through its social impact on the family and the community. Furthermore, severe epilepsy causes serious disability and has a high mortality. For various reasons, including superstition, many patients are not brought for treatment, although with modern methods the disease can probably be controlled in 75 % of patients. An unnecessary burden of disability therefore exists.

2. Epilepsy is a problem encountered not only by neurologists and psychiatrists but also by general practitioners and public health personnel.

3. Significant advances have been made in recent years in disciplines particularly relevant to research in epilepsy, notably in the fields of neurophysiology and electroencephalography, but it is impossible to take full advantage of these advances until terminology has become more standardized. At the same time, the new knowledge that has accrued makes it easier to agree on definitions.

The first draft of the dictionary was prepared in French by Professor H. Gastaut and was sent to a panel of specialists from 16 countries (see page 5). Their comments and suggestions were discussed at a WHO meeting held in Geneva in February 1967.[1] *On the basis of the agreed amendments, a second draft was prepared and circulated for further comments. These were discussed at a second WHO meeting held in Geneva in July 1968,*[2] *after which a further revision was undertaken. From the beginning, the preparation of this* Dictionary of Epilepsy *has been actively supported by the International League Against Epilepsy. The present version thus represents the consensus of experts in the field of epilepsy from many parts of the world.*

The dictionary covers mainly terms pertaining to the clinical aspects of epilepsy. Terms used in neurophysiology and electroencephalography and clinical terms for conditions related to epilepsy, such as hysteria and narcolepsy, have not been included, with the exception of a few terms considered important for the understanding of certain clinical aspects of epilepsy, e.g., neuronal discharge, electroencephalographic paroxysm, and convulsive syncope.

The terms epilepsy and epileptic seizure occur frequently in the text. Epilepsies are conditions of diverse etiology characterized by recurrent seizures caused by varied mechanisms, and a given condition may often be described as either epilepsy or an epileptic seizure. Although the distinction is sometimes arbitrary, the two terms are used in the following ways:

epilepsy *when referring to the etiology or the site of the lesion, e.g., genetic epilepsy, temporal lobe epilepsy;*

epileptic seizure *when referring to the nature of the phenomenon or the frequency or circumstances of occurrence, e.g., oropharyngeal epileptic seizure, automatic epileptic seizure, hallucinatory epileptic seizure, and evoked epileptic seizure.*

Each definition is followed by synonyms and by additional linguistic or explanatory notes where necessary. A special effort has been made to include all known synonyms of the defined terms.

The dictionary is divided into two parts: Part I contains the definitions discussed above and is being published simultaneously in English, French, and Spanish. It is hoped that a Russian edition will also be available shortly. Part II, which is still in

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[1] Participants: Professor H. Gastaut, Dr R. L. Masland, Professor R. J. Broughton, Professor P. M. Saradžišvili, and members of the WHO Secretariat.

[2] Participants: Professor H. Collomb, Professor H. Gastaut, Dr R. L. Masland, Professor D. A. Pond, Professor P. M. Saradžišvili, Dr M. M. Velasco Suárez, Professor T. Wada, and members of the WHO Secretariat.

preparation, will be a multilingual index to all four versions, giving the equivalent terms in the different languages.

In spite of the collaboration of eminent specialists in its preparation and although it represents the outcome of years of work, the dictionary is still regarded as provisional. Terms that epileptologists would like to see included may have been omitted and some of the definitions may be found not to be entirely satisfactory. Only when the dictionary has been put to practical use in the field will such defects become apparent. Comments and suggestions will be welcome and should be addressed to: Chief, Mental Health, World Health Organization, 1211 Geneva 27, Switzerland.

The World Health Organization expresses its gratitude to all those specialists who have assisted in compiling this work—especially to Professor H. Gastaut—and without whose enthusiasm, energy, and profound knowledge of epilepsy this venture would not have been possible. Special acknowledgement should also be made of the valuable assistance provided by Professor R. J. Broughton in the preparation of the English translation.

NOTES ON THE USE OF THE DICTIONARY

The terms are listed in alphabetical order, the noun taking precedence in compound terms, e.g.,

epilepsy, centrencephalic

If more than one adjective is used, the most specific adjective is placed first, immediately after the noun, e.g.,

seizure, contraversive epileptic
seizure, ecmnesic hallucinatory epileptic

If the term is composed of two or more nouns, with or without adjectives, the noun describing the manifestation takes precedence, e.g.,

hallucination, epileptic mirror

Where a compound term is used in the text of a definition, the usual order of words is employed.

As far as possible, all the synonyms that could be found in the literature have been included in the dictionary, but wherever more than one term has been used for the same concept only a single term is recommended. If a term is followed by a definition, this indicates that it is the recommended term for that concept, unless otherwise specified in the definition. All terms that are not followed by definitions are therefore obsolete, incorrect, or not recommended for some other reason.

If a term used in a definition is printed in italics and followed by an asterisk, this indicates that the user of the dictionary should look up the definition of that term for further information.

Several abbreviations are used in the text; these are:

Adj.	Adjective
Ant.	Antonym
Expl.	Explanatory
Ling.	Linguistic note
Syn.	Synonym

The use of proper names has been avoided as far as possible and there are very few terms where it has seemed necessary to use an author's name for a syndrome, e.g., Jacksonian. They have been used only when intensive usage and practical convenience so dictated; in all fourteen have been retained. In all other instances the reference to a proper name, if there is one, is given only in the text.

A

absence. Very brief clouding or loss of consciousness (lasting usually 2–15 seconds) accompanying certain *generalized epileptic discharges**. When impairment of consciousness is the only detectable clinical sign, the term *simple absence** is used. When other signs are also present, the term used is *complex absence**, several varieties of which can be distinguished. An absence may be accompanied by the following types of electroencephalographic discharge: (1) A discharge of the typical rhythmic 3/sec spike-and-wave type characterizes *typical absence**, easily recognized by its very sudden onset and end and by a slight flickering of the eyelids that may occur synchronously with each spike. (2) *A recruiting epileptic rhythm**, or a pseudorhythmic succession of slow spike-and-wave complexes, characterizes *atypical absence**, which begins and ends less abruptly than the typical absence. The characteristic brief losses of consciousness accompanying certain *partial epileptic seizures** (principally of temporal lobe origin) present clinically as absences. However, for various etiological, therapeutic, and other reasons, they are not usually considered to be absences as such. Nevertheless, some authors continue to refer to them as "absences", qualified by an adjective denoting the region of origin (usually *temporal lobe absences**). This usage is not recommended. Syn.: *absentia epileptica ; epileptic absence ; epileptic lapse* (incorrect and obsolete); *epileptic vertigo* (incorrect and obsolete).

Expl.: The problem of defining the term "absence", or rather "absences", is particularly difficult and is far from having been solved. Neither the Commission on Terminology of the International League against Epilepsy, which drew up the International Classification of Epileptic Seizures, nor the World Health Organization experts who acted as advisers in the preparation of this dictionary, were able to devise a satisfactory definition. The problem should therefore be considered in detail. In French, where the term originated, "absence" meant "absence of mind" and could refer just as well to a fit of absent-mindedness as to a loss of consciousness. Gradually, the term acquired a purely medical connotation and came to be applied exclusively to loss of consciousness of any kind, but mainly to the type characteristic of syncope. In his doctoral thesis Calmeil (1824) introduced the concept of "epileptic absence" to designate the short periods of loss of consciousness that occur in epileptics and that, up to that point, had been mingled with other types of epileptic seizure in the categories of *epileptic equivalents**, *minor epileptic seizures**, *larval epilepsy**, and *petit mal**. Delasiauve, in his *Traité de l'épilepsie* (1854), included absence among the various types of epileptic attack and defined it as a sudden loss of consciousness lasting a few seconds and apparent to the observer only from the patient's vacant expression, facial pallor, and immobility. The introduction of electroencephalography in the United States of America was immediately followed by the discovery of the rhythmic discharge of bilateral, symmetrical, and synchronous 3/sec spike-and-wave complexes that accompany absences, as defined by the French authors of the nineteenth century. Unfortunately, instead of keeping the term "absence" for the overall clinical and EEG picture, American authors employed the term "petit mal", introduced by Esquirol in 1815, for all minor epileptic seizures, including absences. They even used the word "petit", not as an abbreviation for "petit mal" but through the misinterpretation of Tissot (1769), who had referred to "large attacks and small ones [des petits]", the latter undoubtedly referring to absences, with their highly characteristic "slight flickering of the eyes". With the progress of epileptology that followed the introduction of electroencephalography, it became clear that there existed other forms of epileptic attacks with loss of consciousness of brief duration, and this gave rise to terminological difficulties. First of all, it was realized that certain *partial epileptic seizures**, particularly of temporal lobe origin, could take the form of a loss of consciousness a few seconds in duration that was clinically almost indistinguishable from an absence. Some authors, using mainly clinical criteria, proposed logically that these too should be called "absences", qualified as "temporal". However, in view of the clear differences in symptomatology, etiology, pathogenesis, and therapy between temporal lobe seizures and true absences, other authors rejected any common term. Still others proposed the term "pseudo-absences", qualified by the adjective "temporal". It also became clear that some *generalized epileptic seizures** too could be clinically almost identical with absences but without displaying the typical 3/sec spike-and-wave discharge. On etiologic and therapeutic grounds such seizures could be clearly distinguished from absences; but in terms of

symptomatology and pathogenesis the two types of seizure were sufficiently similar to justify bracketing them together. Some authors therefore proposed referring to the ordinary absences accompanied by a 3/sec discharge as *petit mal absences* and using the term *variant of petit mal absence* for the attacks unaccompanied by this discharge. Other authors, however, have strongly opposed these terms and have proposed replacing them by *typical absences** and *atypical absences**. A further complication arose when it became evident that the symptomatology of absences could be either "simple", i.e., when restricted to the impairment of consciousness, or "complex", when accompanied by other signs. This led to the introduction of the terms *simple absence* and *complex absence*, applicable to both typical absences and atypical absences, and to the definition of a wide variety of complex absences in terms of the signs accompanying them (atonic absence, automatic absence, myoclonic absence, etc.). As things now stand, the problem of the terminology of absences has not been satisfactorily solved. It seems difficult, however, to find an ideal solution in view of the impossibility of using clinical or EEG features alone to define complex manifestations that are also characterized by their etiology, pathogenesis, and response to drugs.

absence, atonic. A *complex absence** characterized by a loss of postural tone sufficient to cause the subject to slump to the ground. In a *typical absence**, with a rhythmic 3/sec spike-and-wave discharge, the loss of tone may be rhythmic and produce jerky falling movements synchronous with each spike-and-wave complex. On the other hand, in absences with an atypical EEG (*atypical absences**), the loss of tone is always continuous and may be sufficiently sudden to cause the subject to collapse and injure himself. Even when brief, an atonic absence must be distinguished from an *epileptic drop attack**. Syn.: *cataplectic epileptic seizure* (incorrect and obsolete); *inhibitory epileptic seizure; atonic petit mal.*

absence, atypical. A type of simple or complex *absence** characterized by EEG features that differ from those of *typical absences**. There are at least three varieties of EEG discharge peculiar to atypical absences: (1) a low-voltage *recruiting epileptic rhythm** with a very high frequency of about 20/sec; (2) a higher-voltage recruiting epileptic rhythm with a slower frequency of about 10/sec; (3) bilateral, roughly synchronous and symmetrical spike-and-wave complexes, repeated more or less rhythmically at a slow frequency of about 2/sec. Electroencephalographically, atypical absences are easily distinguished from *typical absences* by their lack of bilateral, synchronous, and symmetrical 3/sec spike-and-wave complexes. Moreover, unlike typical absences, they are very difficult to activate by hyperventilation or intermittent photic stimulation. Finally, atypical absences do not belong to the benign group of *primary generalized epilepsies** but are part of the severe symptom complex that constitutes the *Lennox-Gastaut syndrome**. Syn.: *petit mal variant absence ; petit mal variant* (incorrect).

Ling.: Considered out of context and disregarding some clinical features that are often too minor to be easily assessed, in particular a less abrupt onset and termination, this variety of absence can be distinguished from the *typical absence* (or "petit mal absence") only by electroencephalography. This is why it has also been called "petit mal variant absence", the word "variant" here signifying a mode of expression that deviates from the standard. See *absence* (Expl.).

absence, automatic. A *complex absence**, typical or atypical, characterized by usually simple *epileptic automatisms**, for example, involuntary movements of the lips or tongue, or behaviour such as rubbing the hands together or adjusting the clothes. Such attacks must be differentiated from partial seizures of temporal lobe origin that have similar psychomotor symptoms and that, when brief, are sometimes referred to incorrectly as *temporal lobe absences**.

absence, autonomic. A *complex absence** characterized by marked autonomic phenomena.

absence, complex. An *absence** in which the impairment of consciousness is accompanied by other symptoms, which tend to dominate the clinical picture. See the following types of *absence: atonic; automatic; autonomic; enuretic; hypertonic; myoclonic; retrocursive; retropulsive; tussive*; and *vasomotor.* In exceptional cases, atony or myoclonus accompanying a complex absence may predominate on one side of the body or even be completely unilateral. See *seizure, unilateral epileptic.*

absence, enuretic. A *complex absence** characterized by urinary incontinence. Such absences must be differentiated from partial seizures of temporal lobe

origin, which may be accompanied by urinary incontinence or, more frequently, by automatisms of micturition. See *seizure, enuretic epileptic.*

absence, epileptic. Syn. for *absence.*

absence, hypertonic. A *complex absence** characterized by an increase in postural tone producing backward extension of the head and conjugate upward deviation of the eyes, and sometimes backward extension of the trunk (*retropulsive absence**); the latter may force the subject to walk backwards in order to keep his balance (*retrocursive absence**).

absence, mnesic. An obsolete term describing an *absence** characterized mainly by an arrest of ideation; consciousness is maintained more or less intact and the subject remains capable of memorization and recall. See *absence, subclinical; seizure, mnesic epileptic.*

absence, myoclonic. A *complex absence** characterized by bilateral and rhythmic *myoclonus** predominating in the cephalic region and the upper limbs. The attack is almost always a *typical absence** with a rhythmic 3/sec spike-and-wave discharge. The myoclonus occurs at the same frequency and is synchronous with the spikes on the EEG.

absence, petit mal. Syn. for *typical absence.*

absence, petit mal variant. Syn. for *atypical absence.*

absence, pure. Syn. for *simple absence.*

absence, retrocursive. A type of *hypertonic absence** in which the subject walks backwards as a result of the backward extension of his body produced by an increase in postural tone.

absence, retropulsive. A type of *hypertonic absence** characterized by a backward extension of the body due to an increase in postural tone.

absence, simple. An *absence** characterized mainly or exclusively by clouding or loss of consciousness. Syn.: *pure absence.*

absence, sternutatory. A *complex absence** characterized by sneezing.

absence, subclinical. An *absence** that is easily recognizable from the EEG but that clinically is limited to a slight decrease of alertness (or perhaps merely a slight loss of efficiency or of decision-making ability); it can be assessed only by appropriate psychometric tests. See *seizure, subclinical epileptic* (Ling.).

absence, temporal lobe. An incorrect term occasionally used to designate a *non-convulsive epileptic seizure** resulting from a discharge in the temporal lobe and characterized by clouding or loss of consciousness.

Ling.: The expression *"temporal lobe partial seizure* with clouding of consciousness" is preferable to the term "absence", which must be reserved for brief episodes of loss of consciousness occurring as an expression of generalized epilepsy (see *absence,* Expl.). Some authors, however, consider that the problem can be resolved by using the term *temporal lobe pseudo-absence**.

absence, tussive. A *complex absence** characterized by bouts of coughing. See *seizure, tussive epileptic.*

absence, typical. A type of simple or complex *absence** associated by definition with a bilateral, synchronous, and symmetrical EEG discharge of 3/sec spike-and-wave complexes. Clinical features often include a sudden onset and termination, and flickering of the eyelids, or other bilateral clonic phenomena, occurring synchronously with each spike on the EEG. Such absences generally occur in subjects who are apparently free from organic brain disease but who have a familial *epileptic predisposition** (see *epilepsy, primary generalized*). The pathogenesis of these attacks is highly specific (see *seizure, centrencephalic epileptic*); they are easily induced by hyperventilation and are particularly responsive to the so-called "anti-petit mal" drugs (diones, succinimides, benzodiazepines, etc.). All these features make it easy to distinguish typical absences from *atypical absences**. Syn.: *petit mal absence.*

absence, vasomotor. A *complex absence** characterized by marked vasomotor phenomena.

absentia epileptica. Syn. for *absence.*

activation of the epilepsies. A technique designed to induce either clinical and EEG manifestations of an

epileptic attack or *interictal (electroencephalographic) epileptic discharges**. Many different methods are employed, but the most common are hyperventilation, intermittent photic stimulation, natural or induced sleep, sleep deprivation, and the cautious injection of convulsant drugs (pentetrazol, bemegride, etc.). Activation methods must be used with care, since those that are the most effective (injections of convulsants) are liable to produce a nonspecific *occasional epileptic seizure** in any subject, epileptic or not. See *predisposition, epileptic; threshold, epileptic.*

affect-epilepsy. Syn. for *affective epilepsy.*

alcohol-epilepsy. Syn. for *alcohol-induced epilepsy.*

amaurosis, epileptic. Transient amaurosis accompanying or following an attack of *occipital epilepsy**. In such cases the amaurosis is the main symptom of a *visual elementary epileptic seizure**.

anticonvulsant. 1. (Adj.) Preventing or arresting convulsions. 2. (Noun) A drug that prevents or stops convulsions, primarily those of an epileptic nature.

antiepileptic. 1. (Adj.) Preventing or arresting *epileptic seizures**, or used to treat epilepsy. 2. (Noun) A drug that prevents or stops convulsive or non-convulsive epileptic seizures.

aphasia, paroxysmal. Incorrect syn. for *aphasic epileptic seizure.*

Ling.: It is well established that almost all aphasic episodes of very brief duration (less than one minute) are the expression of an epileptic seizure of temporal or frontal lobe origin. It is an equally well known fact that most aphasic episodes of longer duration (a few minutes) reflect a non-epileptic *seizure**, particularly ischaemic seizures of the Sylvian region of the dominant hemisphere.

arrest, epileptic speech. See *speech arrest, epileptic.*

attack. A sudden episode affecting a person in apparently good health, or a sudden worsening of a chronic condition (e.g., attack of appendicitis, heart attack, apoplectic attack).

attack, cataplectic. A sudden and very brief loss of postural tone affecting part or all of the body musculature and occurring in certain narcoleptic subjects independently of any epileptic mechanism.

Ling.: This term should never be used in reference to epilepsy. See *seizure, atonic epileptic.*

attack, cerebellar. Syn. for *cerebellar seizure.*

attack, cerebral. Syn. for *seizure.*

attack, epileptic drop. An *atonic epileptic seizure** in which the decrease or abolition of postural tone is of very brief duration (generally a fraction of a second). Depending on whether the loss of tone involves all the postural muscles or only those of the head and neck, the subject either slumps to the ground or his head suddenly falls onto his chest (*epilepsia nutans**). He gets up again immediately after the fall, which may be violent enough to cause injury, particularly when his head strikes an object in its path. Such epileptic drop attacks coincide with the slow waves of polyspike-wave complexes on the EEG and are very typical in young people, in whom they may occur in association, and sometimes in combination, with *epileptic myoclonus** (in which case they are called *myoclono-atonic epileptic seizures**). Epileptic drop attacks are sometimes described as *akinetic petit mal** because they are accompanied by a polyspike-wave discharge, but this view is untenable since drop attacks never occur in subjects with *primary generalized epilepsy** in association with *petit mal myoclonus** or *typical absences**. They are only observed, alone or in association with either myoclonus or tonic seizures, in children with chronic encephalopathy and some degree of mental retardation, especially the *Lennox-Gastaut syndrome**. See *petit mal; petit mal, atonic.* Syn. (all incorrect): *epileptic collapse; akinetic epileptic seizure* (established by usage); *akinetic petit mal; astatic epileptic seizure; epileptic fall; static epileptic seizure* (obsolete).

attack, hysterical. See *seizure.*

attack, laughing. A brief and unmotivated attack of laughter constituting the essential manifestation of some *affective epileptic seizures**, usually of temporal lobe origin. Syn.: *explosive laughter; ictus ridendi.*

attack, salaam. See *salaam attack.*

attack, tetanoid. 1. Obsolete syn. for *decerebrate seizure.* 2. Obsolete syn. for *tonic epileptic seizure.*

aura. 1. Historically, a term introduced by Galen to describe the sensation of a breath (from the Latin *aura*, a breath or puff of air) felt by some subjects prior to the start of an epileptic seizure. 2. In present usage, a motor, sensory, autonomic, or psychic symptom constituting the initial manifestation of: (*a*) a *partial epileptic seizure** that subsequently becomes generalized (termed, for example, a "tonic-clonic seizure with a visual aura"); (*b*) a partial epileptic seizure of complex symptomatology without any secondary generalization of convulsions (this may by termed a "*temporal lobe epileptic seizure* with an epigastric aura" or even simply an "epigastric aura"). Auras must be carefully distinguished from *epileptic prodromes**. Syn. : *signal symptom; warning symptom.*

Ling.: The term "signal symptom" is preferable to "aura" since, while the latter is in common usage, it has the disadvantage of minimizing the importance both of the partial seizure that precedes a secondary generalization and also of the first manifestation of a partial seizure with complex symptomatology. Although the tendency is to speak, e.g., of a "visual aura" at the onset of a tonic-clonic seizure and of an "epigastric aura" at the onset of a temporal lobe seizure with complex symptomatology, it would be better to use such expressions as "tonic-clonic seizure secondary to a visual partial epileptic seizure" (or "visual epileptic seizure secondarily generalized in the form of a tonic-clonic seizure"), and "temporal lobe epileptic seizure with complex symptomatology beginning with an epigastric sensation". Some types of aura mentioned in the literature are not defined in the present dictionary; in such cases the reader is referred to the term describing the corresponding partial seizure, for example to *abdominal epileptic seizure* for "abdominal aura" and to *epigastric epileptic seizure* for "epigastric aura".

aura, cephalic. Syn. for *cephalic epileptic sensation.*

aura, general somatic. Syn. for *general somatic epileptic sensation.*

aura, hysteroid. An incorrect syn., rarely used in English, for *epigastric epileptic seizure**.

Ling.: This particularly unfortunate term results from the confusion between the true ascending epigastric seizure sensation and the ascending "ball-like" epigastric sensation (*globus hystericus*) felt during some hysterical attacks.

aura, myoclonic. An incorrect term for the *bilateral massive epileptic myoclonus** that often precedes a *tonic-clonic epileptic seizure**.

aura, neuralgic. An incorrect term for the supposedly neuralgic pain felt by some epileptics at the onset of their seizures. See *seizure, somatosensory epileptic.*

aura canora. An obsolete term formerly used to describe a verbal *epileptic automatism**, in the form of singing, that constituted the initial symptom of an *automatic epileptic seizure**.

automatism, ambulatory. See *automatism, epileptic.*

automatism, confusional. See *automatism, epileptic.*

automatism, eating. See *automatism, epileptic.*

automatism, epileptic. More or less coordinated and adapted (eupractic or dyspractic) involuntary motor activity occurring during a state of clouding of consciousness either in the course of or after an *epileptic seizure**, and usually followed by amnesia for the event. The automatism may be simply a continuation of an activity that was going on when the seizure occurred or, conversely, a new activity that develops in association with the ictal impairment of consciousness. Usually, the activity is commonplace in nature, often provoked by the subject's environment or by his sensations during the seizure; exceptionally, fragmentary, primitive, infantile, or antisocial behaviour is seen. From a symptomatological point of view the following are distinguished: (1) *eating automatisms* (chewing, swallowing); (2) *automatisms of mimicry*, expressing the subject's emotional state (usually of fear) during the seizure; (3) *gestural automatisms*, simple or complex, directed towards either the subject or his environment; (4) *ambulatory automatisms* (see *seizure, ambulatory epileptic; seizure, procursive epileptic; fugue, epileptic*); (5) *verbal automatisms. Ictal epileptic automatisms* (see *seizure, automatic epileptic*) usually represent the release of automatic behaviour under the influence of the clouding of consciousness that accompanies a generalized or partial epileptic seizure (*confusional automatisms*). However, they may also be due to the direct stimulation, by an epileptic discharge, of a motor centre during a partial epileptic seizure (most frequently of temporal lobe origin). *Postictal epileptic automatisms*, which are always confusional, may follow any severe epileptic seizure, especially a tonic-clonic one, and may be associated

with furor, which very rarely occurs as an ictal automatism (see *furor, epileptic*). Syn.: *epileptic automatic behaviour.*

automatism, gestural. See *automatism, epileptic.*

automatism, ictal epileptic. See *automatism, epileptic.*

automatism, postictal epileptic. See *automatism, epileptic.*

automatism, verbal. See *automatism, epileptic.*

automatism of mimicry. See *automatism, epileptic.*

automatism of sleep, epileptic ambulatory. See *somnambulism, epileptic.*

autoscopy, epileptic. A type of *visual hallucinatory epileptic seizure** during which the patient sees his own image. Syn.: *epileptic mirror hallucination.*

B

behaviour, epileptic. An incorrect and obsolete term. See *constitution, epileptic; personality, epileptic.*

behaviour, epileptic automatic. Syn. for *epileptic automatism.*

behaviour, glischroid. 1. Mental viscosity, which constitutes one of the psychic features of *epileptic constitution** and *epileptoidia**; this feature is found in Dahlgren's *ixothymic* (or *ixophrenic*) *constitution**. 2. For many psychiatrists, syn. for *epileptoidia.*

Ling.: This term is rarely used in English.

Bravais-Jacksonian. A syn. for *Jacksonian** used by some authors in order to emphasize the fact that the descriptions of Bravais preceded those of Jackson.

C

choreo-athetosis, paroxysmal. 1. A rare and often familial form of choreo-athetosis that has the peculiar characteristic of occurring in episodes lasting no more than a few days and sometimes limited to a few hours or even a few seconds. The shorter episodes may be triggered by an unexpected movement although no epileptic mechanism whatever is involved. 2. An incorrect term used by some authors to describe very brief *tonic epileptic seizures**, about 10 seconds in duration, triggered by a sudden and unexpected movement. These are actually *movement epileptic seizures**, which have nothing in common with choreo-athetosis. See *epilepsy, startle; seizure, somatosensory reflex epileptic.*

clonic. An adjective describing the jerky nature of certain convulsions, not necessarily epileptic.

clonus. Rhythmic *clonic movements** that occur in patients with a pyramidal syndrome and that are precipitated by certain manoeuvres during neurological examination, e.g., ankle clonus, patellar clonus.

clonus, epileptic. A term used to describe the clonic phase of a convulsive seizure. To be distinguished from *epileptic myoclonus**.

collapse, epileptic. Syn. for *epileptic drop attack.*

coma, epileptic. A coma of short duration following an *epileptic seizure** (usually tonic-clonic) or a prolonged coma accompanying certain cases of *status epilepticus**. The most characteristic clinical feature of the coma following a *tonic-clonic epileptic seizure** is stertorous respiration due to tracheobronchial obstruction (see *seizure, stertorous epileptic*).

Ling.: This term does not apply to the complete but transient loss of consciousness that accompanies some brief epileptic seizures, e.g., *temporal lobe absences** or *temporal lobe pseudo-absences**.

comitial. Obsolete syn. for *epileptic.*

Ling.: This adjective was originally used in the term "comitial disease" to designate *grand mal**. At present it is used both substantively and adjectivally

(especially in the Romance languages), with the meaning extended to all forms of epilepsy, when the true nature of the disease is to be concealed from a patient.

condition, pre-epileptic. An incorrect and particularly objectionable term used by some authors to refer to a condition that they believe could develop into confirmed epilepsy. For example, it is sometimes erroneously said that the EEG spike-and-wave paroxysms induced by intermittent photic stimulation in an apparently normal child with a history of cranial injury are evidence of a "pre-epileptic condition".

confusion, agitated epileptic. See *grand mal, intellectual.*

confusion, epileptic. A term sometimes used to describe any confusional state, with or without agitation or delirium, likely to occur in epileptics either: (*a*) during an *epileptic seizure**, of which it may be the only or main symptom (see *seizure, confusional epileptic*); (*b*) during generalized or partial non-convulsive status epilepticus (see *status, absence* and *status epilepticus*); (*c*) directly after a seizure (*postictal epileptic confusion*); or (*d*) independently of any seizure, constituting thereby a psychiatric event apparently unrelated to true epilepsy. See *delirium, epileptic; grand mal, intellectual; psychosis, acute epileptic; stupor, epileptic; twilight state, epileptic.* Syn.: *intellectual petit mal* (incorrect and obsolete).

confusion, postictal epileptic. See *confusion, epileptic.*

confusion, simple epileptic. See *petit mal, intellectual.*

constitution, enechetic. An incorrect and obsolete term (rare in English) previously used by Mauz to describe a type of *ictaffinic constitution** in which adhesivity ("clinging behaviour") and perseveration were thought to predominate. See *constitution, epileptic; personality, epileptic.*

constitution, epileptic. An incorrect and obsolete term describing a precise constitutional type with certain somatic characteristics (a "heavy" or ponderous body build) and psychic features, such as slowness of thought (bradypsychia), mental viscosity (glischroid behaviour), adhesive or "clinging" behaviour, tendency to religiosity, and sometimes explosive behaviour (violent temper tantrums on a background of irritability). Such personality or behaviour changes may be observed in a variety of organic brain diseases and are not specific for epilepsy. It would therefore be very unwise, and even imprudent, to imply that there exists a peculiar constitutional or personality type related to epilepsy. The concept is now greatly criticized, since the so-called "epileptic constitution" is much less frequent in epileptics than has been claimed, being notably rare in epileptic children. See *syndrome, Rorschach's epileptic.* Syn.: *epileptoid constitution.*

Ling.: This term is approximately equivalent to *epileptic behaviour**; *epileptic personality**; *enechetic constitution**; *ictaffinic constitution**; and *ixothymic constitution**.

constitution, epileptoid. Syn. for *epileptic constitution.*

constitution, ictaffinic. An incorrect and obsolete term (rarely used in English) previously employed by Mauz to describe a cluster of constitutional traits similar if not identical to those of the *epileptic constitution** and presumed to occur in subjects with a predisposition to epileptic seizures. This concept is open to serious criticism, inasmuch as the constitutional traits referred to are not peculiar to epilepsy and are observed in persons without this disease. See *constitution, epileptic; personality, epileptic.*

constitution, ixophrenic. An incorrect and obsolete term (uncommon in English) that was used by Dahlgren to denote an *epileptic constitution** and especially one of its main components, *glischroid behaviour**. Syn. (also used by Dahlgren): *ixothymic constitution.*

constitution, ixothymic. Syn. for *ixophrenic constitution.*

convulsant. 1. (Adj.) Inducing *convulsions**, e.g., convulsant drug, convulsant focus. 2. (Noun) A chemical substance, e.g., pentetrazol, bemegride, or strychnine, the administration of which produces convulsions, especially epileptic convulsions.

convulsion. 1. Classically, any involuntary contraction of the body musculature. Such contractions may be tonic or clonic, according to whether they are continuous or paroxysmal, and of either cerebral or spinal origin. Convulsions may be caused by an anoxic mechanism (e.g., convulsions during some

syncopes), toxic conditions (e.g., convulsions due to strychnine), psychic factors (e.g., *hysterical convulsions*), or epilepsy (*epileptic convulsions*). Syn.: *spasm*. 2. At present, "convulsions" refer rather to discontinuous muscular contractions, either brief contractions repeated at short intervals or longer ones interrupted by intervals of muscular relaxation (*clonic convulsions*).

convulsions, clonic. See *convulsion*.

convulsions, epileptic. See *convulsion*.

convulsions, epileptiform. An incorrect term sometimes used to describe *convulsions** of undetermined origin whose symptomatology is suggestive of epilepsy.

Ling.: A convulsion must be defined according to its nature or mechanism (epileptic, anoxic, toxic, psychic, etc.) and not according to its symptoms. When it is impossible to establish the nature of a convulsion, it is preferable to describe it as a "convulsion of unknown origin" rather than as an "epileptiform convulsion" or a "hysteriform convulsion".

convulsions, febrile. *Convulsions** occurring during febrile episodes. They are seen most frequently in young children (particularly up to about 3 years of age) but may occur at any age. Some result from cerebral ischaemia and are actually reflex vasovagal or cardio-inhibitory *convulsive syncopes** arising under the influence of fever. Most febrile convulsions, however, are epileptic in nature and are due to a sudden reinforcement of the constitutional *convulsive predisposition**, which is most marked in childhood and can be reinforced by exogenous factors, such as fever. This explains why febrile convulsions rather frequently occur in a familial pattern and why they carry a good prognosis, the convulsions generally disappearing as the subject grows older and his convulsive predisposition diminishes. It also explains why febrile epileptic convulsions belong to the group of *occasional epileptic seizures** and not to *epilepsy** proper. It may, however, be difficult to make this distinction when an epileptic child with a very low *convulsive threshold** has most of his seizures during febrile episodes. As all types of epileptic attack can be precipitated by fever, some febrile epileptic seizures are atonic rather than convulsive; the group of febrile convulsions does not, therefore, correspond exactly to that of *febrile epileptic seizures**. Febrile epileptic convulsions must be distinguished from epileptic seizures that coexist with certain brain lesions in patients with febrile infectious diseases (e.g., encephalitis), and from epileptic seizures that develop into *status epilepticus** and cause a secondary rise in body temperature. This distinction is difficult to make in those rare cases where the febrile epileptic convulsions are unusually severe, being so prolonged or occurring so frequently as to constitute a unilateral convulsive condition, and when not fatal causing irreversible brain lesions with consequent hemiplegia or epilepsy (see *syndrome, hemiconvulsion-hemiplegia* and *syndrome, hemiconvulsion-hemiplegia-epilepsy*). Syn.: *hyperthermic convulsions; pyretic convulsions*.

convulsions, hyperthermic. Syn. for *febrile convulsions*.

convulsions, hysterical. See *convulsion*.

convulsions, infantile. 1. *Convulsions** in very young children. Syn.: *infantile eclampsia* (obsolete and rarely used in English). 2. Incorrect syn. for *infantile epilepsy*.

Ling.: Meaning (1) is imprecise, since such different conditions as *convulsive epileptic seizures**, *convulsive syncopes**, and *sobbing spasms**, each of which implies a very different prognosis and treatment, cannot be usefully grouped together merely on the grounds that they all occur in children. Meaning (2) is incorrect because many epileptic seizures of infancy are non-convulsive, and infantile convulsions are frequently non-epileptic. However, it is entrenched in everyday usage.

convulsions, Jacksonian. *Convulsions** of localized onset whose essential characteristic is a very peculiar spread resulting in a *Jacksonian march**. See *seizure, somatomotor epileptic*.

convulsions, mental. Syn. for *intellectual grand mal*.

convulsions, pyretic. Syn. for *febrile convulsions*.

convulsions, simple febrile. *Febrile convulsions** of short duration that do not leave any sequelae and that do not recur sufficiently to constitute a convulsive condition. The prognosis is usually excellent.

convulsions, tonic. See *convulsion; spasm*.

convulsions, unilateral epileptiform. An incorrect and obsolete term used by Hughlings Jackson to designate the *somatomotor epileptic seizures** with *Jacksonian march** (*Jacksonian epileptic seizures**) that he had described.

convulsive. Related to or characterized by convulsions.

crisis. Any decisive episode in the course of a disease characterized by a sudden and definite change towards improvement or deterioration (e.g., hypertensive crisis, crisis of pneumonia). The term is rarely used in relation to epilepsy.

Ling.: This is a medical term in use since antiquity.

crisis, oculogyric. Tonic *spasm** of the muscles responsible for conjugate deviation of the eyes.

Ling.: This term has come into use to describe non-epileptic spasms occurring during various cerebral conditions (encephalitis, Parkinson's disease, drug intoxications, etc.). It should not be applied to those rare epileptic seizures that are expressed by conjugate deviation of the eyes; these should be described as *oculogyric epileptic seizures**. See *seizure, versive epileptic; epilepsy, gaze.*

cry, epileptic. A harsh cry lasting several seconds and caused by the passage of air through the upper respiratory tract at the beginning of the tonic phase (*tonic cry*) of most *tonic-clonic epileptic seizures**. This cry may be preceded by a *hiccoughing cry* accompanying the myoclonus that sometimes occurs before a tonic-clonic seizure. It is always followed by *clonic sounds*, which are synchronous with each jerk in the clonic phase, and by *stertorous respiratory noises* after the seizure. More rarely, a tonic epileptic cry may be uttered during very severe *tonic epileptic seizures**. See *seizure, vocal epileptic.*

cry, hiccoughing. See *cry, epileptic.*

cry, tonic. See *cry, epileptic.*

D

déjà-vu, déjà-entendu, déjà-vécu. See *illusions, epileptic, of déjà-vu, déjà-entendu, déjà-vécu.*

delirium, epileptic. An obsolete term, not recommended, denoting a delirious state accompanying an *acute** or *chronic epileptic psychosis**.

dementia, acute epileptic. An incorrect and obsolete expression formerly used to describe various types of stuporous state occurring in some epileptic subjects; these are now classified among the forms of *absence status**.

dementia, epileptic. An incorrect term formerly used to describe any state of dementia secondary to the repetition of *epileptic seizures**. Syn.: *epileptic insanity.*

Expl.: This term is incorrect, since anatomical, clinical, and neurophysiological studies have now established that epileptic seizures, even when they recur frequently over a long period of time, do not give rise to "lesions" attributable to the causal *epileptic discharge** and do not, by themselves, lead to mental deterioration. On the other hand, it is well established that: (1) certain *epileptogenic foci** gradually spread as a result of microscopic ischaemic lesions in the vicinity, and certain forms of partial, unilateral, or generalized *status epilepticus** are accompanied by cerebral oedema that may produce hippocampal herniation with local ischaemic lesions, or even diffuse ischaemic or cytotoxic brain lesions, any of these lesions being likely to have adverse effects on the patient's mental condition; (2) certain progressive brain diseases, particularly of the degenerative type, tend to be accompanied by both epileptic seizures and progressive mental deterioration, which at times may culminate in dementia. In either case, however, the dementia is not due to recurring epileptic seizures but rather to a progressive epileptogenic brain lesion or to a developing epileptogenic encephalopathy. This is why the term "epileptic dementia" should be abandoned.

diathesis, ictaffinic. An incorrect and obsolete term (rarely used in English) proposed at one time by Mauz to describe the tendency towards epileptic seizures occurring in some subjects in response to stimuli that are innocuous for the majority of people. Mauz's intention was, in a way, to emphasize a pre-

disposition to *reflex epilepsy**, a concept that does not deserve consideration as a separate entity.

discharge, electroencephalographic epileptic. An *epileptic discharge** recorded on the scalp by the electroencephalograph. Electroencephalographers use the term *epileptic electroencephalographic paroxysm**.

discharge, epileptic. 1. A *neuronal discharge** resulting from the simultaneous activation of a large number of neurons. Such a discharge is often described as hypersynchronous (because the neurons involved tend to discharge simultaneously, with excessive synchronism) and self-sustained (because it tends to sustain itself for a variable period of time), though the use of these two terms is sometimes criticized. The excessiveness in space and time of the epileptic neuronal discharge may be due either to the intensity of the triggering stimulus, or to the prior hyperexcitability or lack of inhibition of the neuronal population activated. 2. The EEG expression of this excessive neuronal discharge. The epileptic discharges, which mainly take the form of spikes or spike-and-wave complexes (see *paroxysm, epileptic electroencephalographic*), are easily recorded by neurophysiological techniques in which electrodes are placed in contact with the neurons involved (electrocorticography, electrosubcorticography, stereo-electroencephalography). However, they are not always picked up by scalp electrodes (transcranial encephalography). When an epileptic discharge is recorded on the scalp, it should therefore be specified as an *electroencephalographic epileptic discharge**. The prevailing practice among clinicians, however, is not to add this detail but to speak simply of an "epileptic discharge". Electroencephalographers, who disapprove of using the term "discharge" under such conditions, prefer to describe it as an *epileptic electroencephalographic paroxysm**. On the other hand, clinicians sometimes use the word "discharge" without specifying its epileptic nature when this is obvious, for example, a "temporal lobe discharge responsible for an epileptic seizure". It should be recalled: (*a*) that not all epileptic neuronal discharges are necessarily accompanied by a detectable EEG discharge; and (*b*) that not all EEG paroxysms, even those that consist of spikes or spike-and-wave complexes, are necessarily symptomatic of epilepsy. In other words, the EEG, though very useful for diagnosing epilepsy, is neither necessary nor sufficient for making such a diagnosis. Syn.: *hypersynchronous neuronal discharge*.

discharge, epileptic seizure. Syn. for *ictal (electroencephalographic) epileptic discharge*.

discharge, erratic (electroencephalographic) epileptic. An *epileptic electroencephalographic paroxysm**, ictal or interictal, that is localized but moves suddenly from one site to another. Such paroxysms may be observed around an *epileptogenic focus** at any age but they are particularly common in the newborn, in whom the discharges may move over relatively great distances, and even from one hemisphere to the other, without there necessarily being any corresponding epileptogenic foci.

discharge, focal (electroencephalographic) epileptic. An *epileptic electroencephalographic paroxysm** that is narrowly localized over a portion of the scalp. These are usually *interictal epileptic discharges**, characteristic of most partial epilepsies. It is unusual and even exceptional for an *ictal epileptic discharge** to be narrowly localized, even during a partial epileptic seizure.

discharge, generalized (electroencephalographic) epileptic. An *epileptic electroencephalographic paroxysm**, ictal or interictal, that affects the whole scalp and whose components (spikes, spikes-and-waves, or slow waves) are distributed in bilateral, synchronous, and symmetrical fashion.

discharge, hypersynchronous neuronal. Syn. for *epileptic discharge*.

discharge, ictal (electroencephalographic) epileptic. An *epileptic electroencephalographic paroxysm** accompanied by clinical seizures. Such paroxysms are generally of fairly long duration and are nearly always characterized by relatively slow spikes, spikes-and-waves, or waves. The distribution of the discharge is as follows: generalized, bilateral, synchronous, and symmetrical over the entire scalp in *generalized epileptic seizures**; generalized but more pronounced on one side of the scalp in *unilateral epileptic seizures**; localized over part of one side of the scalp in certain forms of *partial epileptic seizure**; and diffuse over a variable portion of the scalp in some other types of partial seizure. Syn.: *epileptic seizure discharge*.

discharge, interictal (electroencephalographic) epileptic. An *epileptic electroencephalographic paroxysm** occurring in an epileptic between seizures.

Such paroxysms, usually of brief duration, almost always take the form of spikes, spikes-and-waves, polyspikes, or polyspike-wave complexes. They are bilaterally, synchronously, and symmetrically distributed over the whole scalp in generalized epilepsy, but remain localized over part of one side of the scalp in partial epilepsy.

discharge, neuronal. A neurophysiological term designating a grouping of unit cell potentials corresponding to the activation of one or more neurons. When a large number of neurons discharge simultaneously (*hypersynchronous neuronal discharge*), it is called an *epileptic discharge**.

discharge, subclinical (electroencephalographic) epileptic. An *ictal (electroencephalographic) epileptic discharge** occurring in an epileptic without the clinical symptoms of a seizure. By definition, interictal discharges can only be subclinical.

disease, comitial. Syn. for *grand mal* (1). See *comitial* (Ling.).

disease, sacred. Syn. for *grand mal* (1).

disease, St John's. Syn. for *grand mal* (1).

disease, St Valentine's. Syn. for *grand mal* (1).

dreamy state. See *state, dreamy.*

dromolepsy. An obsolete term, uncommon in English, used to describe epilepsies characterized essentially by *procursive epileptic seizures**. Syn.: *epilepsia cursiva.*

dysphrenia, transient hemicranial. An obsolete term (uncommon in English) describing migrainous attacks with psychic components and mistakenly classed by Mingazzini with the epilepsies.

dysrhythmia, major. Syn. for *hypsarhythmia.*

dyssynergia, myoclonic cerebellar. See *syndrome, Ramsay Hunt's.*

dyssynergia, progressive cerebellar. See *syndrome, Ramsay Hunt's.*

E

echo, epileptic. An obsolete term, uncommon in English, used to describe stereotyped *epileptic automatisms**. See *seizure, automatic epileptic.*

eclampsia. A condition characterized by *occasional epileptic seizures** occurring during pregnancy or delivery. See *epilepsy, gravidic.* Syn.: *eclampsia of pregnancy.*

Ling.: Although obsolete, this term is sanctioned by usage.

eclampsia, infantile. An obsolete syn., rarely used in English, for *infantile convulsions.*

eclampsia, puerperal. A condition characterized by *occasional epileptic seizures** occurring during labour or, less frequently, during the puerperium.

Ling.: Although obsolete, this term is sanctioned by usage.

eclampsia, uraemic. Seizures of *metabolic epilepsy**, mainly generalized (*epileptic myoclonus** or *tonic-clonic epileptic seizures**), that occur secondary to renal failure (usually chronic) but do not depend entirely on the blood urea level. See *epilepsy, renal.* Syn.: *uraemic epilepsy.*

Ling.: This term, which is obsolete, must be considered as incorrect because the role of uraemia in precipitating the seizures is uncertain.

eclampsia of pregnancy. Syn. for *eclampsia.*

eclipse, epileptic. Incorrect and obsolete syn. for *absence.*

encephalopathy, epileptic, with diffuse slow spike-and-wave discharges. Syn. for *Lennox-Gastaut syndrome.*

encephalopathy, infantile myoclonic, with hypsarhythmia. Syn. for *West's syndrome.*

enuresis, epileptic. 1. Syn. for *enuretic epileptic seizure.* 2. A term used incorrectly to designate nocturnal enuresis that may occur in an epileptic child. Nocturnal enuresis, by definition, is never epileptic, not even in an epileptic child, and it must therefore be distinguished from possible nocturnal *epileptic seizures** in which there is emission of urine.

epilepsia a potu suspenso. A term applied to the seizures of *alcohol-induced epilepsy** and to the *occasional epileptic seizures** triggered in some alcoholics by alcohol withdrawal (voluntary or therapeutic).

epilepsia canora. Syn. for *singing epilepsy.*

epilepsia cursiva. Syn. for *dromolepsy.*

epilepsia nutans. An obsolete term, not recommended, describing a type of epilepsy peculiar to children and characterized by *spasmus nutans**.

epilepsia partialis continua. Strictly speaking, according to the original description of Koževnikov[1], a form of epilepsy with *somatomotor epileptic seizures** characterized by a *Jacksonian march**, in the intervals of which *localized myoclonus** persists in the area of origin of the convulsions. Some authors also include chronic myoclonus limited to one area but without intercurrent somatomotor seizures and, conversely, somatomotor seizures with or without Jacksonian march but without intercurrent myoclonus. A few also include the subacute episodes of localized myoclonus observed during certain syndromes of diffuse hemispheric ischaemia. Syn. (*pro parte*): *Koževnikov's epilepsy; Koževnikov's syndrome.*

epilepsia tarda. Syn. for *senile epilepsy.*

epilepsia-hysteria. Syn. for *hystero-epilepsy.*

epilepsy. A chronic brain disorder of various etiologies characterized by recurrent seizures due to excessive discharge of cerebral neurons (*epileptic seizures**), associated with a variety of clinical and laboratory manifestations. Syn.: *chronic epilepsy* (obsolete).

Ling.: A *single epileptic seizure** and *occasional epileptic seizures** (such as *febrile convulsions** and the seizures of *puerperal eclampsia**) therefore do not constitute epilepsy, nor does the more or less frequent repetition of epileptic seizures during an acute illness. (One speaks not of encephalitic or uraemic epilepsy but rather of epileptic seizures during encephalitis or Bright's disease.) See *seizures, recurrent epileptic; epilepsy, acute.*

epilepsy, abdominal. 1. A term used to designate a form of epilepsy in which most or all of the seizures involve abdominal symptoms (see *seizure, abdominal epileptic* (1)). This term is not recommended, since abdominal symptoms may occur in both generalized and partial epileptic seizures. It is pointless and even imprudent to group together different forms of epilepsy, whose etiologies and seizure mechanisms differ, merely on the grounds that they have certain symptoms in common. 2. An incorrect and obsolete term for forms of epilepsy in which the seizures (wrongly called "reflex") are allegedly triggered by an abdominal disorder (see *seizure, abdominal epileptic* (2); *epilepsy, verminous; epilepsy, autonomic reflex*).

epilepsy, abdominal reflex. See *epilepsy, abdominal* (2).

epilepsy, acousticogenic. Syn. for *auditory reflex epilepsy.*

epilepsy, acousticomotor. Syn. for *auditory reflex epilepsy.*

epilepsy, acquired. An obsolete term, not recommended, formerly used to differentiate the *symptomatic epilepsy** of an acquired disorder from epilepsy due to an inherited disorder or constitution. We now know that such a distinction is specious in so far as most forms of epilepsy result from the interaction between acquired and hereditary factors. See *epilepsy, hereditary.*

epilepsy, acute. An incorrect and obsolete term that was used to designate the occurrence of one or more *occasional epileptic seizures** or of an episode of *status epilepticus** during an acute illness, such as encephalitis, exogenous or endogenous intoxication, etc. See *epilepsy* (Ling.).

epilepsy, adolescent. Epilepsy occurring in an adolescent after puberty. There are no clinical,

[1]Also transliterated Kozhevnikov, Koshevnikoff, Kojewnikoff.

etiological, or prognostic reasons for singling out the relatively numerous cases in which epileptic seizures occur at or after puberty. See *epilepsy, pubertal.*

epilepsy, adult. Syn., rarely used in English, for *late onset epilepsy.*

epilepsy, affective. 1. Epilepsy in which the onset of most or all of the seizures is characterized by a change in the subject's emotional state. When used in this sense, the term is not recommended. See *seizure, affective epileptic* (1). 2. An incorrect term used by earlier authors to designate forms of epilepsy that supposedly developed in response to emotion, or in which the seizures were regularly provoked by emotion. See *seizure, affective epileptic* (2); *epilepsy, abdominal.* Syn. (all incorrect and obsolete): *affect-epilepsy; emotional epilepsy; hyperexcitable epilepsy; psychasthenic epilepsy; psycho-affective epilepsy; psychogenic epilepsy; psychoneuropathic epilepsy; reactive epilepsy.*

Ling.: The role of the emotions in triggering certain types of epileptic seizure is generally recognized (see *seizure, affective epileptic* (2); *seizure, evoked epileptic; epilepsy, musicogenic*). However, current opinion increasingly considers the role of the emotions in the actual pathogenesis of epilepsy to be more restricted, and that "affective epilepsy" exists at all is far from proved.

epilepsy, alcohol-induced. A very rare form of epilepsy seen in some chronic alcoholics in which the seizures, usually generalized and tonic-clonic in type, occur during excessive alcohol ingestion or, more often, during a period of withdrawal, or sometimes between drinking bouts. Such seizures may be due to: (*a*) a lowering of the *convulsive threshold** due to alcohol intoxication or the accompanying metabolic disturbances; (*b*) the brain lesions of an encephalopathy caused by alcohol intoxication and/or the resulting nutritional disturbances; (*c*) a pre-existing brain lesion rendered epileptogenic by alcoholism. To be excluded from alcohol-induced epilepsy are: (1) *occasional epileptic seizures** occurring the day after heavy drinking in non-epileptic and non-alcoholic persons who have a *convulsive predisposition** (i.e., the epileptic type of *morbus convivialis* or *rum fits*); (2) epileptic seizures occurring in a non-alcoholic epileptic due to the incidental excessive ingestion of alcohol. See *epilepsia a potu suspenso.* Syn.: *alcohol-epilepsy.*

epilepsy, allergic. An incorrect term occasionally used to describe the epilepsy of a subject in whom *occasional epileptic seizures** accompany an allergic reaction.

epilepsy, amygdaloid. The only type of *subcortical epilepsy** proved to exist and whose symptomatology is known. This symptomatology, which has certain features in common with *pararhinal epilepsy**, centres on rhythmic chewing movements (see *seizure, masticatory epileptic*).

epilepsy, anterior temporal (lobe). A type of *temporal lobe epilepsy** in which the neuronal discharge or the lesion causing the seizures is situated at the anterior extremity of the temporal lobe. See *epilepsy, pararhinal.* Syn.: *temporal pole epilepsy.*

epilepsy, asymmetrical. Syn. for *unilateral epilepsy.*

epilepsy, audiogenic. Syn. for *auditory reflex epilepsy.*

epilepsy, audiosensory. Syn. for *auditory reflex epilepsy.*

epilepsy, auditory reflex. A rare type of epilepsy in which all or most of the seizures are triggered by auditory sensory stimuli (*auditory reflex epileptic seizures**). The noises provoking these seizures are even more effective if they are unexpected and produce a startle reaction, which explains why most auditory reflex epilepsies are classified under *startle epilepsy**. Syn.: *acousticogenic epilepsy; acousticomotor epilepsy; audiogenic epilepsy; audiosensory epilepsy; psophogenic epilepsy; sonosensory epilepsy.*

epilepsy, auricular. An obsolete and incorrect term erroneously linking certain epilepsies (improperly described as "reflex") to a lesion or a foreign body in the auditory canal. See *seizure, somatosensory reflex epileptic.*

epilepsy, autonomic. 1. A form of epilepsy characterized mainly or exclusively by *autonomic epileptic seizures**. 2. An incorrect term for epilepsy in which the seizures originate in the autonomic centres (diencephalic, thalamic, hypothalamic, paraventricular, etc.) of the central nervous system. Syn.: *vegetative epilepsy; sympathetic epilepsy* (incorrect).

epilepsy, autonomic reflex. A very rare form of epilepsy characterized mainly or exclusively by *autonomic reflex epileptic seizures**. Syn.: *visceral epilepsy.*

epilepsy, benign, of children with centrotemporal EEG foci. A type of *partial epilepsy** peculiar to children, especially those between the ages of 5 and 9 years. The seizures usually or always occur during sleep and are characterized by unilateral convulsions affecting principally one side of the face, by hypersalivation, and sometimes also by disorders of speech. Some of these seizures may undergo secondary generalization and develop into *tonic-clonic epileptic seizures**. This type of epilepsy is also characterized by localized *interictal (electroencephalographic) epileptic discharges** over the centrotemporal region of one or sometimes both hemispheres. The course is ordinarily benign; the seizures disappear either spontaneously or in response to treatment. Its development seems to be due in large measure to a marked *epileptic predisposition**, which explains why the condition rather often has the features of *familial epilepsy**. Syn.: *Sylvian epilepsy with midtemporal spike foci in children.*

epilepsy, brain-stem. An incorrect term used to designate forms of epilepsy in which the seizures, characterized essentially by a more or less generalized tonic spasm and by autonomic manifestations, are presumed or known to originate in the brain-stem structures. See *seizure, brain-stem* (1).

epilepsy, Bravais-Jacksonian. Syn. for *Jacksonian epilepsy.*

epilepsy, bulbar. An incorrect and obsolete term, not applicable to humans, used in early medical research by authors who induced *generalized epileptic seizures** in animals by stimulating the medulla oblongata.

epilepsy, cardiac. A term previously used for the convulsive manifestations accompanying certain cardiac conditions, particularly Stokes-Adams disease, and thought to belong to the category of *reflex epilepsy**.

Ling.: An incorrect term perpetuating an error, since the seizures are in fact ischaemic in nature and constitute a form of syncope.

epilepsy, catamenial. A type of epilepsy characterized mainly or exclusively by *catamenial epileptic seizures**.

epilepsy, central. 1. Incorrect syn. for *centrencephalic epilepsy.* 2. Syn. for *Rolandic epilepsy.* See *epilepsy, Rolandic* (Ling.).

epilepsy, centrencephalic. A type of *generalized epilepsy** in which a centrencephalic mechanism has been demonstrated electroencephalographically (presence of generalized bilateral, synchronous, and symmetrical *epileptic discharges** ; total absence of focal discharges), clinically, and by laboratory and ancillary examinations (absence of psychiatric or radiological signs suggestive of a focal hemispheric lesion). See *seizure, centrencephalic epileptic.* Theoretically, centrencephalic epilepsy is a type of *primary generalized epilepsy** due to a marked *epileptic predisposition**, and may even belong to the category of *hereditary epilepsy**, characterized by *typical absences**, *petit mal myoclonus**, and *tonic-clonic epileptic seizures** occurring either separately or in association with one another. Syn. (all incorrect): *central epilepsy; diencephalic epilepsy; mesencephalic epilepsy; mesodiencephalic epilepsy; subcortical epilepsy.*

epilepsy, chronic. Obsolete syn. for *epilepsy.*

epilepsy, cingulate. A type of *partial epilepsy** in which the neuronal discharge or the lesion producing the seizures is located in the cortex of the gyrus cinguli.

epilepsy, circulatory. An incorrect and obsolete term formerly used to designate ischaemic (non-epileptic) *seizures** resembling *convulsive syncopes** and caused by cardiac arrest, paroxysmal bradycardia, or cerebral ischaemia secondary to systemic vasodepression. See *epilepsy, cardiac.*

epilepsy, coma. Obsolete syn. for *grand mal epilepsy.*

epilepsy, combined generalized. Syn. for *primary generalized epilepsy.*

epilepsy, conditioned. A term, not recommended, designating a form of epilepsy characterized mainly or exclusively by *conditioned epileptic seizures**. It is doubtful whether "conditioned epilepsy" exists at all, especially in view of the fact that the existence of even conditioned seizures is doubtful.

epilepsy, conscious. An obsolete term formerly used for epilepsies characterized mainly or exclusively by *conscious epileptic seizures**.

epilepsy, contact. Syn. for *tap epilepsy.*

epilepsy, cortical. *Partial epilepsy** in which the seizures, at least at the onset, are produced by a neuronal discharge localized to part of the cerebral cortex. Depending on the cortical area involved, it is possible to distinguish *frontal adversive area epilepsy**, *secondary sensory area epilepsy**, *supplementary motor area epilepsy**, *supplementary sensory area epilepsy**; and *cingulate**, *frontal**, *insular**, *occipital**, *opercular**, *pararhinal**, *parietal**, *post-Rolandic**, *pre-Rolandic**, *temporal**, and *uncinate epilepsies**.

epilepsy, cryptogenic. Epilepsy of unknown cause. See *epilepsy, essential.*

epilepsy, dental. An incorrect and obsolete term formerly used to designate *epileptic seizures** (erroneously called "reflex") thought to be triggered in infants by the eruption of teeth.

epilepsy, diencephalic. 1. Epilepsy of diencephalic origin. Although such an origin is possible, it has not yet been adequately proved. More research is needed before the term "diencephalic epilepsy" can be recommended for general use. See *epilepsy, autonomic; epilepsy, subcortical.* 2. Incorrect syn. for *centrencephalic epilepsy.*

epilepsy, diffuse. 1. Syn. for *generalized epilepsy.* 2. Epilepsy secondary to diffuse brain lesions. 3. According to some authors, epilepsy in which the seizures occur at night as well as during the day.

Ling.: This term is not recommended because it has several different meanings.

epilepsy, diffuse, of childhood. See *epilepsy, secondary generalized.*

epilepsy, diurnal. Epilepsy in which seizures occur during the day while the subject is awake. Ant.: *nocturnal epilepsy.*

epilepsy, emotional. Syn. for *affective epilepsy.*

epilepsy, erratic. A type of epilepsy, peculiar to neonates and infants, characterized by *erratic epileptic seizures**.

epilepsy, essential. An incorrect and obsolete term formerly used to designate any type of epilepsy that could not be linked to an obvious organic cerebral cause or a recognized metabolic disturbance, and that was therefore believed to represent true epilepsy. The term actually encompassed all *hereditary epilepsies**, many *metabolic epilepsies**, and, especially, poorly understood *organic epilepsies**. As the result of progress in medicine, the number of "essential" epilepsies has gradually diminished and this group is becoming increasingly synonymous with hereditary epilepsy or, preferably, *primary generalized epilepsy**. Syn.: *idiopathic epilepsy; genuine epilepsy; true epilepsy.*

epilepsy, extrapyramidal. An incorrect and obsolete term formerly used to designate most epilepsies characterized by *versive epileptic seizures**, which were rightly supposed to require the participation of extrapyramidal pathways.

epilepsy, familial. An epilepsy observed in several members of a single family and usually resulting from a particularly marked constitutional and genetic *epileptic predisposition**. When such a predisposition is so marked as to be the essential or the sole cause of epilepsy in the various members of a family, one is justified in speaking of true *hereditary epilepsy**, which is always characterized by *epileptic seizures generalized from the onset** (often *petit mal seizures**). When the part played by predisposition is less important and consists only in developing the epileptogenic potential of acquired metabolic disturbances or brain lesions in several members of the same family—who may then have epilepsies of different types, belonging to the category of *primary generalized epilepsy** or *partial epilepsy**—the term "hereditary epilepsy" is no longer valid, and "familial epilepsy" should be used.

epilepsy, familial progressive myoclonic. Syn. for *Unverricht-Lundborg syndrome.*

epilepsy, febrile. An epilepsy of childhood in which the seizures are regularly triggered by febrile episodes. See *seizure, febrile epileptic.*

epilepsy, focal. Syn. for *partial epilepsy.*

epilepsy, frontal. A form of *partial epilepsy** in which the neuronal discharge or the lesion causing the seizures is located in the premotor frontal cortex.

The seizures of frontal epilepsy are sometimes characterized by an abrupt impairment of consciousness but more often remain entirely subclinical (see *seizure, conscious amnesic epileptic ; seizure, conscious epileptic ; seizure, subclinical epileptic*) until the discharge has spread to pre-Rolandic or subcortical motor structures, at which point it produces an *adversive epileptic seizure**, a *somatomotor epileptic seizure**, or a secondary *generalized epileptic seizure.**

epilepsy, frontal adversive area. A type of *partial epilepsy** in which the neuronal discharge or the lesion producing the seizures is located in the frontal adversive area. The seizures mainly consist in contraversion. See *seizure, versive epileptic.*

epilepsy, functional. As opposed to *organic epilepsy**, a term used for forms of epilepsy that are attributable solely to a disturbance of cerebral function resulting from a hereditary *epileptic predisposition** (*hereditary epilepsy**) or a metabolic disorder (*metabolic epilepsy**).

Ling.: As in the case of *metabolic epilepsy* and *organic epilepsy,* the term "functional"—which some authors refuse to accept—must be taken in a restricted etiological sense and not in a general sense. Obviously all epileptic discharges, whatever their nature, are attended by functional disturbances of the neurons involved. Extending this argument to its logical conclusion, all forms of epilepsy, organic as well as hereditary or metabolic, could be regarded as functional.

epilepsy, gaze. 1. An obsolete term describing epilepsy with seizures characterized by conjugate deviation of the eyes. If one eliminates non-epileptic *oculogyric crises**, such attacks are practically limited to *typical absences** with upward deviation of the eyes and to *versive epileptic seizures** with only lateral ocular deviation (*oculogyric epileptic seizures**), which may be jerky in type (*oculoclonic epileptic seizures**). Syn.: *looking epilepsy.* 2. At present, syn. for *visual exploration epilepsy.*

epilepsy, gelastic. Syn. for *gelolepsy.*

epilepsy, generalized. A form of epilepsy characterized exclusively by *epileptic seizures generalized from the outset** of any symptomatology or etiology. Syn.: *diffuse epilepsy.*

epilepsy, genetic. Syn. for *hereditary epilepsy.*

epilepsy, genital. An incorrect term, rarely used in English, perpetuating the error of linking some epilepsies (wrongly called "reflex") to a lesion of the genital organs. See *epilepsy, ovarian.*

epilepsy, genuine. Syn. for *essential epilepsy.* See *epilepsy, primary generalized.*

epilepsy, grand mal. A term sometimes used to describe the epilepsy of persons who present only *tonic-clonic epileptic seizures**. See *grand mal* (Expl.). Syn.: *grand mal; coma epilepsy* (obsolete).

epilepsy, gravidic. An incorrect and obsolete term, uncommon in English, denoting a form of epilepsy in which the seizures occur mainly or exclusively during pregnancy. Such cases are extremely rare, as pregnancy often diminishes and sometimes even stops the seizures in epileptic women. Such attacks are actually *occasional epileptic seizures** occurring during pregnancy (*eclampsia**) or labour (*puerperal eclampsia**) as the result of an endogenous intoxication.

epilepsy, hemiplegic. 1. A term, not recommended, sometimes used for epilepsies (or epileptic seizures) complicated by hemiplegia, in particular the *hemiconvulsion-hemiplegia syndrome** and the *hemiconvulsion-hemiplegia-epilepsy syndrome**. 2. An obsolete term originally used by Bravais to describe *Jacksonian epilepsies**.

epilepsy, hereditary. A rare type of epilepsy characterized by *epileptic seizures generalized from the onset** (*tonic-clonic epileptic seizures**, *petit mal myoclonus**, and, especially, *typical absences**), which occur either alone or in association, and which result from an unusually marked hereditary *epileptic predisposition**. Hereditary epilepsy is very rare; although constitutional epileptic predisposition is a widespread phenomenon, only occasionally is it transmitted within a single family with sufficient intensity to give rise to true hereditary epilepsy (see *epilepsy, familial*). While the number of families with hereditary epilepsy is not large, enough do exist so that investigators have been able to suspect from studies on them that the causal factor in the transmission of seizures is a dominant autosomal gene of irregular penetrance whose expression varies with age, being highest in childhood; whose action depends on the individual's entire genotype; and whose expression is influenced by environment. Hereditary epilepsies proper must, of course, be distinguished from organic and meta-

bolic brain diseases of a genetic nature liable to be accompanied by epileptic seizures (*Bourneville's tuberous sclerosis**, *Unverricht-Lundborg syndrome**, etc.). Syn.: *genetic epilepsy*. Ant.: *acquired epilepsy*.

Ling.: It is preferable to speak of "hereditary epilepsy" rather than of "genetic epilepsy" because the latter implies not only the transmission of an abnormal gene—which is the sole cause of hereditary epilepsy— but also the transmission of excess chromosomal material responsible for other non-epileptogenic hereditary diseases (e.g., 21-trisomy or Down's syndrome).

epilepsy, hyperexcitable. Syn. for *affective epilepsy*.

epilepsy, hypnic. A syn., rarely used in English, for *morpheic epilepsy*.

epilepsy, hypothalamic. An incorrect term for epilepsy in which the seizures, characterized essentially by autonomic manifestations, were believed to originate in the hypothalamus. Although the hypothalamus is probably involved in the causation of some epileptic seizures, there is at present no physiological or clinical evidence to justify considering "hypothalamic epilepsy" as a separate clinical entity. See *epilepsy, subcortical*.

epilepsy, idiopathic. Syn. for *essential epilepsy*. See *epilepsy, primary generalized*.

epilepsy, infantile. Epilepsy with seizures occurring in neonates or infants before the age of about three years, the upper age limit being somewhat indefinite. It is quite common because the natural *epileptic predisposition** is maximal up to the age of three, subsequently diminishing rapidly. This epilepsy often presents distinctive clinical signs, since the immature infant brain, for unknown neurophysiological reasons, (1) cannot readily combine the tonic and clonic sequences of the epileptic discharge accompanying grand mal, or produce the rhythmic succession of spikes-and-waves of the discharge accompanying the absences of petit mal, which explains why generalized epilepsies in infancy are usually limited to atonic, tonic, clonic, or myoclonic seizures; (2) cannot always produce a simultaneous discharge of both hemispheres or, conversely, limit a discharge to a given part of a single hemisphere, which explains the large number of *unilateral** and *erratic epileptic seizures** in infancy, and the great rarity of *partial epileptic seizures**, especially of the somatomotor type, at this age. Syn.: *infantile convulsions* (incorrect).

epilepsy, insular. A form of *partial epilepsy** in which the neuronal discharge or lesion causing the seizures is located in or around the insula. These seizures often display a very complex symptomatology, but they consist principally of simple or complex sensory manifestations of the gustatory type (illusions or hallucinations) and autonomic phenomena (mainly epigastric or abdominal). See *seizure, gustatory elementary epileptic; seizure, gustatory hallucinatory epileptic; seizure, gustatory illusional epileptic; seizure, abdominal epileptic; seizure, autonomic epileptic; seizure, epigastric epileptic; seizure, oropharyngeal epileptic*.

epilepsy, intermediary. An obsolete term formerly used, by French authors only, to designate epilepsy characterized by *hysteriform epileptic seizures**.

epilepsy, Jacksonian. A term proposed by Charcot to describe epilepsy characterized by *somatomotor epileptic seizures** with *Jacksonian march**. Syn.: *Bravais-Jacksonian epilepsy; hemiplegic epilepsy* (obsolete).

epilepsy, Koževnikov's. Syn. (*pro parte*) for *epilepsia partialis continua*.

epilepsy, larval. An incorrect and obsolete term formerly used to designate certain mental manifestations suggestive of epilepsy but occurring in subjects who never developed convulsive attacks. It was more or less a synonym for *epileptic equivalent** and is to be rejected for the same reasons as must the latter term.

epilepsy, laryngeal. An incorrect and obsolete term (rarely used in English) perpetuating the error of linking some epilepsies (wrongly called "reflex") to a laryngeal lesion.

epilepsy, laryngeal reflex. See *epilepsy, laryngeal*.

epilepsy, late onset. Epilepsy whose first manifestation occurs in the adult. The only reason for singling out this form of epilepsy is that most *epileptic seizures** related to a severe progressive cerebral lesion, particularly a brain tumour, are seen during adulthood. The origin of epilepsy in the adult must therefore be carefully investigated. Syn.: *adult epilepsy*.

epilepsy, light-sensitive. Syn. for *visual reflex epilepsy.*

epilepsy, local. Syn. for *partial epilepsy.*

epilepsy, looking. Syn. for *gaze epilepsy* (1).

epilepsy, malignant, of childhood. See *epilepsy, secondary generalized.*

epilepsy, mesencephalic. 1. An incorrect term describing epilepsies characterized by *tonic epileptic seizures** presumed to originate in the uppermost part of the brain stem. See *epilepsy, brain-stem.* 2. Incorrect syn. for *centrencephalic epilepsy.*

epilepsy, mesodiencephalic. Incorrect syn. for *centrencephalic epilepsy.*

epilepsy, metabolic. Epilepsy resulting from a metabolic disturbance. Observed chiefly among neonates and infants, it decreases in frequency with age. The principal metabolic disturbances liable to cause metabolic epilepsy are: (1) disturbances in pyridoxine metabolism (lack of pyridoxine, pyridoxine dependence); (2) disturbances in amino acid metabolism (particularly disturbed phenylalanine metabolism associated with phenylketonuria); (3) disturbances in electrolyte and water balance (mainly acute dehydration of the newborn); (4) disturbances in carbohydrate metabolism (all forms of spontaneous hypoglycaemia); (5) disturbances in lipid metabolism, the most complete form of which leads to epilepsy of lipoidosis, actually an *organic epilepsy** of metabolic origin; (6) disturbances in calcium metabolism (all types of hypocalcemia); (7) poorly defined metabolic disturbances in renal failure and toxaemia of pregnancy. However, rarely do these metabolic disturbances assume sufficient importance or last long enough to produce, by themselves, chronic epilepsy in an otherwise normal subject. Generally, such an outcome is possible only in subjects already genetically predisposed to convulsions (see *predisposition, convulsive; predisposition, epileptic*) or in those who have brain lesions rendered epileptogenic by the metabolic disturbance. In pure metabolic epilepsies, or in metabolic epilepsies superimposed on a *convulsive predisposition*, the seizures are generalized from the onset or are sometimes unilateral in the newborn and infant. When the metabolic disturbance acts merely by unmasking a cerebral lesion and rendering it epileptogenic, the seizures are entirely partial, generalized from the onset, or, more commonly, secondarily generalized from a partial onset.

Ling.: As in the case of *functional epilepsy** and *organic epilepsy,* the term "metabolic" must be taken in a restricted etiological sense and not in a general sense. Obviously all epileptic discharges, whatever their nature, are attended by metabolic disturbances of the neurons involved. Extending this argument to its logical conclusion, all forms of epilepsy, organic as well as genetic, could be regarded as metabolic.

epilepsy, migrainous. A term describing: (1) a very rare form of epilepsy in which the seizures presumably alternate with typical attacks of migraine—one example being the association of epileptic seizures and migraine attacks of similar symptomatology, both apparently resulting from the same lesion (e.g., *visual epileptic seizures** and ophthalmic migrainous attacks in subjects with an occipital lesion); (2) an equally rare form of epilepsy occurring in subjects with migraine and resulting from ischaemic brain lesions secondary to the migraine attacks. Such a mechanism has not been proven and is still very doubtful. This term is not recommended. Syn.: *migralepsy* (incorrect).

epilepsy, morning. Epilepsy in which the seizures occur mainly or exclusively in the morning. See *epilepsy, waking.*

epilepsy, morpheic. Epilepsy in which the seizures occur mainly or exclusively during sleep, whether at night or during the day. Recent studies have shown that all symptomatological and etiological varieties of epileptic seizure may display this pattern of occurrence, which is still unexplained. Syn.: *hypnic epilepsy.*

epilepsy, movement. A very rare form of *reflex epilepsy** characterized mainly or exclusively by *movement epileptic seizures**. Syn.: *paroxysmal choreo-athetosis* (incorrect).

epilepsy, musicogenic. A very rare form of *reflex epilepsy** (usually of temporal lobe origin) characterized mainly or exclusively by *musicogenic epileptic seizures**. Syn.: *musicolepsy* (obsolete).

epilepsy, myoclonic. An incorrect term, which should be abolished, formerly used to designate all forms of epilepsy in which *epileptic myoclonus** was

the only clinical feature, or the more common forms in which convulsive generalized seizures (tonic-clonic, tonic, or clonic) or partial seizures (Jacksonian) were associated with *massive bilateral** or *fragmentary myoclonus**, epileptic or non-epileptic in origin. The concept grouped together the most disparate phenomena: at one extreme, for example, the *Unverricht-Lundborg syndrome** and *epilepsia partialis continua**, both rare and indicative of extensive brain damage; and, at the other, extremely common forms of epilepsy (*primary generalized epilepsy**) combining *tonic-clonic epileptic seizures** with epileptic myoclonus and often occurring in persons with no demonstrable encephalopathy. Syn. (both obsolete): *myoclono-epilepsy; myoclonus-epilepsy.*

epilepsy, narcoleptic. An obsolete and incorrect term perpetuating a serious error. It is now proven that an epileptic discharge is never accompanied bc clinical or EEG phenomena characteristic of sleed in the strict sense of the word, and that narcoleptiy attacks are actually a simple disturbance of sleep physiology with no relationship whatsoever to epilepsy. Syn.: *hypnolepsy.*

epilepsy, nocturnal. Epilepsy in which the seizures occur mainly or exclusively during night sleep. See *epilepsy, morpheic.* Ant.: *diurnal epilepsy.*

epilepsy, occipital. A type of *partial epilepsy** in which the neuronal discharge or the lesion causing the seizures is located in the occipital cortex. The seizures usually, but not necessarily, include visual symptoms of the elementary or complex (illusional or hallucinatory) type, but not to the exclusion of other clinical manifestations. See *seizure, visual elementary epileptic; seizure, visual hallucinatory epileptic; seizure, visual illusional epileptic.*

epilepsy, ocular. An obsolete and incorrect term perpetuating the error of associating certain epilepsies (incorrectly called "reflex") with an ocular lesion or a foreign body in the eye.

epilepsy, old age. Syn. for *senile epilepsy.*

epilepsy, opercular. A type of *partial epilepsy** in which the neuronal discharge or the lesion producing the seizures is located in the slopes of the Sylvian fissure and the peri-insular region. These seizures often have a very complex symptomatology consisting mainly of hypersalivation, masticatory movements, and marked clouding of consciousness, sometimes preceded by a peculiar taste or a *general somatic epileptic sensation**. See *seizure, gustatory elementary epileptic; seizure, masticatory epileptic; seizure, oropharyngeal epileptic; seizure, salivatory epileptic; epilepsy, secondary sensory area.*

epilepsy, organic. The most common form of *symptomatic epilepsy**, in which the seizures are the result of a brain lesion, regardless of its nature or severity and irrespective of the supplementary role played by inherited or acquired predisposing factors. See *predisposition, epileptic; epilepsy, essential; epilepsy, functional; epilepsy, hereditary; epilepsy, metabolic.*

Ling.: As in the case of *metabolic epilepsy* and *functional epilepsy*, the term "organic" must be taken in a restricted etiological sense and not in a general sense. Obviously, genes (and their dependent enzymes) are physically present as organic molecules. Extending this argument to its logical conclusion, all non-organic epilepsies, genetic or metabolic, could thus be regarded as organic.

epilepsy, ovarian. An incorrect and obsolete term for so-called *reflex epilepsy** purportedly caused by ovarian dysfunction. Syn.: *oophoro-epilepsy.*

epilepsy, pararhinal. A form of *partial epilepsy** in which the neuronal discharge or the lesion causing the seizures is located in the cortex of the orbito-insulo-temporal tip region and in the amygdaloid nucleus—an area referred to as "pararhinal" because it surrounds the anterior rhinal, the posterior rhinal, and the endorhinal sulci. The symptomatology of these seizures is, of course, very complex, but the dominant features are a modification of the emotional state (see *seizure, affective epileptic*) and eating automatisms (see *automatism, epileptic*). See *epilepsy, rhinencephalic.*

epilepsy, paraventricular. An incorrect and obsolete term attributing a paraventricular origin (in the basal ganglia next to the third ventricle) to certain forms of epilepsy in which the seizures have autonomic features. See *epilepsy, subcortical.*

epilepsy, parietal. A type of *partial epilepsy** in which the neuronal discharge or the lesion causing the seizures is located in the parietal cortex. The clinical manifestations of these seizures are always

slight and may even be unapparent (see *seizure, subclinical epileptic*) until the discharge spreads to neighbouring sensory or motor areas, when it produces symptoms of the following types: somatosensory—either complex (illusional or hallucinatory) or elementary—, somatomotor, adversive, aphasic, etc.

epilepsy, partial. This form of epilepsy is characterized by the following features. I. Clinical characteristics: (i) *partial seizures** whose symptoms (chiefly initial or *signal symptoms**) can assume very different forms, depending on the functions of the neuronal population in which the discharge originates: (*a*) partial seizures with elementary symptomatology; (*b*) partial seizures with complex symptomatology; (*c*) partial seizures with secondary generalization; (ii) the relatively frequent presence of interictal neurological signs related to the site of the epileptogenic lesion; (iii) onset at any age; (iv) an etiology ordinarily linked to organic brain disease (sequelae of injury, tumour, etc.). II. Electroencephalographic characteristics: (i) *interictal (electroencephalographic) epileptic discharges** of isolated spikes or spikes-and-waves that are localized to the part of the scalp overlying the epileptogenic focus and that occur either spontaneously or in response to activation procedures; (ii) *ictal (electroencephalographic) epileptic discharges** of spikes, spikes-and-waves, or slow waves, more or less localized to the same part of the scalp (in partial seizures with elementary symptomatology the discharge is usually very localized and sometimes undetectable; in seizures with complex symptomatology it is usually very diffuse and may even be generalized; and in seizures that become secondarily generalized the discharge is always generalized after a partial onset). III. Other characteristics: (i) a fairly good response to the standard antiepileptic drugs (barbiturates and hydantoins), some cases being amenable to surgical therapy; a prognosis that depends on the nature of the epileptogenic lesion; (ii) a well known pathogenesis, since the neuronal discharge results from a lesion that is more or less limited to part of one hemisphere, and nearly always involves, either directly or indirectly, only a part of the cerebral cortex. Syn.: *cortical epilepsy; focal epilepsy; local epilepsy.*

Ling.: If the site of the initial neuronal discharge and/or the causal lesion has been determined (by clinical examination, EEG, radiology, etc.), then cases of partial epilepsy can be assigned an anatomical nomenclature, such as pre-Rolandic partial epilepsy, post-Rolandic partial epilepsy, frontal adversive area partial epilepsy, temporal lobe partial epilepsy, etc.

epilepsy, petit mal. A term sometimes used to describe the epilepsy of subjects who have only *petit mal seizures**, and especially *typical absences**. See *petit mal* (Expl.). Syn.: *petit mal.*

epilepsy, photogenic. Syn. for *visual reflex epilepsy.*

epilepsy, photosensitive. Syn. for *visual reflex epilepsy.*

epilepsy, pleural. An incorrect and obsolete term (uncommon in English) formerly used to describe convulsive episodes liable to accompany certain pleural conditions, especially spontaneous or induced pneumothorax, and assumed to belong to the group of *reflex epilepsies**.

Ling.: This term perpetuates an error, since such attacks are in fact ischaemic in origin, due to syncope or air embolism. On the other hand, air embolism may be accompanied by an *occasional epileptic seizure** or by *status epilepticus**.

epilepsy, pontobulbar. An incorrect and obsolete term used by Hughlings Jackson to emphasize that the origin of the tonic seizures he had described as *trunk fits** was situated low in the brain stem.

epilepsy, postcentral. Syn. for *post-Rolandic epilepsy.* See *epilepsy, Rolandic* (Ling.).

epilepsy, post-Rolandic. A type of *partial epilepsy** in which the neuronal discharge or the lesion producing the seizures is located in the post-Rolandic cortex. The seizures usually, but not necessarily or exclusively, consist of somatosensory symptoms that are generally elementary but occasionally complex (illusional or hallucinatory), and often associated with other symptoms, usually of the somatomotor type. See *seizure, somatosensory elementary epileptic.* Syn.: *postcentral epilepsy.*

epilepsy, post-traumatic. *Organic epilepsy** due to brain lesions resulting from head injury. Post-traumatic epilepsy almost always consists of *partial epileptic seizures**, sometimes secondarily generalized, whose symptomatology depends on the site of the post-traumatic brain lesions; this has led many authors to deny the existence of true post-traumatic epilepsy with seizures generalized from the onset.

It is especially the open skull injuries with brain damage that tend to result in epilepsy. However, most cases of post-traumatic epilepsy are secondary to closed head injuries, since this type of trauma is more common. The fact that brain contusions following a head injury usually affect the temporal lobe accounts for the great number of temporal post-traumatic epilepsies. Post-traumatic epilepsy must be distinguished from *occasional epileptic seizures**, which frequently occur either immediately or some time after a head injury without necessarily culminating in *epilepsy** proper. Syn.: *traumatic epilepsy.*

epilepsy, precentral. Syn. for *pre-Rolandic epilepsy.* See *epilepsy, Rolandic* (Ling.).

epilepsy, pre-Rolandic. A type of *partial epilepsy** in which the neuronal discharge or the lesion producing the seizures is located in the pre-Rolandic cortex. These seizures generally, but not necessarily or exclusively, consist of convulsions that spread via a *Jacksonian march**. See *seizure, somatomotor epileptic.* Syn.: *precentral epilepsy.*

epilepsy, primary generalized. This form of epilepsy is characterized by the following features. I. Clinical characteristics: (i) *epileptic seizures generalized from the onset** taking the form of *tonic-clonic epileptic seizures** (also called grand mal), *typical absences** (also called petit mal), and *bilateral massive epileptic myoclonus** (also called petit mal myoclonus); one or more of these types of seizure can occur in the same patient; (ii) the usual absence of neurological or psychological evidence of cerebral involvement during the intervals between seizures; (iii) frequent onset in childhood and adolescence, although the seizures are liable to persist to, and may even develop at, any age; (iv) absence of any clear etiology, justifying the assumption that this form of epilepsy derives essentially from a hereditary *epileptic predisposition** so marked that very mild metabolic disturbances or very slight acquired brain lesions are rendered epileptogenic. II. Electroencephalographic characteristics: (i) bilaterally synchronous and symmetrical *interictal (electroencephalographic) epileptic discharges** of polyspikes, polyspikes-waves, or fast spike-and-wave complexes occurring either spontaneously or, more often, in response to hyperventilation, intermittent photic stimulation, or sleep; in certain cases the interictal EEG is normal; (ii) bilaterally synchronous and symmetrical *ictal (electroencephalographic) epileptic discharges** associated with a given type of seizure (rhythmic 3/sec spike-and-wave complexes during typical absences; polyspike-wave complexes during bilateral massive epileptic myoclonus; *recruiting epileptic rhythm**, at first continuous and then interrupted by slow waves, during tonic-clonic seizures). III. Other characteristics: (i) a good response to the standard antiepileptic drugs (barbiturates, hydantoins) and to "anti-petit mal" drugs (diones, succinimides); usually a good prognosis; (ii) a pathogenesis that is still uncertain but probably corresponds to what most workers understand by a *centrencephalic epileptic seizure** mechanism, or a "primary bisynchronous" transmission mechanism of the epileptic discharges. Syn.: *centrencephalic epilepsy ; essential epilepsy* (obsolete); *genuine epilepsy* (obsolete); *idiopathic epilepsy* (obsolete); *true epilepsy* (obsolete).

Ling.: The term "primary generalized epilepsy" (from *primus,* first) is certainly imperfect but has the advantage (*a*) of stressing the historical background of this type of epilepsy, which was the first to be recognized as a distinct morbid entity in the form of "grand mal" (comitial disease, sacred disease, falling sickness, etc.), since the original meaning of primary is "first" or "oldest"; (*b*) of indicating the lack of any clear etiology in this form of epilepsy, and perhaps even of suggesting the centrencephalic transmission mechanism of its seizures, since another meaning of primary is "first to occur".

epilepsy, psophogenic. Syn. for *auditory reflex epilepsy.*

epilepsy, psychasthenic. Syn., uncommon in English, for *affective epilepsy.*

epilepsy, psychic. An incorrect and obsolete term formerly used to describe all epilepsies with *ictal, postictal,* or *interictal* impairment of consciousness. See *absence ; grand mal, intellectual ; confusion, epileptic.*

epilepsy, psycho-affective. Syn. for *affective epilepsy.*

epilepsy, psychogenic. Syn. for *affective epilepsy.*

epilepsy, psychomotor. An incorrect syn. for *temporal lobe epilepsy**, unfortunately still being used by a few authors who call *automatic epileptic seizures** "psychomotor" and who erroneously believe that such seizures always result from an epileptic discharge in the temporal lobe.

epilepsy, psychoneuropathic. Syn. for *affective epilepsy.*

epilepsy, pubertal. Epilepsy whose seizures occur at the onset of puberty, when hormonal changes are known to reinforce temporarily the *convulsive predisposition** and *epileptic predisposition**. Thus, the seizures generalized from the onset of *primary generalized epilepsy**, or partial seizures due to a temporal lobe lesion acquired at birth, may first appear only at puberty. It is also well known that at puberty *typical absences** tend to recede or give way to *tonic-clonic epileptic seizures**.

epilepsy, reactive. Syn. for *affective epilepsy.*

epilepsy, reading. A very rare form of *reflex epilepsy** characterized mainly or exclusively by *reading epileptic seizures**.

epilepsy, reflex. A very rare form of epilepsy in which all or most of the seizures are provoked by sensory stimuli (*reflex epileptic seizures**). Inasmuch as reflex epileptic seizures are uncommon, true reflex epilepsies are obviously highly unusual.

epilepsy, renal. Epilepsy secondary to certain ill-defined metabolic disturbances accompanying renal failure, especially of the chronic type, but not necessarily related to the blood urea level. This type of epilepsy does not occur in all patients with kidney disease but only in those who have a *convulsive predisposition** and in whom the *convulsive threshold** is further lowered by the metabolic disturbance. This explains why the seizures of renal epilepsy are usually generalized from the onset and convulsive (massive myoclonus and tonic-clonic seizures). Sometimes, however, when an independent brain lesion (most commonly arteriosclerotic) is rendered epileptogenic by the metabolic disturbance, partial seizures may occur. See *eclampsia, uraemic.*

epilepsy, rhinencephalic. A term sometimes used to describe epilepsy in which the seizures result from a discharge in the rhinencephalic structures. See *epilepsy, amygdaloid; epilepsy, pararhinal.*

epilepsy, Rolandic. A type of *partial epilepsy** in which the neuronal discharge or the lesion producing the seizures is located in the cortex on either side of the Rolandic fissure. Two forms are distinguished: *post-Rolandic epilepsy** and *pre-Rolandic epilepsy**. Syn.: *central epilepsy.*

Ling.: The Rolandic fissure is also known as the central sulcus, which explains the syn. *central epilepsy.*

epilepsy, secondary. Syn. for *symptomatic epilepsy.*

epilepsy, secondary generalized. This form of epilepsy is characterized by the following features. I. Clinical characteristics: (i) *epileptic seizures generalized from the onset** taking the form of *tonic epileptic seizures**, *atonic epileptic seizures**, *atypical absences** (also called petit mal variant absences), and, occasionally, *tonic-clonic epileptic seizures** (also called grand mal) and *bilateral massive epileptic myoclonus**; one or more of these seizures can occur in a single patient; (ii) the usual presence of neurological or psychological signs of diffuse cerebral involvement (e.g., some degree of mental deficiency); (iii) frequent onset in childhood, although the seizures can also develop in adolescents and, rarely, in adults; (iv) an etiology that may not be evident but that can be ascribed to diffuse or multifocal brain lesions. II. Electroencephalographic characteristics: (i) generalized, though often asymmetrical and asynchronous, *interictal (electroencephalographic) epileptic discharges** of slow spike-and-wave complexes superimposed on a slow background activity and generally occurring with no activation procedures being necessary; the interictal EEG is practically never normal; (ii) bilateral and relatively synchronous and symmetrical *ictal (electroencephalographic) epileptic discharges** that are more or less specific for a given type of seizure (slow spikes-and-waves at about 2/sec during certain atypical absences and certain atonic seizures; *recruiting epileptic rhythm** during tonic seizures, certain atypical absences, and certain atonic seizures; polyspike-wave complexes during bilateral myoclonus and *epileptic drop attacks**; isolated slow spike-and-wave complexes during certain types of bilateral myoclonus). III. Other characteristics: (i) a poor response to standard antiepileptic medication (barbiturates, hydantoins) and no response to "anti-petit mal" drugs (succinimides, diones), although the benzodiazepines (diazepam, nitrazepam, and clonazepam) and corticosteroids sometimes give satisfactory results; a guarded prognosis; (ii) a pathogenesis that is still uncertain but very probably consists in a corticocentrencephalic or subcorticocentrencephalic mechanism (transmission of discharges by

"secondary bisynchrony") rather than a purely centrencephalic discharge mechanism (see *seizure, centrencephalic epileptic*).

Ling.: In the last analysis, secondary generalized epilepsy corresponds to what is sometimes termed *diffuse epilepsy of childhood** or *malignant epilepsy of childhood**. This comprises both nonspecific epileptogenic encephalopathies, the clearest forms of which are *West's syndrome** and the *Lennox-Gastaut syndrome**, and the specific epileptogenic encephalopathies, for example, the *Unverricht-Lundborg syndrome**. The proposed term "secondary" generalized epilepsy (from *secundarius*, second in order) although imperfect has the advantage of indicating the relatively recent nosological identification of these forms of epilepsy, the fact that their etiology is secondary to chronic encephalopathy, and the fact that they are characterized by a secondary bisynchronous discharge mechanism.

epilepsy, secondary sensory area. A form of *partial epilepsy** in which the seizures originate in the secondary sensory area on the superior slope of the lateral cerebral sulcus. They consist of various somatic sensations (heat, cold, dysaesthesia) that affect both sides of the body more or less symmetrically (*generalized somatic epileptic sensation**) and may even occur predominantly ipsilateral to the hemisphere affected by the epileptic discharge. Features characteristic of the seizures of *insular epilepsy** (abdominal sensations, vomiting, etc.) may also be present when the epileptic discharge extends from the secondary sensory area to the adjacent peri-insular region.

epilepsy, senile. Epilepsy occurring in an old person. At present, there are no symptomatological, etiological, or prognostic grounds for considering this type of epilepsy as a separate entity. Syn.: *epilepsia tarda; old age epilepsy.*

epilepsy, sight-sensitive. Syn. for *visual reflex epilepsy.*

epilepsy, singing. An obsolete term for *automatic epileptic seizures** in which the verbal automatisms consist of singing. See *aura canora.* Syn.: *epilepsia canora.*

epilepsy, somatosensory reflex. A type of *reflex epilepsy** of very doubtful existence. See *seizure, somatosensory reflex epileptic.*

epilepsy, sonosensory. Syn. for *auditory reflex epilepsy.*

epilepsy, spinal. A term applied to convulsions that are caused by an excessive neuronal discharge of the spinal cord and that, properly speaking, cannot be classed as epileptic.

Ling.: This term is incorrect because epilepsy, by definition, is of cerebral origin. See *seizure, epileptic.*

epilepsy, startle. A form of *reflex epilepsy** in which the seizures are caused by a brief, intense, and, above all, unexpected sensory stimulus generating surprise and a startle reaction. The stimuli responsible for these seizures are almost always (*a*) auditory (door slamming, automobile horn, telephone ringing, etc. —see *seizure, auditory reflex epileptic*); (*b*) exteroceptive (unexpected tap anywhere on the body, especially on the forehead, the top of the head, and shoulders—see *seizure, somatosensory reflex epileptic; epilepsy, tap*); or (*c*) proprioceptive (a jostle, stumble, or a sudden violent movement—see *seizure, movement epileptic*). The seizures thus induced usually take the form of a tonic seizure with desynchronization of the electroencephalogram or, in exceptional cases, massive myoclonus with spike-and-wave or polyspike-wave discharges. In patients with hemiplegia or hemiparesis, tonic seizures brought about by a noise or movement often occur solely or predominantly on the paralysed side, taking the form of unilateral tonic seizures.

epilepsy, striate. An incorrect and obsolete term formerly used for epilepsy in which the seizures were assumed to originate in the nuclei of the corpus striatum. See *epilepsy, subcortical.*

epilepsy, stump. An incorrect term perpetuating the serious error of ascribing a reflex epileptic nature to: (1) *clonus** of an amputation stump, a rather frequent manifestation with a proven spinal mechanism, i.e., having nothing in common with epilepsy; (2) psychic *seizures** (hysterical attacks) sometimes triggered in an amputee by the occurrence of clonus.

epilepsy, subcortical. 1. Incorrect syn. for *centrencephalic epilepsy.* 2. An incorrect and obsolete term formerly used for *partial epilepsy** in which the seizures, generally characterized by versive or autonomic phenomena, were assumed to originate below the cortex, in the corpus striatum (*striate epilepsy*),

the thalamus (*thalamic epilepsy*), the subthalamus (*subthalamic epilepsy*), the hypothalamus (*hypothalamic epilepsy*), or the structures adjoining the third ventricle (*paraventricular epilepsy*).

Ling.: It is likely and perhaps even certain that characteristic clinical manifestations accompany epileptic discharges originating in the aforementioned structures. Unfortunately, current knowledge in this area has not yet permitted identification of these clinical phenomena. Continuing progress in stereoencephalography will probably make it possible within a few years to redefine "subcortical epilepsy" as a distinct entity along with its different varieties. See *seizure, partial epileptic ; epilepsy, amygdaloid.*

epilepsy, subthalamic. An incorrect and obsolete term for epilepsy in which the seizures were presumed to originate in the subthalamus. See *epilepsy, subcortical.*

epilepsy, superior temporal (lobe). A type of *temporal lobe epilepsy** in which the neuronal discharge or the lesion producing the seizures is located in the superior part of the temporal cortex. See *seizure, auditory elementary epileptic; seizure, auditory hallucinatory epileptic; seizure, auditory illusional epileptic.*

epilepsy, supplementary motor area. A type of *partial epilepsy** in which the neuronal discharge or the lesion causing the seizures is located in the cortex of the supplementary motor area of the mesial surface of the hemisphere. The seizures are often very complex and consist mainly of contraversion of the eyes and head, accompanied by flexion, abduction, and elevation of the contralateral arm, and, sometimes, extension of the ipsilateral arm and leg. These manifestations are often associated with rhythmic movements of the extremities and with *iterative epileptic vocalization* (see *seizure, vocal epileptic*) or *epileptic palilalia* (see *seizure, palilalic epileptic*). See *seizure, versive epileptic.*

epilepsy, supplementary sensory area. A form of *partial epilepsy** in which the seizures originate in the supplementary sensory area on the mesial face of the hemisphere. They are usually characterized by *general somatic epileptic sensations** that in some cases are referred more specifically to the thoracic or abdominal wall or even to the underlying viscera. Features of *supplementary motor area epilepsy** are often associated.

epilepsy, sympathetic. Incorrect syn. for *autonomic epilepsy.*

epilepsy, symptomatic. Epilepsy in which the seizures result from a well defined pathological condition, of which they are a symptom. All *metabolic epilepsies** and especially all *organic epilepsies** are symptomatic epilepsies. See *epilepsy, acquired.* Syn.: *secondary epilepsy.*

epilepsy, tap. A very rare type of *reflex epilepsy** characterized mainly or exclusively by *somatosensory reflex epileptic seizures** triggered by unexpected contact. These take the form of *generalized epileptic seizures** of such brief duration that it is not always possible to distinguish whether they consist of *bilateral massive myoclonus**, *atonic epileptic seizures**, or *myoclono-atonic epileptic seizures**. Such seizures, which are most easily provoked by taps on the top of the head or the shoulders, are probably due not so much to the sensory stimulus as to the startle reaction it produces (see *epilepsy, startle*). In even rarer cases, which are still unconfirmed, stimulation of a very small skin area is reported to provoke myoclonus of the subjacent muscles; a different mechanism would of course have to be envisaged for these. Syn.: *contact epilepsy.*

epilepsy, television. A form of *visual reflex epilepsy** in which the seizures occur regularly in light-sensitive subjects whenever they look too closely at a television screen in partial darkness. To be excluded from this concept are epileptic seizures occurring accidentally in front of a television set in a person having frequent *recurrent epileptic seizures**, and such emotional syncopes as may be caused by the scenes appearing on the screen. The diagnosis is facilitated by checking the light-sensitivity of the subject by means of electroencephalography during intermittent photic stimulation.

epilepsy, temporal. Syn. for *temporal lobe epilepsy.*

epilepsy, temporal lobe. *Partial epilepsy** in which the neuronal discharge or the lesion causing the seizures affects all or part of the temporal lobe. This type of epilepsy includes seizures with elementary sensory (auditory, olfactory, or gustatory) or motor (versive or aphasic) symptoms, as well as those with psychic (*psychic epileptic seizure**), psychosensory (*illusional epileptic seizure**, *hallucinatory epileptic*

*seizure**), or psychomotor (*automatic epileptic seizure**) symptoms. Syn.: *temporal epilepsy; psychomotor epilepsy* (incorrect).

epilepsy, temporal pole. Syn. for *anterior temporal (lobe) epilepsy.*

epilepsy, thalamic. An incorrect and obsolete term formerly used for epilepsy in which the seizures were presumed to originate in the thalamus. See *epilepsy, subcortical.*

epilepsy, traumatic. Syn. for *post-traumatic epilepsy.*

epilepsy, true. Syn. for *essential epilepsy.* See *epilepsy, primary generalized.*

epilepsy, uncinate. A type of *temporal lobe epilepsy** in which the neuronal discharge or the lesion causing the seizures is located in the anteromesial part of the temporal lobe, particularly in the uncus of the gyrus hippocampi. These seizures usually, but not necessarily, consist of elementary or complex (illusional or hallucinatory) olfactory symptoms, which may be isolated or combined with other symptoms (particularly impairment of consciousness associated with a *dreamy state**). See *seizure, olfactory elementary epileptic; seizure, olfactory hallucinatory epileptic; seizure, olfactory illusional epileptic; illusions, epileptic dreamy.*

epilepsy, unilateral. A term sometimes used to describe the epilepsy of persons who present *unilateral epileptic seizures** either predominantly or exclusively. Syn.: *asymmetrical epilepsy.*

epilepsy, uraemic. Syn. for *uraemic eclampsia.*

epilepsy, vegetative. Syn. for *autonomic epilepsy.*

epilepsy, ventricular. An incorrect and obsolete term postulating a ventricular origin for certain epileptic seizures, particularly dilatation of the third ventricle by cerebrospinal fluid.

epilepsy, verminous. An obsolete and incorrect term perpetuating the old but unfortunately tenacious error of attributing certain epilepsies of childhood to the presence of intestinal worms. See *epilepsy, abdominal; epilepsy, reflex.*

epilepsy, visceral. Syn. for *autonomic reflex epilepsy.*

epilepsy, visual exploration. A rare type of *reflex epilepsy** characterized mainly or exclusively by *visual exploration epileptic seizures**. Depending on the mechanism by which the visual exploration triggers the seizures, an "extrinsic" or "sensory" variety and an "intrinsic" or "perceptive" variety can be distinguished. When the explored object precipitating the seizures consists of letters or words, the epilepsy is called *reading epilepsy**. Syn.: *gaze epilepsy.*

epilepsy, visual reflex. A type of epilepsy in which all or most of the seizures are triggered by visual sensory stimuli (*visual reflex epileptic seizures**). This is by far the most frequent form of *reflex epilepsy** and perhaps the only one that deserves the name. However, the concept of reflex epilepsy should not be extended excessively. It should not include the many generalized epilepsies of various types occurring in persons in whom *epileptic electroencephalographic paroxysms** or even epileptic seizures can be induced in the laboratory by intermittent photic stimulation. Visual reflex epilepsies may be classified according to the type of stimulation usually responsible for the seizure (see *seizure, visual reflex epileptic; epilepsy, reading; epilepsy, television; epilepsy, visual exploration*). Syn.: *light-sensitive epilepsy; photogenic epilepsy; photosensitive epilepsy; sight-sensitive epilepsy.*

Ling.: Of all the above-mentioned terms, "photogenic epilepsy" is the one most used , although in everyday language the term "photogenic" may have different connotations (producing light; produced by light; or, in photography, enhancing the effect).

epilepsy, waking. Epilepsy in which the seizures occur soon after awakening. All types of epilepsy may have this characteristic, but such a pattern of occurrence is most commonly seen in *primary generalized epilepsy**, where tonic-clonic seizures are often preceded by *bilateral massive epileptic myoclonus** of long duration. See *epilepsy, morning; epilepsy, morpheic.*

epileptic. 1. (Adj.) Referring to epilepsy. Used in particular for any clinical (subjective or objective) or EEG phenomenon associated with an *epileptic discharge**. 2. (Adj. and noun) Applied to any person suffering from *epilepsy** proper. Syn.: *comitial* (obsolete).

Ling.: The term "epileptic" must never be used to describe a subject who has had one or several *occasional epileptic seizures**.

epileptiform. Resembling epilepsy, or having some of its characteristics. See *seizure, epileptiform.* Syn.: *epileptoid.*

Ling.: This term must never be used to describe the symptoms of a seizure.

epileptogenic. Liable to induce an *epileptic seizure** or *epilepsy**, with or without convulsions. In pathology, diverse conditions, such as a brain tumour or scar, and metabolic disturbances, are considered to be epileptogenic. These conditions are especially epileptogenic in subjects with a more marked *epileptic predisposition**. Experimentally, all *convulsants** (pentetrazol, bemegride, camphor, etc.) are epileptogenic. Electrical stimulation of the brain, cooling, or simple mechanical stimulation of the cortex are also epileptogenic when the stimulus is sufficiently intense. Even physiological sensory stimulation may be epileptogenic in subjects naturally or artificially predisposed to convulsions. Thus, from the experimental point of view, a great variety of factors can be epileptogenic. See *focus, epileptogenic.*

epileptoid. Syn. for *epileptiform.*

epileptoidia. An incorrect and obsolete term formerly used to denote a group of constitutional psychological traits presumed to be indicative of epilepsy. Minkowska considered epileptoidia principally as a fluctuation between two extremes: mental viscosity (*glischroid behaviour**) and explosive behaviour. Such a concept is open to criticism in that the psychological traits of epileptoidia are much less frequent in epileptics than has been claimed, whereas they occur quite often in non-epileptic subjects with organic brain lesions. It would thus be unwise, and even dangerous, to use the concept of epileptoidia as the basis or even as a guide in the diagnosis of epilepsy. See *constitution, epileptic; personality, epileptic.* Syn.: *glischroid behaviour.*

epileptologist. A physician who specializes in the study of epilepsy.

epileptology. The branch of medicine concerned with epilepsy.

epiloia. A term proposed by Sherlock (1911) as a synonym for *Bourneville's tuberous sclerosis** to emphasize that *epileptic seizures** occur in approximately 80 % of patients suffering from this particular type of phacomatosis.

Ling.: This term is now practically obsolete.

equivalent, epileptic. A term frequently used in the past to denote clinical phenomena that were believed to be equivalent to an epileptic seizure, although their features differed from those of *grand mal**, which was then considered to be the sole form of epilepsy. Such a view is no longer tenable as: (1) the term "epileptic" is now reserved for the clinical manifestations of a self-sustaining, hypersynchronous neuronal discharge; (2) a wide variety of epileptic seizures are now known whose clinical features are often very different from the rare, classical form of grand mal. According to modern concepts, a seizure must be classed as either epileptic or non-epileptic; when this distinction cannot be made, the attack must be considered as a "seizure of undetermined nature" and must not be incorrectly labelled as an "epileptic equivalent". See *epilepsy, larval.*

F

fall, epileptic. Incorrect syn. for *epileptic drop attack.*

falling-sickness. Obsolete syn. for *grand mal* (1).

feelings of déjà-vu, déjà-entendu, déjà-vécu. See *illusions, epileptic, of déjà-vu, déjà-entendu, déjà-vécu.*

feelings of jamais-vu, jamais-entendu, jamais-vécu. See *illusions, epileptic, of jamais-vu, jamais-entendu, jamais-vécu.*

fit. Syn. for *seizure.*

fit, cerebellar. Syn. for *cerebellar seizure.*

fit, complete epileptic. Syn. for *grand mal seizure* (1).

fit, highest level. An obsolete term, not recommended, formerly used to designate *seizures** originating within the most highly developed centres of the nervous system. Syn.: *highest level seizure.*

Expl.: This term was first used by Hughlings Jackson, who also distinguished *second level fits* and *lowest level fits*. The lowest or first level consisted of the spinal cord, medulla, and pons. Examples of lowest level fits were "those respiratory fits produced by rapid bleeding, by ligature of the great arteries of the neck, and by sudden stoppage of respiration." The middle or second level was "composed of centres of the Rolandic region and possibly of the ganglia of the corpus striatum also." Jackson's example of a middle level fit was what he called *unilateral epileptiform seizures** to distinguish them from the bilateral epileptic seizures of the highest level. These attacks are now called *Jacksonian epileptic seizures**. The highest or third level consisted of the anterior portion of the frontal lobes; according to Jackson, the seizures produced at this level were *epileptic seizures** proper, that is, the seizures of grand mal that characterized what was then known as *essential epilepsy**. More recently, Wilder Penfield has attempted to revive the term *highest level seizure*. He applies it, however, to seizures originating in the "centrencephalon", not in the frontal lobes. See *seizure, centrencephalic epileptic*.

fit, lowest level. An obsolete term describing an *epileptic seizure** originating in the lowest part of the brain, i.e., in areas most directly related to the spinal cord. See *fit, highest level* (Expl.); *fit, trunk*. Syn.: *lowest level seizure; trunk fit; pontobulbar fit*.

fit, middle level. A *partial epileptic seizure**, especially one arising in the Rolandic area of the cerebral cortex. See *fit, highest level* (Expl.). Syn.: *middle level seizure; second level fit*.

fit, myoclonic. Syn. for *myoclonic epileptic seizure* (2).

fit, pontobulbar. Syn. for *trunk fit*.

fit, rum. See *epilepsy, alcohol-induced*.

fit, second level. Syn. for *middle level fit; middle level seizure*.

fit, tetanoid. Obsolete syn. for *decerebrate seizure*.

fit, trunk. An obsolete term used by Hughlings Jackson to describe a type of epileptic seizure originating in the lowest part of the brain and characterized by a bilateral and symmetrical tonic spasm of the trunk, neck, and face, which may extend to the extremities. Trunk fits are actually *tonic epileptic seizures**, particularly axial or axorhizomelic. See *epilepsy, pontobulbar*. Syn. (also used by Jackson): *lowest level fit; pontobulbar fit*.

focus, epileptic. 1. The entire group of neurons involved in a *focal epileptic discharge**. If the discharge spreads and perhaps becomes generalized, then the term epileptic focus refers to those neurons where the discharge originated. 2. A term used in electroencephalography to describe interictal focal epileptic discharges of spikes in an epileptic. Syn.: *epileptogenic focus* (incorrect).

focus, epileptogenic. 1. A localized brain lesion (scar tissue, tumour, etc.) around which hyperexcitable neurons are liable to display *focal epileptic discharges**, in which case they constitute one or more *epileptic foci**. 2. Incorrect syn. for *epileptic focus*.

forced thought, epileptic. See *seizure, ideational epileptic*.

fugue, epileptic. A state of *ambulatory* and *gestural automatism**, more or less eupractic in nature and of long duration (lasting several hours or, rarely, several days), occurring during a postictal confusional state or accompanying non-convulsive status epilepticus of the generalized (*absence status**) or partial (*psychomotor status epilepticus**) type. Epileptic fugues must be distinguished from *procursive epileptic seizures**. Epileptic fugues are extremely rare, and most cases described as such were actually fugues of another type occurring in epileptics or sometimes even in non-epileptic subjects.

furor, epileptic. A state of fury sometimes leading to unforeseeable brutal acts, either self-destructive (suicide, self-mutilation, etc.) or, more commonly, aggressive to others (rape, murder, etc.), which may occur in an epileptic under any one of the following three circumstances: (1) exceptionally, during a partial seizure (in most cases, of temporal lobe origin) as a brief ictal automatism (see *automatism, epileptic*); (2) more often, during a state of postictal *epileptic confusion**; (3) occasionally, during the intervals between epileptic seizures, in which case the furor is a purely psychiatric phenomenon unrelated to

epilepsy proper. See *grand mal, intellectual.* Syn.: *furor epilepticus ; raptus epilepticus.*

Expl.: One cannot overemphasize the rarity of epileptic furor, which is still invoked excessively in attempts to minimize the responsibility of known criminals, who are systematically subjected to electroencephalography.

furor epilepticus. Syn. for *epileptic furor.*

G

gelolepsy. An obsolete term describing *partial epilepsy** (usually of temporal lobe origin) in which *affective epileptic seizures** take the form of an unmotivated *laughing attack** accompanied by an equally brief impairment of consciousness and occasionally by other ictal manifestations. Syn.: *gelastic epilepsy.*

globus hysterious. See *aura, hysteroid* (Ling.).

grand mal. 1. Formerly, any type of epilepsy with *major epileptic seizures**, or any major epileptic seizure (as opposed to *petit mal**). Syn.: *comitial disease; falling-sickness; haut mal; morbus comitialis; morbus sacer; sacred disease; St John's disease; St Valentine's disease.* 2. Nowadays, syn. for *tonic-clonic epileptic seizure.* 3. Syn. for *grand mal epilepsy.*

Expl.: While it is admissible, and sanctioned by usage, to speak of a person as suffering from *petit mal**, the same does not apply to grand mal. The *typical absences** of petit mal are always an expression of *primary generalized epilepsy** or even of pure *hereditary epilepsy**, and treatment does not vary from one patient to another; this gives adequate etiological, prognostic, and therapeutic significance to the entity of petit mal epilepsy. Grand mal seizures, however, when generalized from the onset may occur within the context of primary generalized epilepsy or result from a severe diffuse cerebral lesion, and when secondarily generalized they may reflect a focal brain lesion, e.g., a brain tumour (see *seizure, generalized epileptic*). This being so, it would be very dangerous to regard "grand mal epilepsy" as an adequate diagnosis and to speak of the subject as suffering from "grand mal". See *petit mal* (Expl.).

grand mal, intellectual. An incorrect and obsolete term (uncommon in English) that was used by Falret to describe attacks of delirium with violent agitation or impulsive behaviour (*agitated epileptic confusion*) occurring in epileptic subjects during or after one or more epileptic seizures (*postictal epileptic confusion*) or without apparent chronological relationship to the seizures. See *furor, epileptic ; confusion, epileptic.* Syn.: *mental convulsions.*

H

hallucination, ecmnesic. See *seizure, ecmnesic hallucinatory epileptic; hallucination, epileptic.*

hallucination, epileptic. Complex sensory manifestations or perceptions occurring in the absence of any corresponding external stimuli and constituting the essential and occasionally the sole clinical symptom (sometimes initial) of *partial epileptic seizures** caused by neuronal discharge at the periphery of the temporal lobe in the vicinity of a specific sensory area. Epileptic hallucinations are precise to the smallest detail and are always referable to a previous experience of the patient (*ecmnesic hallucinations*). This differentiates them from the hallucinations found in psychiatric illnesses. According to the sensory system involved, the following epileptic hallucinations may be distinguished: auditory, autonomic, gustatory, olfactory, somatosensory, and visual; various complex epileptic hallucinations combine several of these modalities. Epileptic hallucinations must be distinguished from *epileptic illusions** and from *sensory elementary epileptic seizures**. See *seizure, ecmnesic hallucinatory epileptic.*

hallucination, epileptic mirror. Syn. for *epileptic autoscopy.*

hemiplegia, epileptic. 1. Transient or permanent hemiplegia following an *epileptic seizure** or *status epilepticus**. See *syndrome, hemiconvulsion-hemiplegia; paralysis, postictal epileptic.* 2. A term that

is incorrect when applied to transient hemiplegia occurring exceptionally as the major symptom of a unilateral atonic epileptic seizure (see *seizure, unilateral epileptic*).

hypnolepsy. Syn. for *narcoleptic epilepsy.*

hypsarhythmia. A term used in clinical electroencephalography to denote a highly characteristic tracing of diffuse slow spike-and-wave complexes of very high amplitude that are non-reactive and are repeated at only brief intervals on background activity in the theta and delta range, also of high amplitude. Such an EEG is considered specific for *West's syndrome**. Syn.: *major dysrhythmia.*

Ling.: This term must never be used in isolation as a synonym for the condition of which it is characteristic, because, medically speaking, an infant cannot be said to be suffering from hypsarhythmia any more than from generalized spike-and-wave complexes or from a temporal lobe focus of spikes.

hystero-epilepsy. An incorrect term, definitely to be avoided, that was formerly used to designate three different situations: (1) the association of *epileptic seizures** and hysterical attacks in a single patient, a very common situation, considering the circumstances under which many epileptic patients must live, and one that does not justify consideration as a separate clinical entity; (2) epileptic seizures purported to be induced or stopped by suggestion; such seizures are obviously hysterical attacks and wrongly classed as epileptic; (3) *hysteriform epileptic seizures**. See *epilepsy, intermediary.* Syn.: *epilepsia-hysteria; para-epilepsy.*

I

ictal. Relating to or occurring during a seizure. See *manifestations, ictal epileptic.* Syn.: *seizure* (when used adjectivally). Ant.: *interictal.*

ictus ridendi. Syn. for *laughing attack.*

idea, parasitic. See *seizure, ideational epileptic.*

idiocy, epileptic. An incorrect term formerly used to designate the arrest of intellectual development seen in certain epileptics before puberty. The retardation was believed to result from repetition of the seizures, although it is probably caused by lesions secondary to *status epilepticus** in the child or, much more frequently, by an underlying encephalopathy that is itself responsible for both the seizures and the arrest of intellectual development. See *dementia, epileptic* (Expl.).

illusions, agnosic. See *illusion, epileptic.*

illusions, dysmetropsic. See *seizure, visual illusional epileptic.*

illusions, dysmorphopsic. See *seizure, visual illusional epileptic.*

illusion, epileptic. An alteration of perception occurring as the essential feature of certain *partial epileptic seizures** resulting from discharge in part of the temporal cortex adjacent to a specific sensory area (see *seizure, illusional epileptic*); it is frequently the initial and sometimes the only clinical manifestation. Depending on the area affected by the discharge, the following types of epileptic illusion may be distinguished: (1) *perceptive illusions,* during which an object is perceived in an altered fashion; these may be classified according to the sensory system involved as auditory, gustatory, olfactory, somatosensory, visual, and vertiginous epileptic illusions (see *seizure, auditory illusional epileptic; seizure, gustatory illusional epileptic,* etc.; and *seizure, vertiginous epileptic*); (2) *non-perceptive* or *agnosic illusions,* during which an object is perceived normally but is poorly understood or recognized, resulting in illusions of remembrance (*epileptic illusions of déjà-vu, déjà-entendu, déjà-vécu** or, inversely, *epileptic illusions of jamais-vu, jamais-entendu, jamais-vécu**). The illusions of incoherence and of unreality that form the basis of *epileptic dreamy illusions** belong to the same group.

Ling.: Some authors include the non-perceptive illusions in the group of dysmnesic manifestations of epilepsy (see *seizure, dysmnesic epileptic*).

illusions, epileptic, of déjà-vu, déjà-entendu, déjà-vécu. *Ictal epileptic manifestations**, resulting from discharge in the temporal cortex, during which previously unknown objects and situations even though clearly perceived appear familiar. They may

be limited to the feeling of having already seen an object or situation (déjà-vu), having already heard something (déjà-entendu), or having lived though a situation (déjà-vécu). They belong to the group of non-perceptive *epileptic illusions** of remembrance and imply impairment of recall. See *illusions, epileptic, of jamais-vu, jamais-entendu, jamais-vécu.*

illusions, epileptic dreamy. See *state, dreamy.*

illusions, epileptic, of jamais-vu, jamais-entendu, jamais-vécu. *Ictal epileptic manifestations**, resulting from discharge in the temporal cortex, during which the subject's surroundings even when familiar are no longer recognized, although they are clearly perceived by the subject. In a more attenuated form, they produce the illusions of incoherence and of unreality that form the basis of *epileptic dreamy illusions**. See *illusions, epileptic, of déjà-vu, déjà-entendu, déjà-vécu.*

illusions, kinaesthetic. See *seizure, somatosensory illusional epileptic.*

illusions, non-perceptive. See *illusion, epileptic.*

illusions, perceptive. See *illusion, epileptic.*

illusions, plagiopsic. See *seizure, visual illusional epileptic.*

illusions, polyoptic. See *seizure, visual illusional epileptic.*

illusions, stataesthetic. See *seizure, somatosensory illusional epileptic.*

insanity, epileptic. Syn. for *epileptic dementia.*

interictal. Occurring in the interval between two epileptic seizures. See *manifestations, interictal epileptic.* Syn.: *interseizure* (when used adjectivally).

interseizure. Used adjectivally as a syn. for *interictal.*

J

Jacksonian. An adjective describing any epileptic manifestation of the somatomotor or somatosensory type that spreads along one side of the body in a *Jacksonian march** and results from an epileptic discharge of focal onset spreading to the contralateral pre-Rolandic or post-Rolandic cortex. Syn.: *Bravais-Jacksonian.*

Jacksonism. Syn. for *Jacksonian march.*

jamais-vu, jamais-entendu, jamais-vécu. See *illusions, epileptic, of jamais-vu, jamais-entendu, jamais-vécu.*

jerk, epileptic. Obsolete syn. for *bilateral massive epileptic myoclonus.*

jerk, myoclonic. Syn. for *bilateral massive epileptic myoclonus*, usually employed in the English language literature.

Ling.: Although retained by the Commission on Terminology of the International League against Epilepsy, this term is undesirable because it is tautological (*clonos* meaning "jerk").

L

lapse, epileptic. Incorrect and obsolete syn. for *absence.*

laughter, explosive. Syn. for *laughing attack.*

M

manifestations, epileptic seizure. Syn. for *ictal epileptic manifestations.*

manifestations, ictal epileptic. Clinical (subjective or objective) or EEG manifestations that occur during an *epileptic discharge** and are the expression of an *epileptic seizure**. Syn.: *epileptic seizure manifestations* (or *phenomena*); *ictal epileptic phenomena.*

manifestations, interictal epileptic. Clinical (subjective or objective) or EEG manifestations that occur in

epileptics during the intervals between seizures but that are nevertheless related to the epileptic process itself. Generalized or focal *interictal (electroencephalographic) epileptic discharges** may thus occur between seizures and may greatly facilitate the diagnosis of epilepsy. Clinical interictal manifestations, on the other hand, are much less precise, especially since the so-called *epileptic constitution**, contrary to the opinion of earlier authors, is no longer considered to belong to epilepsy proper. Nevertheless, such manifestations do exist, for example, localized *fragmentary myoclonus** occurring in the interval between *somatomotor epileptic seizures** in certain cases of *epilepsia partialis continua**, or the localized paraesthesiae seen in the interval between *somatosensory epileptic seizures** in some patients. Syn.: *interictal epileptic phenomena; interseizure epileptic manifestations* (or *phenomena*).

manifestations, interseizure epileptic. Syn. for *interictal epileptic manifestations.*

manifestations, postictal epileptic. Clinical (subjective or objective) or EEG manifestations occurring in epileptics immediately following a seizure. Electroencephalographically, they usually consist of focal or diffuse slow waves reflecting a postictal dysfunction of the neurons in part or all of the brain. Clinically, they take the form of a functional insufficiency resulting from the neuronal dysfunction (see *confusion, epileptic; automatism, epileptic; paralysis, postictal epileptic*). Syn.: *postictal epileptic phenomena; postseizure epileptic manifestations* (or *phenomena*).

manifestations, postseizure epileptic. Syn. for *postictal epileptic manifestations.*

manifestations, preictal epileptic. Clinical (subjective or objective) or EEG manifestations occurring in epileptic patients a variable time before their seizures. Such manifestations must be carefully distinguished from those that express the actual onset of the seizure and that are sometimes referred to as the *aura**. Electroencephalographically, they are usually generalized or focal *interictal (electroencephalographic) epileptic discharges** that occur with increasing frequency (see *discharge, subclinical (electroencephalographic) epileptic*). Clinically, preictal epileptic manifestations are actually an exacerbation of clinical *interictal epileptic manifestations** and are usually called *epileptic prodromes**. Syn.: *preictal epileptic phenomena; preseizure epileptic manifestations* (or *phenomena*).

manifestations, preseizure epileptic. Syn. for *preictal epileptic manifestations.*

march, Jacksonian. The manner in which convulsions or paraesthesiae spread during *somatomotor epileptic seizures** or *somatosensory elementary epileptic seizures**. The march proceeds from one muscular or cutaneous area to the next approximately following the order of somatotopic representation in the cortex, where the discharge spreads correspondingly from the initial focus at the same speed. Syn.: *Jacksonism.*

migraine, epileptic. An incorrect and obsolete term for: (1) migraine-like headaches preceding, accompanying, or following an epileptic seizure; (2) *epileptic seizures** with certain symptoms suggestive of migraine. It is certainly true that visual seizures do exist, mainly in children, that are confirmed to be epileptic by electroencephalography or some other method, that are accompanied or followed by headaches, and that are suggestive of ophthalmic migraine; such seizures, which often pose awkward diagnostic problems, of course have no connexion with migraine and should not be described as "epileptic migraine". See *epilepsy, migrainous.*

migralepsy. Incorrect syn. for *migrainous epilepsy.*

morbus comitialis. Syn. for *grand mal* (1).

morbus convivialis. See *epilepsy, alcohol-induced.*

morbus sacer. Syn. for *grand mal* (1).

movement, clonic. A brief convulsion, not necessarily epileptic, producing an equally brief segmental or generalized displacement of the body. See *clonus; myoclonus.*

musicolepsy. Obsolete syn. for *musicogenic epilepsy.*

myoclonic. See *movement, clonic; myoclonus.*

myoclono-epilepsy. Obsolete syn. for *myoclonic epilepsy.*

myoclono-epilepsy, intermittent. An incorrect and obsolete term that was proposed by Rabot to describe the association of *tonic-clonic epileptic seizures**

and *massive bilateral epileptic myoclonus** in subjects with *primary generalized epilepsy**. The myoclonus, which often precedes the tonic-clonic seizures, is then erroneously considered as a *myoclonic aura**.

myoclono-epilepsy, progressive familial, of Unverricht-Lundborg. The original term for *Unverricht-Lundborg syndrome**.

myoclonus. A brief and involuntary contraction of one or several muscles, producing either no movement, when a small muscle acts upon a large body region, or some movement, when the converse is true. Myoclonus appears on the electromyogram as a distinctive type of potential, called "myoclonic", of 20–100 milliseconds' duration. These potentials are isolated or grouped in brief volleys and may be followed by muscle activity of the interferential type in the form of a tonic prolongation of the jerk. According to their topographical distribution, one can distinguish several types of myoclonus, which may sometimes be combined in the same person: (1) *fragmentary myoclonus** and *segmentary myoclonus**, which can present as either *localized** or *sporadic myoclonus** ; and (2) *bilateral massive myoclonus**. Myoclonus is caused by a lesion or a functional disturbance in any of the structures involved in motor function, from the motor cortex to the spinal motoneurons. It is therefore not necessarily epileptic in nature. See *movement, clonic; myoclonus, epileptic.*

myoclonus, action. *Fragmentary** and, in particular, *segmentary myoclonus** that is absent while the patient is in a state of complete muscular relaxation but that develops as soon as he engages in muscular activity, e.g., maintaining his posture (*posture myoclonus*) or an attitude (*attitude myoclonus*), or executing an automatic or, especially, a voluntary movement (*intention myoclonus*).

myoclonus, attitude. See *myoclonus, action.*

myoclonus, bilateral massive. *Myoclonus** simultaneously affecting the agonist and antagonist muscles (without reciprocal innervation) of several symmetrical segments (usually head, neck, and upper limbs) or of the whole body. Myoclonus of this type obviously results in violent movement, which usually occurs in flexion, owing to the predominance of the convulsion in the postural muscles. It is usually accompanied by an *epileptic electroencephalographic paroxysm**. See *myoclonus, bilateral massive epileptic.*

myoclonus, bilateral massive epileptic. *Bilateral massive myoclonus** that results from an *epileptic discharge** probably originating in the brain stem and that constitutes a *generalized convulsive epileptic seizure** of particularly brief duration. Its epileptic nature is confirmed in the majority of patients by the EEG, which shows a *generalized epileptic discharge** either of polyspikes or polyspike-and-wave complexes in the *petit mal myoclonus** of *primary generalized epilepsy**; or, much more rarely, of sharp waves or sharp and slow wave discharges in certain types of epileptogenic encephalopathy. Syn.: *epileptic jerk* (obsolete); *myoclonic jerk.*

myoclonus, epileptic. *Myoclonus** of cerebral origin resulting from an *epileptic discharge** and usually expressed on the EEG as a spike, a sharp wave, a polyspike, or a polyspike-wave. In generalized epilepsy the myoclonus is usually massive and bilateral; in partial epilepsy, however, it is localized—either fragmentary or segmentary. See *myoclonus; myoclonus, bilateral massive epileptic*; *myoclonus, localized epileptic.*

Ling.: When not otherwise qualified, the term "epileptic myoclonus" usually refers to *bilateral massive epileptic myoclonus,* which represents a well-defined type of *generalized epileptic seizure**; whereas the *localized epileptic myoclonus* characteristic of some partial epilepsies is usually only one manifestation within a more complex clinical picture (see, for example, *epilepsia partialis continua*).

myoclonus, familial progressive epileptic. Syn. for *Unverricht-Lundborg syndrome.*

myoclonus, fragmentary. *Myoclonus** that affects a small muscle, several small synergistic muscles simultaneously, or sometimes even a single fibre group of a large muscle. It either exerts no motor effect or causes only a slight and almost imperceptible movement of the part of the body involved (labial commissure, eyeball, soft palate, tongue, etc.) or even of a small segment into which the affected muscles are inserted (fingers, toes). In rare cases, fragmentary myoclonus is unilateral and localized to a part of one side of the body, in which case it may represent a local epileptic manifestation (see *myoclonus, localized epileptic*). However, it almost always affects the muscles of both sides of the body in an asynchronous and asymmetrical manner; in this case fragmentary myoclonus has no relationship to epilepsy, even when

observed in epileptics (see *myoclonus, sporadic*). Syn.: *parcellary myoclonus.*

myoclonus, infantile massive. A type of *infantile spasm** so brief (a fraction of a second long) that it resembles myoclonus.

myoclonus, intention. See *myoclonus, action.*

myoclonus, localized. *Fragmentary** and particularly *segmentary myoclonus** localized to a region of one side of the body.

myoclonus, localized epileptic. *Localized myoclonus** resulting from a *focal (electroencephalographic) epileptic discharge**. Its epileptic nature is often confirmed on the EEG by the simultaneous recording of a spike from the contralateral hemisphere, in view of which it may be regarded as an *ictal epileptic manifestation**.

myoclonus, parcellary. Syn. for *fragmentary myoclonus.*

myoclonus, petit mal. *Bilateral massive epileptic myoclonus** always accompanied on the EEG by a bilateral, synchronous, and symmetrical polyspike or polyspike-wave discharge. This form of myoclonus is observed almost exclusively in persons with *primary generalized epilepsy** who also have *tonic-clonic epileptic seizures** or *typical absences**. Syn.: *impulsive petit mal* (incorrect); *myoclonic petit mal.*

myoclonus, posture. See *myoclonus, action.*

myoclonus, segmentary. *Myoclonus** that simultaneously involves several muscles, agonist and occasionally antagonist (without reciprocal innervation), of one and the same segment, and that is accompanied by a clear-cut displacement of the segment involved (finger, hand, forearm, shoulder, upper limb, etc.). This type of myoclonus is often localized to a part of one side of the body, in which case it represents a local epileptic manifestation (see *myoclonus, localized epileptic*). In rare cases it is bilateral, asynchronous, and asymmetrical (see *myoclonus, sporadic.*).

myoclonus, sporadic. *Fragmentary myoclonus**, sometimes associated with *segmentary myoclonus**, asynchronously and asymmetrically involving the muscles of both sides of the body. This type of myoclonus does not signify that the subject has epilepsy, even when observed in epileptic persons who display *epileptic electroencephalographic paroxysms** of polyspike or polyspike-wave discharges, with which the myoclonus coincides only occasionally (e.g., *Unverricht-Lundborg syndrome** and certain forms of *Ramsay Hunt's syndrome**).

Ling.: The epithet "sporadic" (from *sporadikos,* dispersed, from *sporein,* to sow) has the advantage of clearly indicating the characteristic of dispersion in space and, by extension, in time, of this form of myoclonus.

myoclonus epilepsy. Obsolete syn. for *myoclonic epilepsy.*

N

night terror, epileptic. An incorrect term since, by definition, night terror is never epileptic. It is evident that, in rare cases, an epileptic may have a nocturnal seizure (usually of temporal lobe origin) characterized by automatisms of mimicry or gestural automatisms expressing terror. However, this must be called an "*affective epileptic seizure**" occurring during sleep", and the term "epileptic night terror" should never be used. Syn.: *pavor nocturnus epilepticus.*

nightmare, epileptic. An incorrect term since, by definition, a nightmare is never epileptic. Very rarely, an epileptic may of course have a nocturnal seizure (usually of temporal lobe origin) causing him to wake with a start suffering from anxiety and a feeling of oppression and paralysis, and sometimes leaving the recollection of a terrifying visual hallucination, which may be taken for a dream. Some authors have, moreover, shown that an actual nightmare or a terrifying dream may precipitate a seizure in patients with temporal lobe epilepsy. But such phenomena must be differentiated from a nightmare or a terrifying dream in the strict sense.

noises, stertorous respiratory. See *cry, epileptic.*

nystagmus, epileptic. Syn. for *oculoclonic epileptic seizure.*

O

oneirocritia. Obsolete syn. (uncommon in English) for *dreamy state.*

oneiroid epileptic state. Syn. for *dreamy state.*

oophoro-epilepsy. Incorrect and obsolete syn. (uncommon in English) for *ovarian epilepsy.*

orgasmolepsy. An obsolete term (uncommon in English) formerly used to describe: (1) a rare type of epilepsy in which the seizures occur during orgasm; (2) a rare type of epilepsy in which the seizures, caused by a discharge in the area of the paracentral lobule corresponding to the cortical distribution of the external genital organs, or, more often, in the temporal lobe or its vicinity, are expressed by an erotic sensation that may culminate in orgasm. See *seizure, autonomic hallucinatory epileptic.*

P

palilalia, epileptic. Syn. for *palilalic epileptic seizure.*

panoramic vision, epileptic. See *vision, panoramic epileptic.*

para-epilepsy. Syn. for *hystero-epilepsy.*

paralysis, ictal epileptic. Paralysis accompanying certain generalized, unilateral, or partial epileptic seizures. See *seizure, akinetic epileptic; seizure, somato-inhibitory epileptic; hemiplegia, epileptic.*

paralysis, postictal epileptic. 1. Transient paralysis immediately following certain convulsive epileptic seizures. The most frequent of these paralyses are the transient or fleeting hemiplegias that follow most *unilateral epileptic seizures**, especially the clonic ones. Postictal epileptic paralysis is probably a manifestation of temporary exhaustion of neurons that have just discharged, although some authors think that it may be due to a process of active inhibition. Syn.: *Todd's paralysis.* 2. Permanent paralysis, usually in the form of spastic hemiplegia, secondary to unilateral *status epilepticus**. Such hemiplegia reflects organic brain lesions acquired during status. See *syndrome, hemiconvulsion-hemiplegia.*

paralysis, Todd's. Syn. for *postictal epileptic paralysis* (1).

paroxysm, epileptic electroencephalographic. A wave or group of waves, constituting the EEG representation of an *epileptic discharge**, which appears and disappears suddenly and is characterized by a frequency, morphology, or amplitude that clearly differentiates it from the background activity of the EEG. The paroxysm generally takes the form of spike-like waves of high amplitude and brief duration, and of slower waves; together, these often constitute spike-and-wave complexes. Syn.: *electroencephalographic epileptic discharge.*

pavor nocturnus epilepticus. Syn. for *epileptic night terror.*

personality, epileptic. A term reflecting the erroneous view that epileptic subjects exhibit certain behavioural characteristics that are specific for epilepsy (*epileptic behaviour*). This concept is clearly inappropriate, in view of the variety of symptomatological and especially etiological forms of epilepsy. However, a number of behavioural and affective disorders of diverse origins may occur in individuals who suffer from epileptic seizures: (1) Epileptic seizures are frequently due to, or associated with, organic brain disease. Thus individuals with epilepsy secondary to a brain lesion may, like subjects who have similar brain injury but no epilepsy, show "organic" personality traits. It is the personality changes observed in epileptics with organic brain disease that have led previous authors to introduce the erroneous concept of *epileptic constitution**. (2) Epileptic discharges within the brain, particularly when they persist during the interictal phase, have been shown to disturb normal neuronal activity in the affected area of the brain. For this reason some authors consider that, in subjects who have seizures characterized by complex symptomatology and a local onset in the temporal or frontal lobe, the disturb-

ances of neuronal activity in these parts of the brain, which control higher nervous activity, are manifested also as interictal disturbances of behaviour. (3) The occurrence of epileptic seizures is often a source of severe psychic conflicts for the subject as well as for his family and associates. They frequently lead to feelings of anxiety, depression, frustration, and hostility. (4) Antiepileptic therapy, especially when excessive, may itself lead to personality disturbances. (5) Finally, it is possible that an *epileptic predisposition**, which is often hereditary and which plays a fundamental role in the etiology of certain forms of epilepsy, may be associated with particular personality traits. It is these traits, about which unfortunately little is yet known, that could be legitimately characterized as an *epileptic constitution.* The inconstancy and diversity of personality disturbances in epileptic subjects are such as to render meaningless the concept of an "epileptic personality". Hence this and similar terms should be rejected. See *constitution, epileptic; syndrome, Rorschach's epileptic.*

Ling.: This term corresponds approximately to *epileptic behaviour**, *epileptic constitution**, *enechetic constitution**, *ictaffinic constitution**, *ixophrenic constitution**, *ixothymic constitution**, and *epileptoidia**.

petit. A misapplied gallicism used exclusively by certain American authors to refer to *petit mal absence*, i.e., *typical absence* (see *absence,* Expl.).

Ling.: This term is not recommended.

petit mal. 1. Formerly, any epilepsy with *minor epileptic seizures**, or any minor epileptic seizure (as opposed to *grand mal**). 2. Nowadays, syn. for *petit mal seizure.* 3. Syn. for *petit mal epilepsy.*

Expl.: The history of the term "petit mal" is worth noting: (*a*) Originally, this term referred to any minor form of epileptic seizure. It is still used in this sense by some authors (see *petit mal, adversive ; petit mal, impulsive; petit mal, oral; petit mal, propulsive*). (*b*) In the early days of electroencephalography, the term was used exclusively for simple or complex absences accompanied on the EEG by a bilateral, synchronous, and symmetrical discharge of rhythmic 3/sec spike-and-wave complexes (which are now called *petit mal absences* or, preferably, *typical absences**). (*c*) Subsequently, and by unjustified extension, it came to designate all minor forms of epileptic seizure characterized on the EEG by more or less bilateral, synchronous, and symmetrical spike-and-wave discharges occurring during or between the seizures. This was the origin of the "petit mal triad" comprising *petit mal absences (typical absences), petit mal myoclonus**, and *epileptic drop attacks**, to which some authors added a fourth component, *petit mal variant absences* or *atypical absences**. (*d*) Nowadays, the term is used exclusively for *typical absences* and *petit mal myoclonus* (see *seizure, petit mal*). See *grand mal* (Expl.); *absence* (Expl.).

petit mal, adversive. An incorrect term used by some authors to describe *adversive epileptic seizures**.

petit mal, akinetic. Incorrect syn. for *epileptic drop attack.*

petit mal, atonic. Syn. for *atonic absence.*

petit mal, impulsive. An incorrect term used by some authors to describe *petit mal myoclonus**.

petit mal, intellectual. Incorrect and obsolete syn. for *epileptic confusion.*

petit mal, myoclonic. A term sometimes used to describe the extremely rare cases of *primary generalized epilepsy** characterized exclusively by *petit mal myoclonus**. Syn.: *impulsive petit mal* (incorrect).

petit mal, oral. An incorrect term used by some authors to describe *epileptic seizures**—either generalized (absences) or partial (usually of temporal lobe origin)—characterized by alimentary *epileptic automatisms** (chewing, swallowing). See *seizure, oropharyngeal epileptic.*

petit mal, propulsive. An incorrect term used by some authors to describe the *infantile spasms** in *West's syndrome**.

petit mal, pyknoleptic. Incorrect syn. for *pyknolepsy.*

phenomena, epileptic seizure. Syn. for *ictal epileptic manifestations.*

phenomena, ictal epileptic. Syn. for *ictal epileptic manifestations.*

phenomena, interictal epileptic. Syn. for *interictal epileptic manifestations.*

phenomena, interseizure epileptic. Syn. for *interictal epileptic manifestations.*

phenomena, postictal epileptic. Syn. for *postictal epileptic manifestations.*

phenomena, postseizure epileptic. Syn. for *postictal epileptic manifestations.*

phenomena, preictal epileptic. Syn. for *preictal epileptic manifestations.*

phenomena, preseizure epileptic. Syn. for *preictal epileptic manifestations.*

postictal. Occurring after a seizure. See *manifestations, postictal epileptic.* Syn.: *postseizure* (when used adjectivally). Ant.: *preictal.*

postseizure. Used adjectivally as a syn. for *postictal.*

predisposition, convulsive. A constitutional or acquired state predisposing the subject to convulsive *epileptic seizures generalized from the onset** (particularly *epileptic myoclonus** and *tonic-clonic epileptic seizures**) in the presence of any cerebral insult. It is well known that any individual, normal or abnormal, may have a generalized epileptic seizure of the convulsive type if subjected to a sufficiently severe cerebral insult. This indicates that there is a *constitutional* convulsive predisposition controlled by genetic factors and present, in varying degrees, in all individuals. Such a predisposition can be assumed to be transmitted multifactorially; in other words, it simply represents variation in a normal trait transmitted by several genes (an individual would thus be more or less predisposed to convulsions in the same way as he is more or less tall or more or less intelligent). In addition, toxic, metabolic, or endocrine factors and brain lesions may produce an *acquired* convulsive predisposition that reinforces the individual's constitutional convulsive predisposition. Such factors include, for example, alcoholism, chronic renal failure, the endocrine changes of puberty, and organic sequelae of some types of cranial injury. Convulsive predisposition, constitutional or acquired, is assessed experimentally by measuring the *convulsive threshold**. It must not be equated with *epileptic predisposition**; certain individuals have a particularly low convulsive threshold without any history of epileptic seizures. Syn.: *convulsive susceptibility.*

predisposition, epileptic. A constitutional or acquired state predisposing the subject to *epileptic seizures** of any type (generalized or partial, convulsive or non-convulsive) in the presence of a brain lesion. In a normal individual a cerebral insult of any intensity produces only convulsive generalized epileptic seizures (see *predisposition, convulsive*). It is assumed, by analogy, that every individual also has a *constitutional* epileptic predisposition controlled by genetic factors but reflecting a monomeric or unifactorial transmission (i.e., a dominant autosomal gene of irregular penetrance whose expression varies with age, being maximal in childhood). On the other hand, the same acquired factors (toxic, metabolic, endocrine, or cerebral lesions) that can aggravate the convulsive predisposition are liable to reinforce the constitutional epileptic predisposition. When the brain injury responsible for an epileptic seizure in a predisposed individual is transient, it will cause one or several *occasional epileptic seizures** (for example, convulsive or non-convulsive *febrile epileptic seizures**); when the injury is permanent (a continuing metabolic disturbance or a brain lesion), it will result in *epilepsy** proper. The constitutional epileptic predisposition is very marked in some families, where a greater percentage of occasional epileptic seizures will occur than in the normal population. Under such circumstances, depending on the factor rendered epileptogenic by the constitutional epileptic predisposition, various types of epileptic seizure will be observed in several members of the same family, e.g., different siblings will display febrile convulsions, generalized epilepsy, and partial epilepsy. Such cases of *familial epilepsy** cannot properly be classified as *hereditary epilepsy**. In other instances, however, the constitutional epileptic predisposition is so marked that it can induce, in several members of the same family, occasional generalized epileptic seizures or *primary generalized epilepsies** (in which *petit mal seizures** usually predominate), either spontaneously or in the presence of additional minor acquired factors. Only such cases can truly be considered as *hereditary epilepsy.* Epileptic predisposition is assessed experimentally by measuring the *epileptic threshold**. It must not be equated with *convulsive predisposition*; the convulsive threshold is often, but not necessarily, lowered in epileptics.

pre-epileptic. See *condition, pre-epileptic.*

preictal. Occurring before a seizure. See *manifestations, preictal epileptic; prodrome, epileptic.* Syn.: *preseizure* (when used adjectivally). Ant.: *postictal.*

preseizure. Used adjectivally as a syn. for *preictal.*

prodrome, epileptic. Manifestations preceding a seizure in an epileptic by several hours or days: often, a disturbance of mood or behaviour; less frequently, such subjective symptoms as headache; or, rarely, other phenomena. Epileptic prodromes usually reflect a preictal increase in excitability of an *epileptogenic focus** or of the entire brain. They must therefore be carefully distinguished from *auras**, which represent the onset of a seizure.

pseudo-absence, temporal lobe. Term preferred by some authors to *temporal lobe absence**.

psychosis, acute epileptic. A term (not recommended) describing the acute psychotic manifestations usually lasting from several days to a few weeks that are liable to occur in an epileptic independently of seizures and of ictal or postictal confusional states. These manifestations, which usually take the form of an acute paranoid reaction ("bouffées délirantes" in French terminology or "acute schizophrenic episodes" in Anglo-American terminology), are encountered mostly in persons with seizures of temporal lobe origin, usually during spontaneous periods of remission or remissions produced by anticonvulsive treatment. They are often accompanied by the disappearance of interictal EEG discharges ("forced normalization"). The fact that such manifestations are not necessarily related to seizures and occur in some epileptics only indicates that the strict causal relationship suggested by the term "acute epileptic psychosis" cannot be demonstrated. Preference should therefore be given to the expression "acute psychotic episode (or acute psychosis) in an epileptic". See *psychosis, chronic epileptic.*

psychosis, chronic epileptic. Chronic hallucinatory paranoid psychosis occurring in subjects with epilepsy, particularly *temporal lobe epilepsy**. It is characterized by a high frequency of religious or mystical delusions and tends to occur in subjects whose seizures are tapering off, whether spontaneously or in response to treatment. Chronic epileptic psychosis is rare and is difficult to distinguish from the "functional" paranoid psychoses, although in the epileptic variety affect and social integration are sometimes well preserved.

Expl.: The relationship between epilepsy and chronic psychosis is neither simple nor clear. On the one hand, the psychotic phenomena (*a*) are directly related to epilepsy of the temporal lobe, probably of the dominant hemisphere; (*b*) occur in inverse proportion to the presence and frequency of temporal lobe seizures; and (*c*) are independent of the presence of associated brain lesions. This is all evidence in favour of the epileptic nature of the psychotic manifestations and would justify the term "chronic epileptic psychosis". On the other hand, it would be more appropriate to use the expression "chronic psychosis in an epileptic individual", since numerous factors—organic, physiological (the reliving of previous experiences during some seizures), sociological (rejection by society, low status of the epileptic), and pharmacological (possible long-term anticonvulsant therapy, which disturbs folic acid metabolism)—may play a part in the causation of the psychoses observed in epileptics.

pykno-epilepsy. *Generalized epilepsy** characterized by very frequent *absences** (up to several hundred a day). Electroencephalography has shown that these are almost always *typical absences** with rhythmic 3/sec spike-and-wave discharges. Syn. (incorrect): *pyknolepsy; pyknoleptic petit mal.*

Ling.: Although sanctioned by usage, the term "pyknolepsy" is incorrect; *pykno-epilepsy,* which stresses the epileptic nature of the condition, is preferable.

pyknolepsy. Incorrect syn. for *pykno-epilepsy.*

R

raptus epilepticus. Syn. for *epileptic furor.*

rhythm, recruiting epileptic. An EEG rhythm that is initially rapid and of low amplitude but that gradually becomes slower and of higher amplitude, while presenting rhythmic fluctuations in amplitude (the waxing and waning phenomenon). This rhythm, which is generalized over the entire scalp, is seen during the tonic phase of tonic-clonic seizures, during the majority of tonic seizures, and during certain *atypical absences**.

S

salaam attack. Syn. used by English authors for the *infantile spasms** of *West's syndrome**. To be distinguished from *salaam tic**.

salaam tic. Rhythmic anteroposterior head movements associated with compensatory balancing movements of the trunk in the same direction, with or without extension of the upper limbs, and with nystagmus. The movements are slow and occur in series of 20 to 30 in oligophrenic subjects, particularly in the sitting position. They have nothing to do with epilepsy. Syn. (*pro parte*): *spasmus nutans.*

Ling.: The "tic de salaam" of French authors must be carefully distinguished from the *Salaamkrampf* of German and the *salaam attacks* of English authors, which both designate the *infantile spasms** of *West's syndrome**.

Salaamkrampf. Syn. used by German authors for the *infantile spasms** of *West's syndrome**. To be distinguished from *salaam tic**.

sclerosis, Bourneville's tuberous. See *epilepsy, hereditary.*

seizure. 1. Attack of cerebral origin affecting a person in apparent good health or causing a sudden aggravation of a chronic pathological state. Such attacks consist of sudden and transitory abnormal phenomena of a motor, sensory, autonomic, or psychic nature resulting from transient dysfunction of part or all of the brain. Seizures can be classified in many different ways, and the following types may be distinguished: (1) Seizures of epileptic origin, due to excessive discharge of a hyperexcitable population of neurons. (2) Seizures of anoxic origin, caused by transient functional paralysis of a neuronal population due (*a*) to a sudden lowering of the partial pressure of oxygen in the blood (*anoxo-anoxic* or *anoxo-asphyxial seizures*); (*b*) to a sudden insufficiency in the transport or cerebral distribution of oxygenated blood as a result of cardiac arrest, an abrupt drop in systemic blood pressure, or intracranial or extracranial obstruction of an afferent cerebral artery (*anoxo-ischaemic* or *ischaemic seizures*); or (*c*) to a toxic agent, e.g., cyanide, blocking the enzymatic utilization of oxygen (*anoxotoxic seizures*). (3) Seizures of toxic origin, due to a selective chemical activation of certain brain structures by a toxic substance or toxin, e.g., strychnine or tetanus toxin. (4) Seizures of metabolic origin, e.g., during hypoglycaemia, hepatic insufficiency, or alcohol intoxication (delirium tremens). (5) Seizures of psychic origin (*psychic seizures*), due to the activation or liberation of various brain structures secondary to affective disequilibrium (hysterical attacks, pathological rage attacks, anxiety attacks). (6) Seizures of hypnic nature or origin, which give rise to pathological sleep (narcolepsy) or to some of its features (cataplexy, hallucinosis), or which occur during physiological sleep (sleep-walking, nightmares). (7) Seizures of undetermined origin and not related to any of the above factors. It should be understood that these factors may interact in many ways, so that it is possible to have anoxic seizures of psychic origin (e.g., emotional syncope), epileptic seizures induced by sleep or by hypoglycaemia, etc. The above classification does not claim to be based on pathogenesis: for example, "hypnic" does not mean "induced by sleep", but simply "related to sleep". Syn.: *cerebral attack; fit.* 2. Used adjectivally as a synonym for *ictal.*

seizure, abdominal epileptic. 1. An *epileptic seizure** manifested by abdominal sensations (mainly of a colicky nature) in the peri-umbilical area and/or the hypochondrium, sometimes associated with borborygmi, vomiting, flatulence, and defaecation, and frequently accompanied by mental confusion. It results from a generalized or partial neuronal discharge, usually in the insular or peri-insular region. See *epilepsy, insular; epilepsy, abdominal.* Syn.: *intestinal epileptic seizure; alimentary epileptic seizure; enteralgic epileptic seizure.* 2. An incorrect and obsolete term for a form of epileptic seizure (wrongly called "reflex") believed to be caused by an organic abdominal lesion or even by a parasitic intestinal infection (see *epilepsy, verminous*). True but rare abdominal *reflex epileptic seizures** are in fact triggered by intestinal colic or by excessively rapid filling of the stomach (see *seizure, autonomic reflex epileptic*).

seizure, abdominal reflex epileptic. See *seizure, abdominal epileptic* (2).

seizure, acousticogenic epileptic. Syn. for *auditory reflex epileptic seizure.*

seizure, acousticomotor epileptic. Syn. for *auditory reflex epileptic seizure.*

seizure, adversive epileptic. A common type of *versive epileptic seizure** in which the deviation of the eyes, head, and trunk results in the subject turning round as though to look backward or to one side. This adversion is almost always towards the side opposite the discharging hemisphere, but in rare cases may be towards the other side, and is usually accompanied by an elevation of the corresponding arm in abduction and semiflexion (the patient looks at his raised fist). It is caused by a neuronal discharge in the frontal or temporal zone or in the supplementary motor area. Syn.: *adversive petit mal* (incorrect).

seizure, affective epileptic. 1. An *epileptic seizure** whose initial manifestation consists primarily in an alteration of the subject's emotional state. Pure fear with its characteristic facies is almost always the emotional state produced. However, the fear is not experienced at the conscious level. Seizures consisting of a sudden *laughing attack** (see *gelolepsy*), an expression of joy, or a feeling of pleasure or ecstasy (as in the celebrated case of Prince Myshkin in Dostoievski's novel) are very rare. Attacks of furor are extremely uncommon, if care is taken to distinguish them from violent reactions during postictal confusional states (see *furor, epileptic*). Affective epileptic seizures are thought to result from neuronal discharge in the anteromedial part of the temporal lobe (pararhinal area). See *epilepsy, affective*. 2. An epileptic seizure presumed to occur mainly or exclusively in response to an emotion. Emotion can unquestionably play some role in triggering an epileptic seizure, but this role is never uniform or precise enough to justify considering *affective epilepsy** as a separate clinical entity.

seizure, akinetic epileptic. 1. A form of *generalized epileptic seizure** of rather long duration (lasting from about half a minute to several minutes) observed especially in children. It is characterized by falling and a loss of motility, even though muscle tone is preserved, and by clouding or loss of consciousness. See *seizure, apoplectic epileptic*. 2. An incorrect but commonly used syn. for *atonic epileptic seizure* and especially for *epileptic drop attack*.

Ling.: Usage (2) is incorrect because the fall and the loss of motility in atonic epileptic seizures, and notably in epileptic drop attacks, are due to loss of muscle tone.

seizure, alimentary epileptic. Syn. for *abdominal epileptic seizure* (1).

seizures, alternating epileptic. *Unilateral epileptic seizures** whose manifestations change from side to side in successive seizures or sometimes even during the same seizure (*"see-saw" epileptic seizure**). Very rarely, *partial epileptic seizures** may be of the alternating type, e.g., in the case of certain rare bilateral pre-Rolandic epileptogenic foci producing somatomotor seizures that are sometimes right-sided and other times left-sided. As a rule, however, the alternation is so very characteristic of unilateral epileptic seizures that, whenever it is observed, and until proven otherwise, the diagnosis of unilateral seizure must be made against that of partial seizure.

seizure, ambulatory epileptic. A type of *automatic epileptic seizure** in which the automatisms (either ictal or, occasionally, postictal) consist of coordinated ambulation. At times the patient will go so far as to walk or drive even through heavy city traffic. When sufficiently long, ambulatory epileptic seizures may constitute an *epileptic fugue**. Such seizures must be distinguished from *procursive epileptic seizures**.

seizure, anoxo-anoxic. See *seizure*.

seizure, anoxo-asphyxial. See *seizure*.

seizure, anoxo-ischaemic. See *seizure*.

seizure, anoxotoxic. See *seizure*.

seizure, aphasic epileptic. A *partial epileptic seizure** characterized mainly or exclusively by a transient, total or partial, aphasia, either motor or sensory. It usually results from a neuronal discharge in the inferior frontal or temporoparietal region of the dominant hemisphere. Such seizures must be distinguished from *vocal epileptic seizures** with *epileptic speech arrest**. Syn.: *paroxysmal aphasia* (incorrect).

seizure, apoplectic epileptic. An obsolete term for a non-convulsive *generalized epileptic seizure** in which the subject suddenly falls to the ground and remains there unconscious and motionless for a few seconds or even several minutes. Some of these seizures are accompanied by loss of muscle tone and are therefore classified as *atonic epileptic seizures**. Others, which occur without loss of tone, are *akinetic epileptic seizures**.

seizure, ascending epigastric epileptic. See *seizure, epigastric epileptic*.

seizure, astatic epileptic. An incorrect term used by Lennox to designate Ramsay Hunt's *static epileptic seizure**, which is identical to an *epileptic drop attack**, the briefest variety of *atonic epileptic seizure**.

Ling.: The word "astatic" only implies the loss of balance and falling, and is therefore applicable to a large number of epileptic seizures, many of which cause the subject to fall if they occur when he is erect. Since the word has no precise significance, it should be abandoned.

seizure, asymmetrical atonic epileptic. Syn. for *unilateral atonic epileptic seizure*. See *seizure, unilateral epileptic*.

seizure, asymmetrical clonic epileptic. Syn. for *unilateral clonic epileptic seizure*. See *seizure, unilateral epileptic*.

seizure, asymmetrical epileptic. Syn. for *unilateral epileptic seizure*.

seizure, asymmetrical tonic epileptic. Syn. for *unilateral tonic epileptic seizure*. See *seizure, unilateral epileptic*.

seizure, asymmetrical tonic-clonic epileptic. Syn. for *unilateral tonic-clonic epileptic seizure*. See *seizure, unilateral epileptic*.

seizure, athetotic epileptic. An incorrect and obsolete term perpetuating the error of designating as epileptic those psychic *seizures** (hysterical attacks) with movements resembling athetosis.

seizure, atonic epileptic. A *generalized epileptic seizure** whose essential symptom is a decrease or abolition of postural tone, causing the subject to fall to the ground. When the loss of tone is very brief (a fraction of a second), the seizure is called an *epileptic drop attack**. When the loss of tone is of longer duration (usually 1 to 3 seconds), it is said to be an *atonic absence**, which may be typical or atypical, depending upon the nature of the concomitant EEG discharge. When the loss of tone is of long duration and the subject remains unconscious on the ground in a complete state of relaxation for one or more minutes, this is called a *true atonic epileptic seizure*; in such cases the EEG consists of a mixture of rapid rhythms and slow waves producing more or less regular and rhythmic spike-and-wave complexes of varying frequency. Syn.: *akinetic epileptic seizure* (incorrect but commonly used); *cataplectic epileptic seizure* (incorrect and obsolete); *inhibitory epileptic seizure*.

seizure, audiogenic epileptic. Syn. for *auditory reflex epileptic seizure*.

seizure, audiosensory epileptic. Syn. for *auditory reflex epileptic seizure*.

seizure, auditory elementary epileptic. A type of *partial epileptic seizure** characterized mainly or exclusively by fleeting elementary auditory manifestations in the absence of any corresponding external stimuli (paracousia). These manifestations may be either negative (muffling of noise) or, more frequently, positive (simple auditory sensations). Such seizures arise from neuronal discharge in the superior temporal cortex. They must be distinguished from *auditory illusional epileptic seizures** and *auditory hallucinatory epileptic seizures**. See *sensation, epileptic*.

seizure, auditory epileptic. 1. A type of *partial epileptic seizure** characterized mainly or exclusively by elementary auditory manifestations with no corresponding external stimuli (see *seizure, auditory elementary epileptic*), by complex auditory manifestations or perceptions with no corresponding external stimuli (see *seizure, auditory hallucinatory epileptic*), or by altered auditory perceptions (see *seizure, auditory illusional epileptic*). Such seizures result from neuronal discharge in the specific auditory cortex of the temporal lobe or the neighbouring areas. See *epilepsy, superior temporal (lobe)*. 2. Incorrect and obsolete syn. for *auditory reflex epileptic seizure*.

seizure, auditory hallucinatory epileptic. A type of *partial epileptic seizure** characterized by complex auditory manifestations or perceptions in the absence of corresponding external stimuli. The subject hears, for example, a conversation he has just finished, a symphony heard a long time previously, or even a childhood song. The character of the perception may be normal or distorted. Such seizures result from neuronal discharge in the superior temporal region. They must be distinguished from *auditory illusional epileptic seizures** and *auditory elementary epileptic seizures**. See *epilepsy, superior temporal (lobe); hallucination, epileptic*.

seizure, auditory illusional epileptic. A type of *partial epileptic seizure** characterized by perceptive

*epileptic illusions** in which sounds are perceived in an abnormal fashion. The symptoms are described as microacousia, macroacousia, or microteleacousia, depending on whether the sounds appear attenuated, magnified, or gradually fading as if becoming more and more distant. Such seizures result from neuronal discharge in the superior temporal cortex. They must be distinguished from *auditory hallucinatory epileptic seizures** and *auditory elementary epileptic seizures**. See *epilepsy, superior temporal (lobe)*.

seizure, auditory reflex epileptic. A rare type of *reflex epileptic seizure** triggered by a noise, which generally must be brief, loud, and sudden. Such seizures are sometimes of brief duration and take the form of *bilateral massive epileptic myoclonus** accompanied on the EEG by a generalized spike-and-wave or polyspike-wave paroxysm. More often, they are prolonged, in which case they take the form of a *tonic epileptic seizure** with generalized desynchronization of the EEG. When they occur in patients suffering from hemiplegia or hemiparesis, the tonic seizures produced by noise are often predominantly or entirely on the paralysed side, appearing as an unilateral tonic seizure. The fact that the noises triggering these seizures are especially effective when they are unexpected and produce a startle reaction explains why such seizures are often classed with *startle epilepsy**. In animal experiments generalized tonic-clonic seizures can be readily induced by an *intense and prolonged* auditory stimulus in certain strains of mice, rats, and albino rabbits. However, the differences in the induction conditions and in the symptoms induced are so great that the attacks of these rodents cannot be regarded as identical to the auditory reflex seizures of man. Syn.: *acousticogenic epileptic seizure; acousticomotor epileptic seizure; audiogenic epileptic seizure; audiosensory epileptic seizure; psophogenic epileptic seizure; sonosensory epileptic seizure; auditory epileptic seizure* (incorrect and obsolete).

Ling.: It is unfortunate that, of all the adjectives hitherto used to describe this type of epileptic seizure, the only two sanctioned by usage are "audiogenic" and "acousticomotor", both hybrids formed from a Greek and a Latin root.

seizure, auto-induced epileptic. Syn. for *self-induced epileptic seizure*.

seizure, automatic epileptic. A *generalized epileptic seizure** of the absence type (*automatic absence**) or a *partial epileptic seizure** (in the latter case usually of temporal lobe origin) characterized by involuntary and more or less coordinated and adapted (eupractic or dyspractic) motor activity occurring during an ictal state of mental confusion and followed by amnesia (see *automatism, epileptic*). Such seizures must be distinguished from postictal *epileptic automatisms*, which may follow any severe epileptic seizure but particularly a tonic-clonic seizure, and which at times may be associated with furor. Furor very rarely accompanies ictal automatic behaviour (see *furor, epileptic*). Syn.: *psychomotor epileptic seizure; temporal lobe epileptic seizure* (incorrect).

seizure, autonomic epileptic. 1. A type of *generalized** or *partial epileptic seizure** consisting exclusively or mainly of autonomic disturbances with sensory or motor features. Depending on whether one or all autonomic systems are affected, the following forms can be distinguished: (1) Generalized autonomic epileptic seizures, which always fall within the category of generalized epilepsy and probably result from discharge in the rostral brain stem. These seizures, sometimes called *diencephalic autonomic seizures*, have a number of the following components: tachycardia, hypertension, polypnoea, mydriasis, piloerection, sweating, etc.; they have also been erroneously designated by the assumed site of origin of the neuronal discharge (*diencephalic epilepsy, thalamic epilepsy, hypothalamic epilepsy, paraventricular epilepsy*, etc.). (2) Autonomic epileptic seizures affecting exclusively or mainly only one of the autonomic systems and resulting from either a generalized epileptic discharge or, more frequently, a partial epileptic discharge usually situated in the orbito-insulotemporal region (pararhinal region). Depending on the function or system involved, these seizures may be subdivided into *gastrointestinal epileptic seizures** (oropharyngeal, epigastric, or abdominal) and *enuretic epileptic seizures**. Respiratory, circulatory, and vasomotor changes are quite frequent at the beginning of generalized and particularly of partial epileptic seizures originating in the pararhinal region (see *sensation, autonomic epileptic; seizure, laryngeal epileptic; seizure, sternutatory epileptic; seizure, tussive epileptic*), but these modifications are never sufficiently characteristic or significant to justify the term respiratory, circulatory, or vasomotor epilepsy. Autonomic sensory changes may take on a hallucinatory quality during certain partial epileptic seizures involving the anteromedial temporal region (*autonomic hallucinatory epileptic seizure**). See *epilepsy,*

insular. Syn.: *sympathetic epileptic seizure* (incorrect); *vegetative epileptic seizure; visceral epileptic seizure*. 2. Incorrect syn. for *autonomic reflex epileptic seizure*.

seizure, autonomic hallucinatory epileptic. A form of *partial epileptic seizure** during which the subject feels a sudden urge to drink or, above all, to eat, or experiences sudden and intense sexual desire that may culminate in orgasm (see *orgasmolepsy*). Such seizures, especially the latter variety, are extremely rare, and result from a partial neuronal discharge usually affecting the anteromesial portion of the temporal lobe.

seizure, autonomic reflex epileptic. A type of *reflex epileptic seizure** produced by autonomic sensory afferent impulses. If the so-called cardiac, dental, laryngeal, ocular, oropharyngeal, ovarian, pleural, verminous, etc., epilepsies—which are all diagnostic errors of the past—are disregarded, autonomic reflex seizures are extremely rare. However, there are a few well-defined seizures associated with abdominal symptoms, triggered by intestinal colic, or seizures, also with digestive symptoms, provoked by an overly rapid filling of the stomach. See *epilepsy, abdominal*. Syn.: *autonomic epileptic seizure* (incorrect).

seizure, auto-provoked epileptic. Syn. for *self-induced epileptic seizure*.

seizure, axial tonic epileptic. See *seizure, tonic epileptic*.

seizure, axorhizomelic tonic epileptic. See *seizure, tonic epileptic*.

seizure, brain-stem. 1. A *seizure**, epileptic or non-epileptic, characterized essentially by a more or less generalized *tonic spasm** and by autonomic manifestations, and whose origin, real or assumed, lies in brain-stem structures. Non-epileptic attacks are principally *decerebrate seizures**, *cerebellar seizures**, certain seizures associated with degenerative or demyelinating brain-stem diseases (e.g., multiple sclerosis), and especially *convulsive syncopes**. The *epileptic brain-stem seizures* are not well defined. While the brain-stem structures that regulate tonus and control vital functions are most likely involved in generating *tonic epileptic seizures**, there is as yet insufficient neurophysiological and anatomical evidence to justify singling out "epileptic brain-stem seizures" as a distinct clinical entity. There is even less justification for attempting to determine which of these seizures supposedly originate in one part of the brain stem, as Hughlings Jackson did in speaking of *pontobulbar seizures* or *lowest level fits* to describe *trunk fits**. 2. For some authors, a reflex *convulsive syncope** triggered by psychoaffective factors, which Pette erroneously included among the *primary generalized epilepsies**.

seizure, Bravais-Jacksonian epileptic. Syn. for *Jacksonian epileptic seizure*.

seizure, Bravais-Jacksonian sensory epileptic. Syn. for *Jacksonian sensory epileptic seizure*.

seizure, catamenial epileptic. An *epileptic seizure** that occurs either during menstruation or several days preceding or following it, and that is caused by a lowering of the *convulsive threshold** secondary to endocrine and cellular changes brought about by menstruation. Syn.: *menstrual epileptic seizure*.

seizure, cataplectic epileptic. An incorrect and obsolete term that was used to designate *atonic epileptic seizures**, which have nothing in common with cataplexy. See *attack, cataplectic*.

seizure, centrencephalic epileptic. A type of *generalized epileptic seizure** caused by a distinctive and well-defined neurophysiological mechanism implying oscillatory epileptic interaction between subcortical structures ("centre of the encephalon") and (*a*) the whole two hemispheres, via ascending diffusely projecting connexions, and (*b*) peripheral effectors, via descending pathways. It is generally agreed that this term refers above all to *petit mal seizures** and their classical bilateral, synchronous, and symmetrical spike-and-wave discharges, but certain authors apply it to all *epileptic seizures generalized from the onset**, including *tonic-clonic epileptic seizures**. Some authors subdivide centrencephalic epileptic seizures into "primary" and "secondary" forms, depending on whether the oscillatory system discharges from the start as an entity or is secondarily triggered by a cortical epileptic discharge. In the latter case one sometimes speaks of a "corticocentrencephalic" or a "corticoreticulocortical" mechanism. Syn.: *highest level seizure*.

Ling.: Although the centrencephalon is not a structural or functional entity accepted by anatomists or physiologists, the concept and the term "centrencephalic

epileptic seizure" are both well worth retaining. The concept had already been validated by neurophysiological experiments dating back to the eighteenth century, and in 1941 the term "centrencephalic" was introduced by Penfield and Jasper. This term is now widespread and sanctioned by usage. Nevertheless, it should not be used indiscriminately to refer to the entire group of "generalized epileptic seizures", since it has not been demonstrated that these are all caused by discharges in the same systems.

seizure, cerebellar. A generalized tonic *spasm** in opisthotonos with autonomic manifestations that occurs independently of any epileptic mechanism during episodes of increased intracranial pressure, mainly in patients with a tumour of the posterior fossa (particularly of the cerebellum). The ischaemic nature of these spasms has recently been demonstrated: brain herniation is exacerbated during a paroxysm of increased intracranial pressure and compresses the arteries supplying the upper brain stem; this ischaemic paralysis liberates the tonus-producing structures of the lower brain stem and thus causes hypertonia. See *seizure, decerebrate; seizure, brain-stem.* Syn.: *cerebellar attack; cerebellar fit; posterior fossa seizure.*

Ling.: This term should never be used in reference to epilepsy. See *seizure, tonic epileptic.*

seizure, choreic epileptic. An incorrect and obsolete term perpetuating the error of designating as epileptic (1) psychic *seizures** (hysterical attacks) involving uncoordinated movements similar to those of chorea, or (2) episodes of *paroxysmal choreo-athetosis**.

seizure, circumcursive epileptic. A type of *automatic epileptic seizure** in which *ambulatory automatisms** cause the subject to go round in circles. Syn.: *rotatory epileptic seizure.*

seizure, clonic epileptic. A type of *generalized epileptic seizure** of early infancy that lasts about a minute or even longer and is characterized: (*a*) clinically, by loss of consciousness, an autonomic discharge "en masse", and bilateral clonic contractions repeated more or less rhythmically and distributed uniformly all over the body; (*b*) electroencephalographically, by a mixture of rapid rhythms and slow waves producing more or less regular spike-and-wave or polyspike-wave complexes.

seizure, conditioned epileptic. An *epileptic seizure** supposedly induced by a factor that has become epileptogenic by conditioning (see *seizure, evoked epileptic*). Such a mechanism has never been demonstrated, despite numerous attempts to render a neutral stimulus (e.g., a sound) potentially epileptogenic by combining it repeatedly with an unconditioned visual stimulus that invariably triggers epileptic seizures in subjects suffering from *visual reflex epileptic seizures**. On purely hypothetical grounds, however, it is conceded that this mechanism may play a part in certain forms of epilepsy; for example, according to some authors, *musicogenic epileptic seizures** are actually *affective epileptic seizures** triggered by music, which thus acts as a conditioned stimulus.

seizure, confusional epileptic. An obsolete term formerly used for any *generalized** or *partial epileptic seizure** characterized mainly or exclusively by a confusional episode, often accompanied by *automatisms**. See *confusion, epileptic.*

seizure, conscious adversive epileptic. A form of *adversive epileptic seizure** in which deviation of the eyes and head is believed to occur without initial loss of consciousness. It is thought to result from a discharge in the frontal adversive area. Syn.: *simple adversive epileptic seizure.*

seizure, conscious amnesic epileptic. An epileptic seizure that is characterized by the inability to commit present events to memory but that is not accompanied by any appreciable impairment of consciousness. It is usually a *partial epileptic seizuze** resulting from neuronal discharge in the frontal lobe cortex.

seizure, conscious epileptic. Formerly, a type of *epileptic seizure**, believed to be rare, in which consciousness was retained. This term is no longer valid as it is now known that many epileptic seizures of diverse types (notably *partial epileptic seizures** with elementary symptomatology) occur in the conscious state and that there are even some epileptic seizures that can be identified only by EEG, as they are not accompanied by any detectable clinical manifestations. See *absence, subclinical; discharge, subclinical (electroencephalographic) epileptic; seizure, conscious amnesic epileptic; seizure, subclinical epileptic.*

seizure, contraversive epileptic. A common type of *versive epileptic seizure** in which the eyes, head, or trunk deviate to the side opposite the discharging hemisphere. Ant.: *ipsiversive epileptic seizure.*

seizure, convulsive epileptic. An *epileptic seizure** (generalized, unilateral, or partial) consisting exclusively or mainly of *convulsions**. Contrary to general opinion, such seizures are less common than *nonconvulsive epileptic seizures**.

seizure, cursive epileptic. Syn. for *procursive epileptic seizure.*

seizures, cyclic epileptic. *Epileptic seizures** that occur spontaneously but predictably at fairly regular and foreseeable intervals. In most cases they do not appear to be linked to any appreciable predisposing factor, and their periodicity, which results from still unknown biological mechanisms, is often evident only from a statistical analysis of their distribution. Rarely, a known factor is the cause of the periodicity, e.g., the sleeping-waking cycle (*morpheic epilepsy**, *waking epilepsy**) or the menstrual cycle (*catamenial epileptic seizures**).

seizure, decerebrate. A generalized tonic *spasm** in opisthotonos with autonomic manifestations that results from a transient release of tonus-producing structures of the lower brain stem when corticoreticular inhibition is momentarily lifted (e.g., during a *convulsive syncope** or in certain forms of diffuse cortical necrosis, usually of ischaemic origin). See *seizure, cerebellar; seizure, brain-stem.* Syn. (all obsolete): *tetanoid attack; tetanoid fit; tetanoid seizure.*

Ling.: This term should never be used with reference to epilepsy. See *seizure, tonic epileptic.*

seizure, diencephalic autonomic. See *seizure, autonomic epileptic.*

seizure, diffuse epileptic. Syn. for *generalized epileptic seizure.*

seizure, dysmnesic epileptic. A type of *partial epileptic seizure** resulting from neuronal discharge in the temporal lobe (and perhaps also in the frontal lobe) whose essential and occasionally only feature, often occurring initially, is a more or less marked impairment of memory. Generally included in this category are *ecmnesic hallucinations* (see *seizure, ecmnesic hallucinatory epileptic*) and *epileptic panoramic vision**. Certain authors also include *feelings of déjà-vu, déjà-entendu, déjà vécu* and *of jamais-vu, jamais-entendu, jamais-vécu* (see *illusion, epileptic*). See *seizure, conscious amnesic epileptic; seizure, mnesic epileptic.* Syn.: *paramnesic epileptic seizure.*

seizure, ecmnesic hallucinatory epileptic. A term rarely used in English, describing a *hallucinatory epileptic seizure** of visual, auditory, or other type, in which previous experiences are recalled by the subject and reviewed in the greatest detail (*ecmnesic hallucinations*). Most if not all epileptic hallucinatory manifestations are of the ecmnesic type. See *seizure, dysmnesic epileptic; hallucination, epileptic.*

seizure, enteralgic epileptic. Syn. for *abdominal epileptic seizure* (1).

seizure, enuretic epileptic. A type of *generalized** or *partial epileptic seizure** (if partial, usually of temporal lobe origin) consisting of involuntary emission of some quantity of urine during a brief period of unconsciousness. When the enuresis occurs during a *typical absence** or an *atypical absence**, it is said to be an *enuretic absence**. Such enuresis (simple urinary incontinence) must be distinguished from micturition occurring as more or less eupractic behaviour during certain *automatic epileptic seizures**. Syn.: *epileptic enuresis.*

seizure, epigastric epileptic. A type of *partial epileptic seizure** consisting of an abnormal sensation of discomfort or weight in the epigastrium (*epigastric epileptic sensation*) that sometimes rises to the throat (then designated an *ascending epigastric epileptic sensation*). It results from neuronal discharge in the insula or its vicinity. These seizures are often followed by other epileptic manifestations with psychic, psychosensory, or psychomotor symptoms, and together they produce very complex types of attacks. See *epilepsy, insular.* Syn.: *hysteroid aura* (incorrect).

seizure, epileptic. A *seizure** resulting from an excessive neuronal discharge. According to their clinical and/or EEG features, epileptic seizures may be subdivided into *generalized epileptic seizures**, *partial epileptic seizures**, *unilateral epileptic seizures**, and unclassified epileptic seizures.

seizure, epileptic, beginning locally. Syn. for *epileptic seizure of local onset.*

seizure, epileptic, generalized from the onset. See *seizure, generalized epileptic.*

seizure, epileptic, of local onset. A term used by some authors in preference to *partial epileptic seizure** or *focal epileptic seizure** in order to group all partial seizures under a single rubric whether or not they become secondarily generalized, and thus distinguish them from *epileptic seizures generalized from the onset**. Syn.: *epileptic seizure beginning locally.*

seizure, epileptiform. An incorrect term sometimes used to designate a *seizure** of undetermined origin whose clinical features are suggestive of epilepsy. Syn.: *epileptoid seizure.*

Ling.: A seizure must be defined according to its nature or mechanism (epileptic, anoxic, toxic, hypnic, psychic, etc.) and not according to its symptoms. When the cause of the attack cannot be determined, it is preferable to speak of a " seizure of undetermined origin" rather than of an "epileptiform" or a "hysteriform" seizure.

seizure, epileptoid. Syn. for *epileptiform seizure.*

seizure, erratic epileptic. 1. A term sometimes used to designate *clonic** or *unilateral clonic epileptic seizures** of infancy in which the jerks move from one limb to another during a single seizure and sometimes from one side of the body to the other. 2. An *epileptic seizure** peculiar to the newborn and characterized by *erratic (electroencephalographic) epileptic discharges**, which may sometimes be accompanied by stable convulsive manifestations (for example, a tonic or clonic *spasm** of a single limb).

seizure, evoked epileptic. An *epileptic seizure** regularly evoked by some definite factor that plays a triggering or predisposing role, as opposed to epileptic seizures occurring in an apparently spontaneous or unexpected manner. Such seizures can be subdivided according to whether the eliciting factor is applied deliberately by the patient (as in *self-induced epileptic seizures,* which are very rare) or not. They can also be subdivided according to whether the evoking factor does or does not operate by conditioning (see *seizure, conditioned epileptic*), or whether it is or is not repeated cyclically (see *seizures, cyclic epileptic*). However, the most important classification system is based on whether the causal factor is a sensory stimulus or not. In this system, two general categories of evoked epileptic seizures are defined: (1) Seizures evoked by factors other than sensory stimuli. These include seizures evoked by hyperthermia (see *convulsions, febrile; seizure, febrile epileptic*); by the ingestion of alcohol (see *epilepsy, alcohol-induced*); by hyperventilation, voluntary or (more often) involuntary, during physical exertion, emotion, etc.; by severe transitory metabolic disturbances (e.g., acute hypoglycaemia during insulin shock therapy, massive accidental ingestion of sodium chloride in infancy, etc.); by certain phases of the sleeping-waking cycle (see *epilepsy, morpheic; epilepsy, waking*); by the menstrual cycle (see *seizure, catamenial epileptic*); by physical fatigue or lack of sleep; by emotions (see *seizure, affective epileptic*); by intellectual or emotional factors accompanying visual exploration and reading (see *seizure, visual exploration epileptic*; and *seizure, reading epileptic,* intrinsic or perceptive varieties) or hearing music (see *seizure, musicogenic epileptic*). (2) Seizures evoked by sensory factors. Only these seizures belong to the category of *reflex epilepsy* in the strict sense (see *seizure, reflex epileptic.* Ant.: *spontaneous epileptic seizure.*

seizure, febrile epileptic. An *occasional epileptic seizure** provoked by fever. Febrile epileptic seizures must not be equated with *febrile convulsions**, as (1) such seizures are not necessarily convulsive (in fact, they are often akinetic or atonic), and (2) febrile convulsions are not always of epileptic origin. Syn.: *hyperthermic epileptic seizure; pyretic epileptic seizure.*

seizure, focal epileptic. Syn. for *partial epileptic seizure.*

seizure, fortuitous epileptic. Syn. for *spontaneous epileptic seizure.*

seizure, gastrointestinal epileptic. 1. An *autonomic epileptic seizure** whose symptomatology relates to the gastrointestinal tract. Depending on the symptoms, one may distinguish *oropharyngeal epileptic seizures**, *epigastric epileptic seizures**, and *abdominal epileptic seizures**. See *epilepsy, abdominal.* 2. An obsolete and incorrect term when used to describe epileptic seizures (incorrectly called "reflex") ascribed to a gastrointestinal disorder. See *seizure, autonomic reflex epileptic.*

seizure, gastrointestinal reflex epileptic. See *seizure, gastrointestinal epileptic* (2); *seizure, abdominal epileptic* (2).

seizure, generalized convulsive epileptic. See *seizure, generalized epileptic.*

seizure, generalized epileptic. An epileptic seizure characterized as follows: (1) Clinically, by impairment of consciousness and "en masse" mobilization of autonomic phenomena, with or without motor signs—particularly convulsions—involving both sides of the body simultaneously. According to whether or not convulsions accompany the attacks, the following types can be distinguished: *generalized convulsive epileptic seizures* (*tonic-clonic**, *tonic**, and *clonic epileptic seizures**, and *bilateral massive epileptic myoclonus**) and *generalized non-convulsive epileptic seizures* (simple or complex *absences**, *akinetic** or *atonic epileptic seizures**). (2) Electroencephalographically, by a bilateral, synchronous, and symmetrical *ictal epileptic discharge**. These seizures, especially the convulsive type—and more particularly tonic-clonic seizures—, may follow an initial *partial epileptic seizure**, whose clinical manifestations are sometimes called an "aura"; they are then referred to as *secondarily generalized partial epileptic seizures* (or *secondarily generalized epileptic seizures*). In contrast, a generalized seizure not preceded by any partial manifestation, clinical or electroencephalographic, is called an *epileptic seizure generalized from the onset.* The distinction between a seizure generalized from the onset and a secondarily generalized seizure is not always easy to make, since the focal onset characteristic of the latter may be clinically inapparent if it is brief or develops in a "silent" cortical area. Syn.: *diffuse epileptic seizure.*

seizure, generalized non-convulsive epileptic. See *seizure, generalized epileptic.*

seizure, global tonic epileptic. See *seizure, tonic epileptic.*

seizure, grand mal. 1. Previously, any *major epileptic seizure**. Syn.: *complete epileptic fit; grand mal.* 2. Nowadays, syn. for *tonic-clonic epileptic seizure.*

Ling.: On scientific grounds the term "tonic-clonic epileptic seizure" is preferable, but "grand mal seizure" is still more widely used. See *grand mal* (Expl.).

seizure, gustatory elementary epileptic. A type of *partial epileptic seizure** consisting exclusively or primarily of elementary gustatory manifestations with no corresponding external stimuli (parageusia). Three of the four basic tastes are involved, usually bitter, sour, and, rarely, salt. Such seizures result from neuronal discharge in the insular, peri-insular, or opercular cortex. They must be distinguished from *gustatory illusional epileptic seizures** and *gustatory hallucinatory epileptic seizures**. See *epilepsy, insular; epilepsy, opercular; sensation, epileptic.*

seizure, gustatory epileptic. 1. A type of *partial epileptic seizure** consisting exclusively or mainly of elementary gustatory manifestations with no corresponding external stimuli (see *seizure, gustatory elementary epileptic*), complex gustatory manifestations or perceptions with no corresponding external stimuli (see *seizure, gustatory hallucinatory epileptic*), or by altered gustatory perceptions (see *seizure, gustatory illusional epileptic*). Such seizures result from neuronal discharge in or near the specific gustatory cortex. See *epilepsy, insular; epilepsy, opercular.* 2. An incorrect and obsolete term perpetuating an error when used to designate epileptic seizures (wrongly called "reflex") supposedly triggered by a specific gustatory sensation. There is no proof of the existence of gustatory reflex epileptic seizures.

seizure, gustatory hallucinatory epileptic. A type of *partial epileptic seizure** characterized by complex gustatory manifestations or perceptions with no corresponding external stimuli. The perceptions are reminiscent of the complex sensation that accompanies the introduction of food into the mouth, where it is simultaneously appreciated by taste and smell. This explains why the taste of some foods is a component of these hallucinations. Such seizures result from neuronal discharge in the insula and its vicinity. They must be distinguished from *gustatory illusional epileptic seizures** and *gustatory elementary epileptic seizures**. See *hallucination, epileptic.*

seizure, gustatory illusional epileptic. A form of *partial epileptic seizure** characterized by perceptive *epileptic illusions** in which the sense of taste is suddenly reinforced (hypergeusia) to such an extent that the subject can even taste his own saliva. Such seizures result from a neuronal discharge in the insular and peri-insular cortex. They must be distinguished from *gustatory elementary epileptic seizures** and *gustatory hallucinatory epileptic seizures**, with which they are often confused. In the illusional attacks the subject frequently states that he perceives such tastes as bitterness and tobacco. These are actually unusual perceptions, due to the

hypergeusia, of substances that are present in his mouth. See *epilepsy, insular; epilepsy, opercular.*

seizure, gustatory reflex epileptic. See *seizure, gustatory epileptic* (2).

seizure, gyratory epileptic. A type of *versive epileptic seizure** in which the subject rotates once or several times. Syn.: *torsion epileptic seizure* (obsolete).

seizure, hallucinatory epileptic. A type of *partial epileptic seizure** consisting mainly or exclusively of *epileptic hallucinations**. Such seizures must be distinguished from *illusional epileptic seizures** and *sensory elementary epileptic seizures**. Syn.: *psychosensory epileptic seizure.*

seizure, hemiatonic epileptic. Syn. for *unilateral atonic epileptic seizure.* See *seizure, unilateral epileptic.*

seizure, hemiclonic epileptic. Syn. for *unilateral clonic epileptic seizure.* See *seizure, unilateral epileptic.*

seizure, hemigeneralized epileptic. Syn. for *unilateral epileptic seizure.*

seizure, hemitonic epileptic. Syn. for *unilateral tonic epileptic seizure.* See *seizure, unilateral epileptic.*

seizure, hemitonic-clonic epileptic. Syn. for *unilateral tonic-clonic epileptic seizure.* See *seizure, unilateral epileptic.*

seizure, highest level. Syn. for *highest level fit.*

seizure, hyperthermic epileptic. Syn. for *febrile epileptic seizure.*

seizure, hysterical. See *seizure.*

seizure, hysteriform. An incorrect and obsolete term formerly used to designate a *seizure** of undetermined origin or an *epileptic seizure** with clinical features suggestive of hysteria. See *seizure, hysteriform epileptic.*

Ling.: A seizure must be defined according to its mechanism (epileptic, anoxic, toxic, hypnic, psychic, etc.) and not according to its symptoms. When the cause of the attack cannot be established, it should be described as a "seizure of undetermined origin" instead of a "hysteriform" or "epileptiform" seizure.

seizure, hysteriform epileptic. An incorrect and obsolete term formerly used to describe the following types of *epileptic seizure**, which were difficult to distinguish from attacks of hysteria: (1) long-lasting convulsive epileptic seizures with marked clonic movements; (2) long-lasting atonic epileptic seizures (see *seizure, apoplectic epileptic*); (3) long-lasting epileptic seizures with more or less coordinated automatisms corresponding to what are now called *automatic epileptic seizures**. Of course, in the past authors also described as "hysteriform epileptic" some purely hysterical attacks that were incorrectly diagnosed as epileptic. See *hystero-epilepsy.*

seizure, ideational epileptic. A type of *partial epileptic seizure** in which the sole or essential ictal sign, often occurring initially, is a thought that forces itself upon the patient (*epileptic forced thought*). The thought may be one already present in the subject's mind when the seizure occurs, which he is incapable of resisting (true paralysis of intellectual function). More often, it is an entirely new thought (*parasitic idea*) forced upon the patient at the onset of the seizure. The thought may be subjective (metaphysical or even transcendental, such as an idea of death or immortality); objective (a fixation upon the ideational content of a phrase read or heard before the attack); or unidentifiable and even unrecallable, the patient only remembering that he was thinking very intently about "something". Very rarely, forced thinking may consist of a very rapid recollection of more or less protracted experiences in his past life (*epileptic panoramic vision**). Even when brief and followed by other epileptic manifestations, these ictal disturbances of ideation are always an integral part of the seizure and must not be described as a prodrome. Ideational epileptic seizures result from neuronal discharge in the frontal or temporal cortex.

seizure, illusional epileptic. A type of *partial epileptic seizure** characterized essentially or exclusively by perceptive alterations producing *epileptic illusions**. Such seizures must be distinguished from *hallucinatory epileptic seizures** and *sensory elementary epileptic seizures**. Syn.: *psychosensory epileptic seizure.*

seizure, inhibitory epileptic. A term sometimes used to designate *atonic epileptic seizures**. This term is not recommended as it is imprecise.

seizure, intestinal epileptic. Syn. for *abdominal epileptic seizure* (1).

seizure, ipsiversive epileptic. A very rare type of *versive epileptic seizure** in which the eyes, head, or trunk deviate towards the side of the discharging hemisphere. Ant.: *contraversive epileptic seizure.*

seizure, ischaemic. See *seizure.*

seizure, Jacksonian epileptic. A *somatomotor epileptic seizure** with the convulsions spreading via a *Jacksonian march**. Syn.: *Bravais-Jacksonian epileptic seizure; unilateral epileptiform seizure* (incorrect and obsolete); *unilateral epileptiform convulsions* (incorrect and obsolete).

seizure, Jacksonian sensory epileptic. A *somatosensory elementary epileptic seizure** with the paraesthesiae spreading via a *Jacksonian march**. Syn.: *Bravais-Jacksonian sensory epileptic seizure.*

seizure, jumping epileptic. An obsolete term describing a type of *automatic epileptic seizure** characterized by jumping up and down.

seizure, laryngeal epileptic. 1. An obsolete term that was used to describe *epileptic seizures** associated with an abnormal laryngeal sensation, which sometimes produced bouts of coughing. See *seizure, tussive epileptic.* 2. An incorrect and obsolete term when used to designate epileptic seizures (wrongly called "reflex") supposedly triggered by a laryngeal condition (see *seizure, autonomic reflex epileptic*).

seizure, laryngeal reflex epileptic. See *seizure, laryngeal epileptic* (2).

seizure, light-sensitive epileptic. Syn. for *visual reflex epileptic seizure.*

seizure, local epileptic. Syn. for *partial epileptic seizure.*

seizure, lowest level. Syn. for *lowest level fit.*

seizure, major epileptic. An obsolete term, to be avoided, that was occasionally used as a syn. for *tonic-clonic epileptic seizure**. By extension, this term was formerly used, even more improperly, for all epileptic seizures of long duration and great intensity, especially the convulsive ones. See *seizure, grand mal.*

seizure, masticatory epileptic. A form of *partial epileptic seizure** consisting mainly of rhythmic masticatory movements (sometimes severe enough to injure the tongue), abundant salivation, and loss of consciousness. It results from discharge in the tonsil of the cerebellum, the insula or its vicinity, or the opercular region, and is a variety of *oropharyngeal epileptic seizure**.

seizure, menstrual epileptic. Syn. for *catamenial epileptic seizure.*

seizure, mental epileptic. Syn. for *psychic epileptic seizure.*

seizure, middle level. Syn. for *middle level fit.*

seizure, minor epileptic. An obsolete term, to be avoided, sometimes used to designate seizures of lesser intensity or duration (e.g., absences) occurring in patients who are also subject to *tonic-clonic epileptic seizures**, in which case the latter are described as "major". By extension, this term is occasionally used, even more improperly, to designate all epileptic seizures of short duration or low intensity, irrespective of the symptomatology and nature of the attacks. See *seizure, petit mal.*

seizure, mnesic epileptic. An obsolete term describing any *epileptic seizure** associated with an arrest of ideation, but with complete or partial conservation of consciousness compatible with memory storage and recall. This term is no longer of interest since it has become apparent that many seizures, of the most diverse types, take place under similar conditions (e.g., the majority of *partial epileptic seizures** with elementary motor or sensory symptoms). See *seizure, conscious epileptic.*

seizure, movement epileptic. An extremely rare variety of *evoked epileptic seizure** that is triggered by a sudden movement, e.g., suddenly standing up. It is a very brief *tonic epileptic seizure**, frequently predominating on one side of the body, that occurs suddenly and results in postural change. Some authors have confused such seizures with brief episodes of *paroxysmal choreo-athetosis**, which are sometimes triggered by a movement.

seizure, musicogenic epileptic. 1. A very rare type of *partial epileptic seizure** (usually of temporal lobe origin) provoked by listening to music. The exact triggering mechanism of such seizures is still unknown. Strictly speaking, they do not belong to the

group of *reflex epileptic seizures** since in most cases it is the affective content of the music rather than the music itself that triggers the seizure (see *seizure, conditioned epileptic*). 2. An incorrect term when used to designate an epileptic seizure (generally of temporal lobe origin) during which the patient hears music. Such seizures belong to the group of *auditory hallucinatory epileptic seizures**.

Ling.: The term "musicogenic" is always understood in the sense of "being caused by music", not "causing music".

seizure, muttering epileptic. An obsolete term describing a type of *automatic epileptic seizure** in which the verbal automatisms consist of confused words uttered through clenched teeth.

seizure, myoclonic epileptic. 1. *Bilateral massive epileptic myoclonus** considered as an isolated epileptic seizure of unusually brief duration. For some authors, this represents the elementary form of convulsive generalized epilepsy. 2. Epileptic myoclonus repeated at very brief intervals for several seconds or minutes. Syn.: *myoclonic fit*. See *myoclonus, epileptic*.

seizure, myoclono-atonic epileptic. An *epileptic seizure** of very brief duration consisting of *bilateral massive epileptic myoclonus** immediately followed by an *epileptic drop attack**, the two manifestations being accompanied on the EEG by the spikes and the slow waves of a polyspike-wave discharge respectively. Such seizures, which do not belong to the category of *petit mal**, are observed almost exclusively in children suffering from chronic encephalopathy with more or less severe mental retardation.

seizure, non-convulsive epileptic. An *epileptic seizure** expressed clinically by any symptom other than convulsions. Contrary to general opinion, non-convulsive epileptic seizures are more frequent than convulsive ones. They include: (1) in the group of *generalized epileptic seizures**, all types of *absence** and all *akinetic** and *atonic epileptic seizures**; (2) in the group of *partial epileptic seizures**, all those with elementary sensory or autonomic symptomatology and all seizures of complex (psychic, psychosensory, and psychomotor) symptomatology.

seizure, occasional epileptic. An *epileptic seizure**, usually convulsive and generalized but sometimes with other manifestations, that occurs fortuitously in a non-epileptic person. (1) In the absence of any cerebral changes, the causal factor may be exogenous intoxication by a convulsant drug or agent (pentetrazol, bemegride, various insecticides and rat poisons), endogenous intoxication (e.g., gravidic or nephropathic), sudden withdrawal of a sedative drug (quick-acting barbiturates), fever in infants, etc. (2) The causal factor may be transitory cerebral changes (infectious, traumatic, vascular, etc.) that do not result in *epilepsy** proper (see *epilepsy, acute*). Such seizures, which are more likely to occur in persons predisposed to convulsions (see *predisposition, convulsive*), do not constitute true epilepsy.

seizure, oculoclonic epileptic. A *versive epileptic seizure** manifested by lateral rhythmic clonic movements of both eyeballs, often terminating in a tonic lateral deviation. It is due to neuronal discharge in the contralateral occipital area. Syn.: *epileptic nystagmus*.

seizure, oculogyric epileptic. A *versive epileptic seizure** manifested solely by tonic lateral conjugate deviation of the eyes. It results from neuronal discharge in the contralateral frontal adversive area. Oculogyric epileptic seizures must of course be distinguished from non-epileptic spasms of the muscles controlling conjugate deviation of the eyes (see *crisis, oculogyric*).

seizure, olfactory elementary epileptic. A type of *partial epileptic seizure** consisting exclusively or mainly of elementary olfactory manifestations with no corresponding external stimuli (parosmia) that the subject is generally unable to identify, although he usually describes them as being unpleasant. Such seizures result from neuronal discharge in the uncinate cortex. They must be distinguished from *olfactory illusional epileptic seizures** and from *olfactory hallucinatory epileptic seizures**. See *epilepsy, uncinate; sensation, epileptic*.

seizure, olfactory epileptic. 1. A type of *partial epileptic seizure** consisting exclusively or mainly of elementary olfactory manifestations with no corresponding external stimuli (see *seizure, olfactory elementary epileptic*), complex olfactory manifestations or perceptions with no corresponding external stimuli (see *seizure, olfactory hallucinatory epileptic*), or altered olfactory perceptions (see *seizure, olfactory illusional epileptic*). Such seizures result from neuronal discharge in the specific olfactory cortex or its vicinity.

See *epilepsy, uncinate*. 2. An incorrect and obsolete term when used to designate epileptic seizures (wrongly called "reflex") supposedly triggered by a lesion of the nasal mucosa or by a smell. There is no evidence for the existence of olfactory reflex epileptic seizures.

seizure, olfactory hallucinatory epileptic. A type of *partial epileptic seizure** characterized by complex olfactory manifestations or perceptions with no corresponding external stimuli. These perceptions are usually of an unpleasant nature, e.g., a smell of putrid organic compounds (excreta), often burned (charred flesh) or undergoing decomposition (rotten eggs); an odour of pharmaceuticals; etc. Such seizures result from neuronal discharge in the anterior temporal, and in particular the uncinate, region. They must be distinguished from *olfactory illusional epileptic seizures** and from *olfactory elementary epileptic seizures**. See *epilepsy, uncinate; hallucination, epileptic.*

seizure, olfactory illusional epileptic. A type of *partial epileptic seizure** characterized by perceptive *epileptic illusions** in which the sense of smell is suddenly reinforced (hyperosmia), causing the subject to perceive odours in his environment to which he had previously been adapted. Such seizures result from neuronal discharge in the temporo-uncinate cortex. They should if possible be distinguished from *olfactory elementary epileptic seizures** and from *olfactory hallucinatory epileptic seizures**, although this is sometimes a difficult distinction to make. In the illusional attacks the subject often states that he perceives an odour of "closeness", of "sweating", or of tobacco. These are actually unusual perceptions due to the hyperosmia. See *epilepsy, uncinate.*

seizure, olfactory reflex epileptic. See *seizure, olfactory epileptic* (2).

seizure, oral epileptic. Syn. for *oropharyngeal epileptic seizure.*

seizure, oropharyngeal epileptic. 1. A type of *partial epileptic seizure** with varying clinical features whose central symptom is hypersalivation. This symptom sometimes occurs alone (*salivatory epileptic seizure**). In other cases it is combined with rhythmic movements of the lips and tongue followed by swallowing, reminiscent of the behaviour of a person who is tasting food. In some instances the hypersalivation may also be accompanied by automatic mastication (*masticatory epileptic seizure**). In still other cases the oropharyngeal symptoms may be followed by other epileptic phenomena of a psychic, psychosensory, or psychomotor nature resulting in very complex seizures. The seizures are due to neuronal discharge in the insula or its vicinity or in the opercular region. See *epilepsy, insular; epilepsy, opercular.* Syn.: *oral epileptic seizure; pharyngeal epileptic seizure.* 2. An incorrect and obsolete term when used to designate epileptic seizures (wrongly called "reflex") supposedly triggered by a pharyngeal disorder (see *seizure, autonomic reflex epileptic*).

seizure, oropharyngeal reflex epileptic. See *seizure, oropharyngeal epileptic* (2).

seizure, orthostatic epileptic. An incorrect and obsolete term that was formerly used to describe those episodes of loss of consciousness, with or without convulsions, triggered by prolonged standing or by simply getting out of bed. Such attacks are now known to be orthostatic syncopes, simple or convulsive, and not epileptic seizures. See *syncope, convulsive.*

seizures, overlapping epileptic. *Serial epileptic seizures** that overlap so that one begins before the previous one has ended. Such overlapping is rare. See *status epilepticus.*

seizure, palilalic epileptic. A type of *partial epileptic seizure** consisting of the involuntary and irresistible repetition of a word or sentence and resulting from neuronal discharge in the supplementary motor area. This phenomenon is similar to that of *iterative epileptic vocalization* (see *seizure, vocal epileptic*). Syn.: *epileptic palilalia.*

seizure, paramnesic epileptic. Syn. for *dysmnesic epileptic seizure.*

seizure, partial epileptic. An *epileptic seizure** whose initial symptoms (motor, sensory, psychic, or autonomic) are not as extensive as those of generalized epileptic seizures and reflect a neuronal discharge more or less localized to one part of the brain. On the basis of anatomical, EEG, clinical, and radiological evidence, it is agreed that virtually all such seizures result from a localized discharge in the cerebral cortex. Depth recordings from the brain have shown that there also exist many subcortical

epileptic seizures that may or may not spread to the cerebral cortex (e.g., those of *amygdaloid epilepsy**). However, aside from the fact that the frequency of such seizures, as compared with those of cortical partial seizures, is undetermined, little is known about their symptomatology and they are almost impossible to diagnose with the information currently available. Hence, at present only cortical partial epileptic seizures can be precisely defined. Clinically, partial epileptic seizures vary greatly depending on the functions of the cortical neuronal population involved in the discharge. There exist: (1) partial seizures with elementary symptoms, subdivided into (*a*) seizures with motor symptoms (e.g., somatomotor, Jacksonian, and versive seizures), (*b*) seizures with sensory symptoms (e.g., somatosensory and visual seizures), and (*c*) seizures with autonomic symptoms (e.g., epigastric and abdominal seizures); (2) partial seizures with complex symptomatology involving higher-level cerebral activity, subdivided into (*a*) seizures with purely psychic symptoms (e.g., dysmnesic and ideational seizures), (*b*) seizures with psychosensory symptoms (illusional and hallucinatory seizures), and (*c*) seizures with psychomotor symptoms (automatic seizures). Electroencephalographically, partial epileptic seizures are usually characterized by an *ictal epileptic discharge** more or less localized to the part of the scalp that overlies the cortical area involved in the neuronal discharge (see *discharge, focal (electroencephalographic) epileptic*). The seizures may remain partial throughout their duration, which rarely exceeds a few minutes. However, the spread of the neuronal discharge around the initial focus may give rise to additional symptoms (e.g., symptoms of a somatomotor epileptic seizure may follow those of a somatosensory epileptic seizure when the discharge spreads from the post-Rolandic to the pre-Rolandic cortex). When the discharge spreads even farther, the partial seizure turns into a *unilateral epileptic seizure** or, more often, into a *generalized epileptic seizure** (most often tonic-clonic). When a partial seizure is more or less rapidly transformed into a generalized seizure it becomes a *secondarily generalized partial epileptic seizure*, which must be distinguished from an *epileptic seizure generalized from the onset*. According to the cortical area affected by the epileptic discharge or the lesion provoking it (providing EEG or radiological evidence of the discharge or lesion can be obtained), it is possible to classify partial epileptic seizures as follows: (*a*) seizures of the frontal adversive, secondary sensory, supplementary motor, and supplementary sensory areas; and (*b*) cingulate, frontal, insular, occipital, opercular, pararhinal, parietal, post-Rolandic, pre-Rolandic, uncinate, and (especially) temporal lobe seizures (see the corresponding epilepsies). Syn.: *focal epileptic seizure; local epileptic seizure; epileptic seizure of local onset.*

Ling.: The four terms "partial epileptic seizure", "focal epileptic seizure", "local epileptic seizure", and "epileptic seizure of local onset" are used interchangeably to describe seizures of which the most characteristic—those with somatomotor symptoms—were observed by Hippocrates in ancient times, by Areteus at the beginning of the Christian era, and thereafter by Erastus, Galen, Ambroise Paré, Pritchard, Bright, and Todd, before finally being recognized as distinct entities by Bravais and Hughlings Jackson. Of these authors, only three suggested a precise term for the somatomotor seizure: Pritchard (1822), Bravais (1827), and Jackson (beginning in 1863), who used respectively the terms "partial epilepsy", "hemiplegic epilepsy", and "unilateral epileptiform convulsions". Later, Charcot elegantly proposed replacing all three terms by "Jacksonian epilepsy"; however, at about the same time, Voisin thought it preferable to revert to the expression "partial epilepsy". The latter term gained wide acceptance when it was proved that seizures with many different symptoms could result from a localized brain discharge, the Jacksonian seizure being simply a typical example. With the development of neurophysiology and neurosurgery, it became evident that a punctiform stimulation of the cortex or a very limited cortical lesion was sufficient to trigger an epileptic seizure, and the expression "focal epilepsy" gained favour. More recently epileptologists, considering it very important to differentiate between initially generalized seizures and seizures generalized after a partial onset, proposed the term "epileptic seizure of local onset" to group together all partial epileptic seizures, whether secondarily generalized or not, as opposed to seizures generalized from the onset. If preference has been given here to the term "partial epileptic seizure", it is because this is the oldest and most widely used expression, and has been retained in the International Classification of Epileptic Seizures established by the International League against Epilepsy. It should be noted that the term is also more accurate in that the neuronal population discharging during the seizures occupies a large part of one hemisphere or even of the whole brain, and cannot be likened to a geometric "focus" or "locus".

seizure, petit mal. 1. Formerly, any *minor epileptic seizure**. 2. Nowadays, a seizure of *primary generalized epilepsy** accompanied on the EEG by a bilateral, synchronous, and symmetrical discharge of rhythmic 2.5-3.5/sec spike-and-wave complexes (*typical absence**) or sporadic polyspike-wave complexes (*petit mal myoclonus**). These two types of seizure may occur separately or concurrently in the same subject, or may be associated with *tonic-clonic epileptic seizures** (also called *grand mal seizures*). This definition excludes from the petit mal group: (1) *epileptic drop attacks**, which also show a polyspike-wave discharge but occur in subjects with encephalopathy and mental retardation; and (2) generalized epileptic seizures with other types of EEG discharge, particularly *atypical absences**. See *absence* (Expl.); *epilepsy, centrencephalic* (Expl.); *petit mal* (Expl.). Syn.: *petit mal.*

seizure, pharyngeal epileptic. Syn. for *oropharyngeal epileptic seizure.*

seizure, photogenic epileptic. Syn. for *visual reflex epileptic seizure.*

seizure, photosensitive epileptic. Syn. for *visual reflex epileptic seizure.*

seizure, pontobulbar. Syn. for *trunk fit.*

seizure, posterior fossa. Syn. for *cerebellar seizure.*

seizure, postural epileptic. An obsolete term formerly used to designate all *epileptic seizures** in which, owing to increased tonus of postural muscles, the body assumes an unnatural attitude or takes an unexpected position.

seizure, procursive epileptic. A *generalized epileptic seizure** (in the form of an *absence**) or, far more frequently, a *partial epileptic seizure** (usually of temporal lobe origin), characterized by very brief confusional ambulatory *automatisms** in which the subject takes a few steps or runs straight ahead, colliding with or overturning any obstacle. Procursive epileptic seizures must be distinguished from ictal or postictal *confusional automatisms**, which are more frequent and often longer-lasting; in the latter, the patient may walk or even drive a car through heavy city traffic in a well-organized way. See *seizure, ambulatory epileptic; seizure, automatic epileptic; fugue, epileptic.* Syn.: *cursive epileptic seizure.*

seizure, projective epileptic. A form of *illusional epileptic seizure** of the non-perceptive type in which the patient projects onto one of his acquaintances the ictal symptoms that he himself is experiencing. This type of illusion is sometimes combined with *epileptic autoscopy**.

seizure, psophogenic epileptic. Syn. for *auditory reflex epileptic seizure.*

seizure, psychic. See *seizure.*

seizure, psychic epileptic. A type of *partial epileptic seizure** with complex psychic symptoms that results from neuronal discharge in the associative cortex of the temporal lobe or, rarely, the frontal lobe. Three varieties may be distinguished: *ideational epileptic seizure**, *dysmnesic epileptic seizure**, and *affective epileptic seizure**. Syn.: *mental epileptic seizure.*

seizure, psychomotor. 1. See *seizure, psychomotor epileptic* (1). 2. Syn. for *temporal lobe seizure* (2).

seizure, psychomotor epileptic. 1. A time-honoured but undesirable synonym for *automatic epileptic seizure**. 2. Syn. for *temporal lobe seizure* (2).

Ling.: The term "psychomotor epileptic seizure" was formerly used to designate epileptic seizures characterized essentially by automatic psychomotor manifestations. When *temporal lobe epilepsy*, with seizures often characterized by psychomotor *automatisms**, was recognized as a separate entity, the term "psychomotor epileptic seizure" was gradually introduced as a synonym for "temporal lobe epileptic seizure", although similar automatisms may be observed in other types of generalized or partial epileptic seizure and although not all temporal lobe seizures are accompanied by automatisms. This terminological error has far-reaching implications. In order to avoid any ambiguity, it is therefore recommended that the term "psychomotor epileptic seizure" be discarded in favour of *automatic epileptic seizure*, just as the term "temporal lobe seizure" should be abandoned.

seizure, psychosensory epileptic. An *epileptic seizure** consisting mainly or exclusively of illusions or hallucinations.

Ling.: This term is not recommended and should be replaced by *illusional epileptic seizure** and *hallucinatory epileptic seizure**.

seizure, pyretic epileptic. Syn. for *febrile epileptic seizure.*

seizure, reading epileptic. A form of *epileptic seizure** induced by reading. It may occur as an *epileptic seizure generalized from the onset**, usually convulsive, caused by intermittent photic stimulation of the retina due to interrupted eye movements made when scanning a line of text: this is the "secondary", "extrinsic", or "sensory" variety of reading epileptic seizure, which is an example of *visual reflex epilepsy**. In other instances, it is a parieto-occipital *partial epileptic seizure** triggered by emotional or intellectual factors related to the text being read: this is the "primary", "intrinsic", or "perceptive" variety of reading epileptic seizure.

seizures, recurrent epileptic. *Epileptic seizures** that repeat at intervals. If the intervals are long, the attacks are characteristic of *epilepsy** proper. If the attacks occur at such brief intervals that they create a continuous epileptic condition, they are characteristic of *status epilepticus**. Syn.: *repeated epileptic seizures.*

seizure, reflex epileptic. A type of *epileptic seizure** induced by a well-defined sensory stimulus that produces volleys of afferent impulses and excessive response at different levels in the brain (reflex arcs). Reflex epileptic seizures must therefore be carefully distinguished from those provoked by non-sensory factors (see *seizure, evoked epileptic*). In certain cases reflex epileptic seizures may be equivalent to a genuine reflex, in the physiological sense of the word, with merely the intensity of the response being increased by the epilepsy. This is the case, for instance, in *bilateral massive epileptic myoclonus** (accompanied by a generalized spike-and-wave pattern on the EEG), which may be induced by a single flash of light in some light-sensitive epileptics and which is merely an exaggeration of the physiological, normally subclinical, photomotor reflex. More frequently, however, because of the changes brought about in the response by the epileptic process, the seizures induced merely show some similarity to a reflex. Such is the case, for example, in *tonic-clonic epileptic seizures** or *typical absences** induced by intermittent photic stimulation in certain light-sensitive epileptics who may show a self-sustained epileptic discharge of the reflex centres in response to the light flashes. In almost all cases, the seizures thus evoked display the clinical and EEG characteristics of *epileptic seizures generalized from the onset**, clearly indicating that the reflex centres are situated in the brain stem and that the primary sensory cortex does not play an essential part in their production. In fact, a sensory stimulus is often epileptogenic independently of its specific quality, and there is every reason to believe, for example, that most sound stimuli that give rise to an epileptic seizure do so through their startling effect when applied unexpectedly (see *epilepsy, startle*) rather than through any specific auditory response. Theoretically, there are as many varieties of reflex epileptic seizure as there are sensory modalities. However, if the extremely doubtful cases purportedly triggered by olfactory, gustatory, and vestibular stimuli are excluded, in practice there only remain *auditory**, *somatosensory**, and *autonomic reflex epileptic seizures**, all very rare, and *visual reflex epileptic seizures**, which are more common. Experimentally, reflex seizures have been induced that are identical to those encountered in human pathology, e.g., generalized epileptic seizures provoked by noise in certain rodents (see *seizure, auditory reflex epileptic*) and by light in certain monkeys (see *seizure, visual reflex epileptic*). It is also possible to produce in the animal partial reflex epileptic seizures involving mechanisms of focalized cortical reflection; to date these mechanisms have not been demonstrated in man (*Amantea's epilepsy, Clementi's epilepsy*). Syn.: *sensory epileptic seizure* (incorrect).

Ling.: Not all authors agree that the term "reflex epileptic seizure" should be limited only to those seizures that are caused by a sensory stimulus. Some, who support a more clinical conception of the word "reflex"—much broader than the physiological one—include among the reflex epileptic seizures all reading and visual exploration seizures, musicogenic epileptic seizures, seizures triggered by emotions, etc. This broader concept covers almost all the *evoked epileptic seizures**.

seizures, repeated epileptic. Syn. for *recurrent epileptic seizures.*

seizure, retrocursive epileptic. An *epileptic seizure** characterized by walking backwards as a result of an increase in postural tone, which curves the trunk in extension. This is practically always a generalized epileptic seizure of short duration and, more specifically, an absence. See *absence, hypertonic; absence, retrocursive.*

seizure, retropulsive epileptic. An *epileptic seizure** characterized by a bending backwards of the trunk in extension as a result of an increase in postural tone. This is practically always a generalized epileptic seizure of brief duration and, more specifically, an absence. See *absence, hypertonic; absence, retropulsive.*

seizure, rotatory epileptic. Syn. for *circumcursive epileptic seizure.*

seizure, salivatory epileptic. A type of *partial epileptic seizure** characterized clinically by salivation abundant enough to produce drooling at the corner of the mouth or the repeated automatic swallowing of saliva. The hypersalivation is often accompanied by other ictal signs and by clouding of consciousness. Such seizures result from neuronal discharge in the insula or its vicinity or in the opercular region. See *seizure, oropharyngeal epileptic.*

seizure, secondarily generalized partial epileptic. See *seizure, generalized epileptic; seizure, partial epileptic.*

seizure, secondarily generalized epileptic. See *seizure, generalized epileptic.*

seizure, "see-saw" epileptic. A form of *unilateral epileptic seizure** during which the symptoms change sides. Very rarely *partial epileptic seizures** may present this feature; this is the case, for example, in certain temporal lobe seizures involving one hemisphere before the other and in which, therefore, adversion occurs first on one side, then on the other. On the whole, however, the alternating "see-saw" feature is so peculiar to *unilateral epileptic seizures** that, whenever it is observed, and until proven otherwise, the diagnosis of unilateral seizure must be made against that of partial seizure.

seizure, self-induced epileptic. A rare type of epileptic seizure deliberately induced by the patient. It is almost always a *generalized epileptic seizure**, usually in the form of an *absence**, and occurs mainly in children, often mentally retarded, who deliberately provoke their seizures by some manoeuvre they have discovered. The attack is most often a *visual reflex epileptic seizure**, which the patient triggers by looking towards the sun and rhythmically interrupting its rays by rapidly moving his fingers back and forth in front of his eyes. Less frequently, absences are self-induced by a patient simply by closing his eyes, by intently fixing his gaze on a high-contrast object (see *epilepsy, gaze* (2)), or by hyperventilating. Syn.: *auto-induced epileptic seizure; auto-provoked epileptic seizure.*

seizure, sensory elementary epileptic. A type of *partial epileptic seizure** whose sole or essential feature, often occurring initially, consists of elementary sensory manifestations with no corresponding external stimuli. These manifestations may involve the somatosensory, visual, auditory, gustatory, olfactory, or vestibular modalities (see *sensation, epileptic; seizure, vertiginous epileptic; seizure, somatosensory elementary epileptic; seizure, visual elementary epileptic;* etc.). Such seizures result from neuronal discharge in a specific sensory area. They must be distinguished from illusional and hallucinatory seizures, which may affect the same sensory modalities but have completely different clinical features and significance (see *seizure, illusional epileptic; seizure, hallucinatory epileptic; hallucination, epileptic; illusion, epileptic*). When followed by other ictal phenomena, especially of the convulsive type, the sensory manifestations are sometimes incorrectly called an *aura**.

seizure, sensory epileptic. 1. A type of *partial epileptic seizure** whose sole or essential feature, often occurring initially, consists of simple or complex sensory manifestations. These may include elementary sensory manifestations with no corresponding external stimuli, i.e., *epileptic sensations** (see *seizure, sensory elementary epileptic*); complex sensory manifestations or perceptions with no corresponding external stimuli, i.e., *epileptic hallucinations** (see *seizure, hallucinatory epileptic*); or altered perceptions, i.e., *epileptic illusions** (see *seizure, illusional epileptic*). Sensory epileptic seizures are subdivided according to the specific sensory area involved in the neuronal discharge, which may affect the auditory, gustatory, olfactory, somatosensory, visual, or vestibular areas of the cortex (see *seizure, auditory epileptic; seizure, gustatory epileptic,* etc.; and *seizure, vertiginous epileptic*). 2. An incorrect term when used to designate epileptic seizures triggered by a sensory stimulus (see *seizure, reflex epileptic*).

seizures, serial epileptic. *Recurrent epileptic seizures** occurring in series or groups.

seizure, sight-sensitive epileptic. Syn. for *visual reflex epileptic seizure.*

seizure, simple adversive epileptic. Syn. for *conscious adversive epileptic seizure.*

seizure, single epileptic. An isolated *epileptic seizure** that does not recur. It is usually a generalized convulsive epileptic seizure occurring unexpectedly in a person predisposed to convulsions (*occasional epileptic seizure**), but it may also be a *spontaneous epileptic seizure** of any type. Even in the latter case, however, a person who has had a single epileptic seizure must not be considered an epileptic.

seizure, somataesthetic epileptic. Syn. for *somatosensory epileptic seizure.*

seizure, somato-inhibitory epileptic. A very rare type of *partial epileptic seizure** that, by an as yet undetermined mechanism, is manifested exclusively or mainly by paralysis or paresis of a part of one side of the body. It appears to be due to neuronal discharge in certain inhibitory structures of the contralateral pre-Rolandic cortex. These seizures must be distinguished from generalized *atonic epileptic seizures**, which are very common, from *unilateral atonic epileptic seizures**, and, of course, from transient *postictal epileptic paralysis**.

seizure, somatomotor epileptic. A type of *partial epileptic seizure** expressed exclusively or mainly as tonic or clonic *convulsions* of any part of one side of the body, which may either remain localized or spread to neighbouring areas via a *Jacksonian march** (see *seizure, Jacksonian epileptic*). Consciousness is unimpaired during these seizures, which result from neuronal discharge in the pre-Rolandic cortex of the contralateral hemisphere; however, they may become secondarily generalized, with loss of consciousness.

seizure, somatosensory elementary epileptic. A type of *partial epileptic seizure** characterized exclusively or mainly by elementary somataesthetic manifestations with no corresponding external stimuli (paraesthesiae). The paraesthesiae are either of a negative type (numbing) or, more commonly, positive (pins and needles, formication, rarely pain). Such seizures result from neuronal discharge in the post-Rolandic region; the paraesthesiae are felt on the side of the body contralateral to the discharging cortex and may spread via a *Jacksonian march**, thus justifying designation of the attacks as *Jacksonian sensory epileptic seizures**. Consciousness is preserved during the attacks, which often turn gradually into somatomotor seizures. Somatosensory elementary epileptic seizures must be distinguished from *somatosensory illusional epileptic seizures** and from *somatosensory hallucinatory epileptic seizures**. See *epilepsy, post-Rolandic; sensation, epileptic.*

seizure, somatosensory epileptic. 1. A type of *partial epileptic seizure** characterized exclusively or mainly by elementary somataesthetic manifestations with no corresponding external stimuli (see *seizure, somatosensory elementary epileptic*), complex somataesthetic manifestations or perceptions with no corresponding external stimuli (see *seizure, somatosensory hallucinatory epileptic*), or altered somataesthetic perceptions (see *seizure, somatosensory illusional epileptic*). Such seizures result from neuronal discharge in the specific somatosensory cortex or its vicinity. See *epilepsy, post-Rolandic; epilepsy, parietal.* Syn.: *somataesthetic epileptic seizure.* 2. An incorrect term when used to designate *somatosensory reflex epileptic seizures.*

seizure, somatosensory hallucinatory epileptic. A type of *partial epileptic seizure** during which the subject experiences complex somataesthetic perceptions with no corresponding external stimuli, giving him, for example, the impression of possessing a supernumerary limb. Such seizures result from neuronal discharge in the temporoparietal cortex. They must be distinguished from *somatosensory illusional epileptic seizures** and from *somatosensory elementary epileptic seizures**. See *epilepsy, post-Rolandic; hallucination, epileptic.*

seizure, somatosensory illusional epileptic. A type of *partial epileptic seizure** characterized by perceptive *epileptic illusions** in which part or all of the body is perceived in a deformed manner. In *stataesthetic illusions,* there is an illusion of an abnormally positioned or distorted (shortened or enlarged) limb; in *kinaesthetic illusions,* the subject "perceives" an immobile limb moving or, conversely, feels he cannot move an unparalysed limb. Such seizures result from neuronal discharge in the temporoparietal cortex. They should be distinguished from *somatosensory hallucinatory epileptic seizures** and from *somatosensory elementary epileptic seizures**. See *epilepsy, parietal.*

seizure, somatosensory reflex epileptic. A type of *reflex epileptic seizure** supposedly evoked by exteroceptive somatosensory afferent impulses. The

existence of such a type of epileptic seizure is doubtful, as (1) the very rare cases of *auricular epilepsy** mentioned in the early literature lack objective evidence, and so-called *stump epilepsy** is actually a clonus of spinal origin, sometimes associated with neuropathic manifestations; (2) the equally rare cases of epileptic seizures evoked by a sudden contact (*tap epilepsy**) or triggered by a violent unexpected movement (*movement epileptic seizure**) appear to be due less to an exteroceptive stimulus than to the reaction of surprise and the proprioceptive afferent impulses accompanying this reaction (see *epilepsy, startle*). Syn.: *somatosensory epileptic seizure* (incorrect).

seizure, sonosensory epileptic. Syn. for *auditory reflex epileptic seizure.*

seizure, spontaneous epileptic. An *epileptic seizure** that occurs independently of any factor known to be liable to provoke or even to favour it. Syn.: *fortuitous epileptic seizure.* Ant.: *evoked epileptic seizure.*

seizure, static epileptic. An incorrect and obsolete term used by Ramsay Hunt to describe the briefest variety of *atonic epileptic seizure**, i.e., the *epileptic drop attack**.

Ling.: For Hunt, the word "static" implied simply that the epileptic discharge disturbed structures responsible for posture. The word "atonic" is preferable as it explains the astatic phenomenon by the loss of muscle tone.

seizure, sternutatory epileptic. An obsolete term describing an *autonomic epileptic seizure**, generally resembling a *typical absence**, accompanied by repeated sneezing.

seizure, stertorous epileptic. An incorrect and obsolete term formerly used to designate *apoplectic epileptic seizures** with stertor, occurring mainly at night. It is probable that such cases corresponded to unnoticed *tonic-clonic epileptic seizures** in which only the postictal stertorous coma was observed.

seizure, subclinical epileptic. An *epileptic seizure** unaccompanied by any detectable clinical manifestation and expressed only by a *subclinical (electroencephalographic) epileptic discharge**. *Subclinical absences** and certain *partial epileptic seizures** (see *epilepsy, frontal; epilepsy, parietal*) are the best examples of this type. Also in this category are some seizures occurring during certain forms of tonic *status epilepticus**, which initially are clinically apparent but subsequently are expressed only by their EEG discharge and by small changes in the heart or respiratory rate. These changes can be detected only by simultaneous electrocardiographic and pneumographic recordings.

Ling.: The prefix "sub-" is used in the sense of "slightly" or "a little", as in the terms "subdelirious", "subfebrile", and "subicteric".

seizure, sudatory epileptic. An obsolete term describing a type of *autonomic epileptic seizure** in which sweating is the predominant manifestation.

seizure, sympathetic epileptic. Incorrect syn. for *autonomic epileptic seizure.*

seizure, temporal. Syn. for *temporal lobe seizure* (1).

seizure, temporal lobe. 1. A time-honoured but undesirable term designating *epileptic seizures**, whatever their symptoms, in which the neuronal discharge or the lesion provoking it has been objectively confirmed by EEG or radiology to be situated in the temporal lobe. It would be more accurate to use the term *temporal* (or *temporal lobe**) *epileptic seizure**. See *epilepsy, temporal lobe.* Syn.: *temporal seizure.* 2. An incorrect term when used to designate epileptic seizures with psychic, psychosensory, or particularly psychomotor symptoms. It is now established that these seizures are not necessarily due to a discharge or lesion in the temporal lobe. See *seizure, automatic epileptic.* Syn. (both also incorrect): *psychomotor epileptic seizure; psychomotor seizure.*

seizure, temporal lobe epileptic. 1. Incorrect syn. for *automatic epileptic seizure.* See *seizure, temporal lobe* (2). 2. Preferred syn. for *temporal lobe seizure.* See *seizure, temporal lobe* (1).

seizure, tetanoid. Obsolete syn. for *decerebrate seizure.*

seizure, tetanoid epileptic. Obsolete syn. for *tonic epileptic seizure.*

seizure, tonic epileptic. A type of *generalized epileptic seizure** of brief duration (usually 5–20 seconds) characterized as follows: (1) Clinically, by clouding of consciousness, autonomic discharge "en masse",

and a bilateral and symmetrical tonic *spasm** predominating in the postural muscles, usually causing the body to assume a position of partial opisthotonos with semiflexed arms in elevation above the head. Depending on whether the contraction is limited to the trunk (axial) muscles, extends to the root of the limbs, or affects the whole of the limbs, the respective terms *axial tonic, axorhizomelic tonic*, and *global tonic epileptic seizures* are sometimes used. (2) Electroencephalographically, by desynchronization or by a *recruiting epileptic rhythm**. Both clinically and electroencephalographically, tonic seizures are sometimes considered as *tonic-clonic epileptic seizures** limited to the initial tonic phase, or as hypertonic *atypical absences**. They occur almost exclusively in infants, particularly in the presence of diffuse brain disease. See *syndrome, Lennox-Gastaut*. Syn. (all obsolete): *tetanoid attack; tetanoid epileptic seizure; trunk fit (pro parte)*.

Ling.: The terms *cerebellar seizure**, *cerebellar fit**, and *decerebrate seizure**, which designate non-epileptic tonic seizures that are very similar in appearance to tonic epileptic seizures, must never be used as synonyms for these epileptic attacks.

seizure, tonic-clonic epileptic. A type of *generalized epileptic seizure** lasting approximately one minute and characterized as follows: (1) Clinically, by loss of consciousness, autonomic discharge "en masse", and bilateral symmetrical convulsions generalized to the whole body; the latter are initially tonic and subsequently become clonic. (2) Electroencephalographically, by a *recruiting epileptic rhythm** occurring during the tonic contraction and periodically interrupted by slow waves during the clonic contractions. The seizure always terminates in a stertorous coma lasting 5–10 minutes. It is crucial to distinguish tonic-clonic seizures generalized *from the onset* from those that are *secondarily* generalized. See *seizure, generalized epileptic; seizure, partial epileptic*. Syn.: *grand mal seizure; major epileptic seizure; grand mal*.

seizure, torsion epileptic. Obsolete syn. for *gyratory epileptic seizure*.

seizure, tremulous epileptic. A type of *generalized epileptic seizure** described by early authors but of doubtful existence, supposedly characterized by jerks repeated at such short intervals as to give the impression of a fine tremor or vibration (*epileptic tremor*). This type of seizure must be distinguished from: (1) the vibratory phase of a *tonic-clonic epileptic seizure**, intermediate between the tonic and the clonic phases; and (2) tremors that may occur during *epileptic automatisms**.

seizure, true atonic epileptic. See *seizure, atonic epileptic*.

seizure, tussive epileptic. An obsolete term that was used to designate an *autonomic epileptic seizure**, generally of the *typical absence** type, accompanied by bouts of coughing. Such a seizure must, of course, be distinguished from tussive syncope, which is not a syncope accompanied by cough but one provoked by a fit of coughing. There is no such thing as an epileptic seizure provoked by coughing.

seizure, uncinate. 1. A time-honoured but undesirable term designating the seizures of *uncinate epilepsy**, whose symptomatology is variable but generally includes a *dreamy state**. It would be more correct to use the term *uncinate epileptic seizure*. 2. An incorrect term when used to designate epileptic seizures characterized by a *dreamy state**. It is now established that these seizures are not necessarily due to an epileptic discharge of the uncus.

seizure, uncinate epileptic. Preferred syn. for *uncinate seizure*. See *seizure, uncinate* (1).

seizure, unconscious adversive epileptic. A type of *adversive epileptic seizure** in which deviation of the eyes and head is believed to be preceded by loss of consciousness. It presumably results from a discharge in the extremity of the frontal lobe (or of the temporal lobe) that spreads secondarily to the frontal adversive area.

seizure, unilateral atonic epileptic. See *seizure, unilateral epileptic*.

seizure, unilateral clonic epileptic. See *seizure, unilateral epileptic*.

seizure, unilateral epileptic. An epileptic seizure with all the clinical features of a *generalized epileptic seizure** but whose motor manifestations occur predominantly or only on one side of the body. It is thus possible to distinguish: (1) *unilateral tonic-clonic epileptic seizures* (syn.: *asymmetrical tonic-clonic epileptic seizures; hemitonic-clonic epileptic seizures*);

(2) *unilateral tonic epileptic seizures* (syn. : *asymmetrical tonic epileptic seizures; hemitonic epileptic seizures*); (3) *unilateral clonic epileptic seizures* (syn. : *asymmetrical clonic epileptic seizures; hemiclonic epileptic seizures*); (4) *unilateral atonic epileptic seizures* (syn. : *asymmetrical atonic epileptic seizures; hemiatonic epileptic seizures; epileptic hemiplegia* (incorrect)); (5) *complex absences* with unilateral motor symptoms (e.g., *atonic* or *myoclonic absence* involving one side of the body only). Electroencephalographically, unilateral epileptic seizures are accompanied by a *generalized epileptic discharge** appropriate for the relevant clinical variety but with an amplitude usually much greater on the contralateral half of the scalp. Unilateral epileptic seizures are quite peculiar to children, in whom, depending on the case, they may be considered as either (1) an *epileptic seizure generalized from the onset* with highly asymmetrical features (nothing is yet known of the cause of this asymmetry, which may involve either hemisphere during successive seizures or even during the same seizure, a fact that explains the relatively high frequency of *alternating** and *"see-saw" epileptic seizures**); or (2) an *epileptic seizure of local onset* that becomes secondarily generalized on one side of the body (see *seizure, partial epileptic*), the side always remaining the same. Syn.: *asymmetrical epileptic seizure ; hemigeneralized epileptic seizure.*

seizure, unilateral epileptiform. An incorrect and obsolete term used by Hughlings Jackson to designate the *somatomotor epileptic seizures** with *Jacksonian march** (*Jacksonian epileptic seizures**) that he had described.

seizure, unilateral tonic epileptic. See *seizure, unilateral epileptic.*

seizure, unilateral tonic-clonic epileptic. See *seizure, unilateral epileptic.*

seizure, vasomotor epileptic. An obsolete term for *epileptic seizures** accompanied by marked vasomotor phenomena. See *seizure, autonomic epileptic.*

seizure, vasovagal epileptic. An incorrect and obsolete term formerly applied to non-epileptic ischaemic *seizures** and especially to *convulsive syncopes** caused by cerebral ischaemia secondary to systemic vasodepression.

seizure, vegetative epileptic. Syn. for *autonomic epileptic seizure.*

seizure, versive epileptic. A type of *partial epileptic seizure** in which the convulsion of bilateral and synergistic muscles produces conjugate deviation of the eyes, head, and sometimes the trunk, towards the side opposite the discharging hemisphere (*contraversive epileptic seizure*) or, very rarely, towards the same side (*ipsiversive epileptic seizure*). The following varieties are distinguished: (1) clonic conjugate deviation of the eyes (*oculoclonic epileptic seizure** or *epileptic nystagmus*), often ending in tonic ocular deviation and resulting from neuronal discharge in the occipital area; (2) tonic conjugate deviation of the eyes (*oculogyric epileptic seizure**), usually due to neuronal discharge in the frontal adversive area; (3) tonic conjugate deviation of the head and eyes, and tonic conjugate deviation of the trunk, head, and eyes (*adversive epileptic seizure**), both resulting from neuronal discharge in the frontal, temporal, or supplementary motor area (the latter is usually accompanied by elevation in abduction of the semiflexed ipsilateral arm, the patient looking at his raised fist); (4) rotation of the body following initial adversion, causing the subject to turn one or more times (*gyratory epileptic seizure**). See *epilepsy, frontal adversive area; epilepsy, supplementary motor area.*

seizure, vertiginous epileptic. 1. A type of *partial epileptic seizure** characterized mainly or exclusively by true sensations of vertigo. These are usually gyratory in type but are too imprecise to permit differentiation between elementary vertiginous sensations and vertiginous illusions or hallucinations (sensations of free-falling, of being raised up, etc.). Such seizures result from neuronal discharge in a still undetermined area of the cerebral cortex. They must be distinguished from those simple states of transitory confusion that are so common during epileptic seizures and that many patients refer to as "dizziness". Formerly, such a distinction was not made, and the term *epileptic vertigo* was incorrectly used as a syn. for *absence**. 2. An obsolete and incorrect term when used to designate epileptic seizures (wrongly called "reflex") supposedly triggered by impairment of the vestibular system or by vertigo. There is no evidence of the existence of vertiginous or vestibular reflex epileptic seizures.

seizure, vertiginous reflex epileptic. See *seizure, vertiginous epileptic* (2).

seizure, vestibular reflex epileptic. An *epileptic seizure** supposedly provoked by sensory vestibular afferent impulses. Although such seizures were described in old medical texts, there is no current evidence that they actually exist. See *seizure, vertiginous epileptic* (2).

seizure, visceral epileptic. Syn. for *autonomic epileptic seizure.*

seizure, visual elementary epileptic. A type of *partial epileptic seizure** characterized exclusively or mainly by fleeting elementary visual manifestations with no corresponding external stimuli (paropsia). These may be either negative (scotomata, hemianopia, amaurosis) or, more commonly, positive (sparks or flashes of light, i.e., phosphenes). Such seizures result from neuronal discharge in the specific visual occipital cortex, and the sensations appear in the visual field contralateral to the discharging hemisphere but can spread to the whole visual field. These seizures must be distinguished from *visual illusional epileptic seizures** and from *visual hallucinatory epileptic seizures**. See *epilepsy, occipital; sensation, epileptic.*

seizure, visual epileptic. 1. A type of *partial epileptic seizure** characterized mainly or exclusively by elementary visual manifestations with no corresponding external stimuli (see *seizure, visual elementary epileptic*), by complex visual manifestations or perceptions with no corresponding external stimuli (see *seizure, visual hallucinatory epileptic*), or by altered visual perceptions (see *seizure, visual illusional epileptic*). Such seizures result from neuronal discharge in the specific visual cortex or its vicinity. See *epilepsy, occipital.* 2. An incorrect term when used to designate *visual reflex epileptic seizures**.

seizure, visual exploration epileptic. A rare type of *epileptic seizure** produced by visual exploration. Such seizures are sometimes caused by intermittent photic stimulation of the retina resulting from interrupted eye movements when the patient is looking at an object with strong contrasts; this is the "extrinsic" or "sensory" variety, which comes under the heading of *visual reflex epileptic seizures**. The seizures may also be caused by emotional or intellectual factors related to the recognition of the explored object; this is the "intrinsic" or "perceptive" variety. When the explored object provoking the seizure is a written text, the attack is called a *reading epileptic seizure**.

seizure, visual hallucinatory epileptic. A type of *partial epileptic seizure** characterized by complex visual manifestations or perceptions in the absence of corresponding external stimuli. The subject witnesses colourful scenes of varying complexity, which have often been compared to those of the cinema. In some cases, the hallucinated scene is distorted or made smaller (illusional hallucinations of the Lilliputian type); and in rare instances, the subject sees his own image (*epileptic autoscopy**). Such seizures result from neuronal discharge in the temporo-occipital cortex. They must be distinguished from *visual illusional epileptic seizures** and from *visual elementary epileptic seizures**. See *epilepsy, occipital; hallucination, epileptic.*

seizure, visual illusional epileptic. A type of *partial epileptic seizure** characterized by perceptive *epileptic illusions** in which the objects appear distorted. Depending on the type of perceptive alteration, the following varieties can be distinguished: *polyoptic illusions* (monocular diplopia); *dysmetropsic illusions* (a change in size—macropsia or micropsia—, or a change in distance, i.e., impression of an approaching or retreating object that increases or decreases in apparent size—macroproxiopsia or microteleopsia); *plagiopsic illusions* (inclination of objects in a given plane of space); and *dysmorphopsic illusions* (distortion of objects, which appear transversely flattened —dysplatyopsia—or suddenly seem to change shape—metamorphopsia). Such seizures result from neuronal discharge in the temporo-occipital cortex. They must be distinguished from *visual hallucinatory epileptic seizures** and from *visual elementary epileptic seizures**. See *epilepsy, occipital.*

seizure, visual reflex epileptic. The most frequent type of *reflex epileptic seizure**, triggered by usually intermittent and prolonged photic stimulation of the retina. Depending on the type of such stimulation, at least two varieties may be distinguished: (1) seizures provoked by intermittent light, such as: (*a*) light coming through foliage or reflected on the sea or the snow; (*b*) sunlight interrupted repeatedly by a row of trees as seen from a moving car, or the flashes of sunlight seen through a helicopter rotor; (*c*) intermittent light of relatively low frequency (5–25 cycles per second), which can be produced by a stroboscope or by a television set when functioning poorly or when the viewer is too close to the screen (see *epilepsy, television*); (2) seizures provoked by the visual exploration of an intensely illuminated text or of an object

presenting strong contrasts; under such circumstances intermittent retinal stimulation is obviously caused by the sudden jerky displacement of the retina in relation to the image formed, occurring during the interrupted eye movements (see *seizure, visual exploration epileptic; seizure, reading epileptic; epilepsy, gaze*). In the restricted sense in which *reflex epileptic seizure* has been defined, it is noteworthy that, whatever the mode of stimulation, visual reflex epileptic seizures always take the form of an *epileptic seizure generalized from the onset**, as either massive myoclonus, a tonic-clonic seizure, or a typical absence. Syn.: *light-sensitive epileptic seizure; photogenic epileptic seizure; photosensitive epileptic seizure; sight-sensitive epileptic seizure; visual epileptic seizure* (incorrect).

Ling.: Of all the above-mentioned terms, "photogenic epileptic seizure" is the one most widely used, although in everyday language the term "photogenic" may have different connotations (producing light—but not produced by light; or, in photography, enhancing light).

seizure, vocal epileptic. A *generalized** or, more frequently, *partial epileptic seizure** characterized either by an interruption of speech independent of any type of true aphasia (*epileptic speech arrest**), or by continuous articulation or rhythmic modulation of a vowel (*epileptic vocalization*). If the articulation is repeated several times, it is termed *iterative epileptic vocalization*, which is similar to the *palilalic epileptic seizure**. Partial epileptic seizures with vocal manifestations usually result from a discharge in the inferior Rolandic region or the supplementary motor area. See *seizure, aphasic epileptic.*

sensation, autonomic epileptic. A sensation that is often the initial and sometimes the only manifestation of *partial epileptic seizures** resulting from neuronal discharge in the temporo-insulo-orbital region. Such sensations may be of several types, including digestive (dryness of the mouth, tightening of the throat, stationary or ascending epigastric discomfort, abdominal pain); cardiac (tachycardia, irritability of heart); respiratory (laryngeal irritation, suffocation, oppression); and vasomotor (sensations of heat or cold). See *seizure, autonomic epileptic.*

sensation, cephalic epileptic. An abnormal sensation, difficult to describe (a feeling of heaviness, emptiness, warmth, etc.), affecting the head and occurring at the onset of some epileptic discharges, usually in the temporal lobe, the inferior Rolandic area, or the secondary or supplementary sensory area. Syn.: *cephalic aura.*

sensation, dreamy. Syn. for *dreamy state.*

sensation, epigastric epileptic. See *seizure, epigastric epileptic.*

sensation, epileptic. An elementary sensory manifestation with no corresponding external stimuli occurring as the sole or essential (and often initial) clinical feature of *partial epileptic seizures** caused by discharge in a specific sensory area of the cortex. Depending on the discharging area, the sensations will be auditory, gustatory, olfactory, somatosensory, visual, or vertiginous (see *seizure, auditory elementary epileptic; seizure, gustatory elementary epileptic*, etc.; and *seizure, vertiginous epileptic*). Certain seizures with autonomic manifestations (e.g., *epigastric epileptic seizures**) are accompanied by sensory symptoms that may be considered as *autonomic epileptic sensations**. When followed by other ictal manifestations, particularly convulsions, epileptic sensations are sometimes erroneously called an *aura**. See *seizure, sensory elementary epileptic.*

sensation, general somatic epileptic. An abnormal sensation, difficult to define (usually described as a feeling of heaviness, weakness, crispation, cold, etc.), affecting the entire body but particularly the extremities and experienced at the onset of certain epileptic discharges, usually involving the temporal lobe, the mesial frontal region, the secondary sensory area, or the supplementary sensory area. See *epilepsy, secondary sensory area; epilepsy, supplementary sensory area.* Syn.: *general somatic aura.*

sleep terror, epileptic. See *night terror, epileptic.*

somnambulism, epileptic. An incorrect term as, by definition, somnambulism (or sleep-walking) is never epileptic. It is obviously possible, although very rare, for an epileptic subject to have a nocturnal seizure characterized by *ambulatory automatisms**, but these should be called *epileptic ambulatory automatisms of sleep* and never "epileptic somnambulism".

sounds, clonic. See *cry, epileptic.*

spasm. 1. Classically, any involuntary muscle contraction of central or peripheral nervous origin; when

of central origin, spasms are often epileptic in nature. Spasms may, however, have many etiologies other than epilepsy, such as hypocalcaemia (tetany), poisoning (e.g., by strychnine), psychoaffective imbalance (hysteria), etc. In this frame of reference, *spasm* is synonymous with *convulsion** (1). This is why in the French medical literature a careful distinction has always been made between *tonic spasms* and *clonic spasms*, according to whether the contraction is continuous or interrupted. 2. At present, any continuous involuntary muscle contraction, that is to say, a *tonic spasm*. See *convulsion* (2).

spasm, clonic. See *spasm*.

spasm, infantile. A *tonic epileptic seizure** of brief duration (1–3 seconds) seen in infants suffering from *West's syndrome**, an encephalopathy characterized by an arrest of psychomotor development and by *hypsarhythmia**. See *epilepsia nutans; salaam tic* (Ling.). Syn.: *spasm in flexion (of the infant); infantile massive myoclonus (pro parte); propulsive petit mal* (incorrect); *salaam attack; Salaamkrampf*.

spasm, sobbing. An anoxo-asphyxial *seizure** in infancy displaying the clinical and EEG characteristics of lipothymia, syncope, or *convulsive syncope**, and associated with marked cyanosis. These manifestations occur after a protracted sobbing episode leading to panting bradypnoea, which in turn produces excessive sweeping of the dead spaces without effective alveolar ventilation, i.e., true asphyxia. Hence they have nothing in common with epilepsy, from which they must be carefully distinguished. On the other hand, they are very similar to *breath-holding spells**, with which they are often associated and indeed confused. See *convulsions, infantile*.

Ling.: Since these anoxo-asphyxial manifestations are not always convulsive it would be better to call them "sobbing fits", but "sobbing spasm" has become the accepted term.

spasm, tonic. See *spasm*.

spasm in flexion (of the infant). Syn. for *infantile spasm*.

spasmus nutans. 1. A term, not recommended, describing an *epileptic seizure** occurring in children in which the head drops to the chest, owing to a loss of tone of the neck muscles (see *attack, epileptic drop*), or to a tonic spasm in flexion due to contraction of the anterior neck muscles (see *spasm, infantile*). 2. Syn. for *salaam tic*.

Ling.: This term is not recommended because it refers to two different types of epileptic seizure and to one non-epileptic phenomenon.

speech arrest, epileptic. An *ictal epileptic manifestation** during which the subject is unable to utter a single word, although his "internal language" (thought processes) is completely intact. It is caused by a neuronal discharge usually involving the inferior Rolandic area or, more rarely, the supplementary motor area of either hemisphere. Epileptic speech arrest must be distinguished from *aphasic epileptic seizures**, which result exclusively from discharges in inferior frontal or temporoparietal regions of the dominant hemisphere.

spell. See *attack*.

spell, breath-holding. An anoxo-ischaemic *seizure** in infancy displaying the clinical and EEG characteristics of lipothymia, syncope, or *convulsive syncope**, with marked cyanosis. These manifestations occur after a brief phase of forced-expiration apnoea, itself succeeding a short sobbing spell or a cry. The forced-expiration apnoea is too brief to cause serious asphyxia but it results in deficient filling of the atria and a fall in cardiac output, partially compensated for by reflex tachycardia. Immediately after the apnoea the tachycardia gives way to reflex bradycardia, and cerebral ischaemia ensues, which is all the more pronounced since the brain is already partially ischaemic from the decrease in cardiac output. Such manifestations have nothing in common with epilepsy, from which they must be carefully distinguished; on the other hand, they are very similar to *sobbing spasms**, with which they are often associated and indeed confused. See *convulsions, infantile*.

state, dreamy. A state peculiar to some *epileptic seizures** of temporal lobe origin, during which the patient feels as though he were living in a dream. The subject may grasp his surroundings poorly and thus experience *epileptic illusions** of incoherence and unreality (*epileptic dreamy illusions*), or he may have true *epileptic hallucinations**, generally visual, which, owing to lessened vigilance or narrowing of the field of consciousness, hold the patient spellbound like the images of a dream. The dreamy state is not necessarily due, as is assumed by some authors, to

epileptic discharge in the uncus (see *seizure, uncinate*). Syn.: *dreamy sensation; oneiroid epileptic state; oneirocritia* (obsolete).

state, epileptic twilight. A transient psychic change occurring during or after an *epileptic seizure**, usually one of temporal lobe origin, and characterized by reduced alertness with narrowing of the field of consciousness resulting in a "hazy" and "blurred" perception of the surroundings. Such states may be classed as intermediate between confusional states (see *confusion, epileptic*), in which dissolution of consciousness is more complete, and *dreamy states**, in which fantasy is prevalent.

state, oneiroid epileptic. Syn. for *dreamy state.*

status, absence. An *absence** that is sufficiently repeated or prolonged to constitute a form of *status epilepticus**. Clinically, absence status is characterized essentially or exclusively by some degree of clouding of consciousness. It may last for hours or even days, and may lead to an *epileptic fugue**. Electroencephalographically, it is only rarely accompanied by a discharge of 3/sec spike-and-wave complexes, continuous or discontinuous, such as are seen in *typical absences**. Usually the discharge consists of spike-and-wave or polyspike-wave complexes repeated more or less rhythmically and sometimes interrupted by slow rhythms of varying frequency. The ictal condition of absence status must be distinguished from: (1) postictal confusional states of long duration, a rare complication of particularly severe seizures; (2) confusional states of other types occurring independently of seizures in certain patients with epilepsy. See *confusion, epileptic.* Syn.: *petit mal status; acute epileptic dementia* (incorrect and obsolete); *epileptic stupor* (obsolete).

Ling.: Though widely used, the term "petit mal status" is not advised since: (1) the EEG pattern of absence status is only rarely that of true petit mal absences (*typical absences*); (2) absence status is more often observed in persons with *atypical absences** than in those who display typical absences; in other words, it is more frequent in the *Lennox-Gastaut syndrome** than in the *primary generalized epilepsies**; (3) absence status can occur even in persons who never develop absences of any kind in the intervals and who have no history of such attacks.

status, petit mal. Syn. for *absence status.*

status epilepticus. A condition characterized by an *epileptic seizure** that is sufficiently prolonged or repeated at sufficiently brief intervals so as to produce an unvarying and enduring epileptic condition. This definition is strictly etymological, as the word "status" implies a "fixed and lasting state" and "epilepticus" defines the mechanism. Today, such a broad definition of status epilepticus is more logical than that of earlier authors who limited it to repeated tonic-clonic seizures with hyperthermic coma, a condition that may lead to death if not arrested. There are as many types of status epilepticus as there are of epileptic seizure. They can be classified as follows: (1) *generalized status epilepticus*, subdivided into: (*a*) *convulsive generalized status epilepticus*: (i) tonic-clonic status epilepticus (grand mal status epilepticus), (ii) tonic status epilepticus, (iii) clonic status epilepticus, (iv) myoclonic status epilepticus; (*b*) *non-convulsive generalized status epilepticus* (see *status, absence*); (2) *unilateral status epilepticus,* which is always followed by hemiplegia and, at times, by permanent hemiplegia with or without resulting partial epilepsy (*hemiconvulsion-hemiplegia syndrome** and *hemiconvulsion-hemiplegia-epilepsy syndrome**); (3) *partial status epilepticus,* which has as many varieties as there are partial seizures, the most frequent being: (*a*) *somatomotor status epilepticus,* consisting of repeated *Jacksonian epileptic seizures** in the intervals of which *localized myoclonus** sometimes persists (see *epilepsia partialis continua*); (*b*) *psychomotor status epilepticus* in *temporal lobe epilepsy**, which usually produces a non-convulsive confusional state with *automatisms**, sometimes leading to an *epileptic fugue**.

status epilepticus, convulsive generalized. See *status epilepticus.*

status epilepticus, generalized. See *status epilepticus.*

status epilepticus, non-convulsive generalized. Syn. for *absence status.*

status epilepticus, partial. See *status epilepticus.*

status epilepticus, psychomotor. See *status epilepticus.*

status epilepticus, somatomotor. See *status epilepticus.*

status epilepticus, unilateral. See *status epilepticus.*

stupor, epileptic. 1. Stuporous *epileptic confusion**. 2. Obsolete syn., not recommended, for *absence status.*

susceptibility, convulsive. Syn. for *convulsive predisposition.*

symptom, signal. Syn. for *aura* (2).

symptom, warning. Syn. for *aura* (2).

syncope, convulsive. A syncope causing cerebral ischaemia sufficiently severe and persistent to provoke, after only 3–5 seconds, a 5–10 second *tonic spasm**, occasionally followed by a few *clonic movements** (see *seizure, decerebrate*). Any type of syncope, from the cardiac syncope of Adams-Stokes disease to the common reflex syncope so frequent in children, may be accompanied by convulsions. Care must therefore be taken at all ages to distinguish convulsive syncopes from *epileptic seizures**, which are completely unrelated. See *convulsions, infantile; convulsions, febrile; epilepsy, cardiac; epilepsy, pleural; epilepsy, television; seizure, brain-stem* (2); *seizure, orthostatic epileptic; spasm, sobbing; spell, breath-holding.*

syndrome, hemiconvulsion-hemiplegia. A syndrome consisting of a unilateral convulsive (hemiconvulsive) seizure or a unilateral convulsive condition in early childhood, followed by transient or permanent hemiplegia. When epilepsy follows as a sequela, it produces the *hemiconvulsion-hemiplegia-epilepsy syndrome**. Syn.: *hemiplegic epilepsy.* Abbreviation: *HH syndrome.*

syndrome, hemiconvulsion-hemiplegia-epilepsy. A syndrome consisting of a unilateral convulsive (hemiconvulsive) seizure or a unilateral convulsive condition in early childhood, followed by transient or permanent hemiplegia and, after a variable free interval, by the subsequent development of epilepsy, usually partial (on either side of the body). Syn.: *hemiplegic epilepsy.* Abbreviation: *HHE syndrome.*

syndrome, HH. Abbreviation for *hemiconvulsion-hemiplegia syndrome.*

syndrome, HHE. Abbreviation for *hemiconvulsion-hemiplegia-epilepsy syndrome.*

syndrome, Koževnikov's. Syn. (*pro parte*) for *epilepsia partialis continua.*

syndrome, Lennox-Gastaut. An encephalopathy of as yet undetermined origin occurring in children (usually between the ages of 2 and 8 years) or, rarely, in adolescents, and manifested by the frequent association of: (1) *tonic epileptic seizures**, *atonic epileptic seizures**, and *atypical absences** (occurring alone or together, or sometimes in combination with other types of seizure); (2) interictal diffuse slow spike-and-wave discharges; (3) mental retardation and radiological signs of cerebral atrophy. Syn.: *epileptic encephalopathy with diffuse slow spike-and-wave discharges; petit mal variant* (incorrect).

syndrome, Ramsay Hunt's. A misleading term applied to at least three different syndromes that are caused by cerebrospinal degeneration, often hereditary; characterized by *action myoclonus**, isolated or combined with spontaneous *sporadic myoclonus** or with *bilateral massive myoclonus**; and occasionally associated with certain types of *generalized epileptic seizure**: (1) A syndrome characterized by action myoclonus associated with a cerebellar (or cerebellospinal) syndrome, in which the EEG is more or less normal and never displays epileptic paroxysms, either spontaneous or induced by intermittent photic stimulation. (2) A syndrome similar to the above, but accompanied by spontaneous sporadic myoclonus. (3) A syndrome characterized by action myoclonus and by a cerebellar (or cerebellospinal) syndrome with or without spontaneous sporadic myoclonus, but associated with *epileptic seizures generalized from the onset** (*bilateral massive epileptic myoclonus**, *epileptic drop attacks**, *tonic** or *tonic-clonic epileptic seizures**) expressed on the EEG as epileptic paroxysms, sometimes spontaneous but usually induced by intermittent photic stimulation.

Expl.: The first of the above syndromes corresponds to Ramsay Hunt's *progressive cerebellar dyssynergia* (1914), whereas the other two correspond to certain cases described by the same author as *myoclonic cerebellar dyssynergia* (1921). At present there is great confusion in the use of this term, as some neurologists wrongly include in Ramsay Hunt's syndrome all myoclonic syndromes with a cerebellar or cerebellospinal syndrome, irrespective of the type of myoclonus and regardless of whether they are accompanied by epileptic seizures.

syndrome, Rorschach's epileptic. An incorrect term (uncommon in English) sometimes applied to those psychological disturbances revealed by the Rorschach test in epileptic patients. According to

Rorschach, this syndrome includes the following features: intense extratensive resonance with, at times, pure colour responses; lowering of formal control with confabulation; global apprehension and loss of detail responses; emphasis on symmetry; and perseveration, especially anatomical. For Piotrowski, this syndrome can be characterized in terms of 14 traits; the presence of 7 of these suffices to make a diagnosis of epilepsy. Minkowska particularly emphasizes the delay in responses, the attachment towards the cards, the difficulties of precise vision, the sensory vocabulary, and the connexion between two interpretations. In reality, however, the concept of "Rorschach's epileptic syndrome" is incorrect in the sense that this syndrome is absent in many patients suffering from epilepsy (particularly functional epilepsy), whereas, on the contrary, it is often found in non-epileptic persons with organic brain disease. It would therefore be unwise and even imprudent to make, or even to suggest, a diagnosis of epilepsy on the basis of the Rorschach test.

syndrome, Unverricht-Lundborg. This term is misleading because it describes a variety of conditions (e.g., the hereditary disease due to Lafora bodies or myoclonic corpuscle disease, certain infantile and juvenile forms of amaurotic idiocy, nonspecific degenerative cerebral diseases). The common elements of these different diseases are as follows: (1) Clinically, the association of *sporadic myoclonus** with (*a*) epileptic seizures generalized from the onset in the form of *bilateral massive epileptic myoclonus**, *tonic epileptic seizures**, or *tonic-clonic epileptic seizures**; (*b*) progressive mental deterioration; and sometimes (*c*) signs of pyramidal or extrapyramidal lesions. (2) Electroencephalographically, diffuse anomalies that take the form of slow waves combined with bilateral, synchronous, and symmetrical polyspike discharges; these are unrelated to the sporadic myoclonus and are easily induced by intermittent photic stimulation. Syn.: *familial progressive epileptic myoclonus; familial progressive myoclonic epilepsy; progressive familial myoclono-epilepsy of Unverricht-Lundborg.*

syndrome, West's. An encephalopathy of as yet undetermined origin occurring in infants (usually between the ages of 3 and 9 months) either in an apparently spontaneous manner or as a complication of a pre-existing cerebral disease. Clinically, it has three characteristic features: (1) *infantile spasms**, usually in flexion; (2) arrest of psychomotor development, and (3) *hypsarhythmia**. Syn.: *infantile myoclonic encephalopathy with hypsarhythmia; syndrome of spasms in flexion.*

syndrome of spasms in flexion. Syn. for *West's syndrome.*

T

thought, epileptic forced. See *seizure, ideational epileptic.*

threshold, convulsive. A measurement used to evaluate the *convulsive predisposition** of a subject. It may be expressed in terms of the quantity of a convulsant drug (pentetrazol, bemegride, etc.) per unit of body weight necessary and sufficient to provoke the first clinical (*myoclonus**) or EEG (polyspike discharge) convulsive manifestation, either with the drug alone (pentetrazolic activation) or when intermittent photic stimulation is also administered (photopentetrazolic activation). See *threshold, epileptic.* Syn.: *myoclonic threshold.*

threshold, epileptic. A measurement used to evaluate the predisposition of an epileptic for developing his usual seizures. It may be expressed in terms of the quantity of a convulsant drug (pentetrazol, bemegride, etc.) per unit of body weight necessary and sufficient to produce the clinical and/or EEG manifestations of the patient's usual type of seizure (see *seizure, subclinical epileptic*). See *predisposition, epileptic.* Epileptic threshold must not be equated with *convulsive threshold**. Frequently, in an epileptic patient with temporal lobe seizures, the injection of increasing doses of pentetrazol will induce a nonconvulsive seizure before the convulsive threshold is reached, or, conversely, in a pykno-epileptic subject it will provoke the first *myoclonus** (sometimes even a *tonic-clonic epileptic seizure**) before triggering a *typical absence**.

threshold, myoclonic. Syn. for *convulsive threshold.*

tonic. An adjective describing the state of rigidity of muscles in continuous contraction. See *clonic.*

tonic-clonic. An adjective describing the succession of the tonic and clonic phases in the course of a convulsive seizure, especially in the major generalized convulsive seizure still called "grand mal seizure". See *seizure, tonic-clonic epileptic.*

Ling.: This term must never be applied to a type of EEG discharge, even if it is responsible for tonic-clonic convulsions.

tremor, epileptic. See *seizure, tremulous epileptic.*

tuberous sclerosis, Bourneville's. See *epilepsy, hereditary.*

twilight state, epileptic. See *state, epileptic twilight.*

V

variant, petit mal. 1. Incorrect syn. for *atypical absence.* 2. Incorrect syn. for *Lennox-Gastaut syndrome.*

vertigo, epileptic. An incorrect and obsolete term formerly used to designate non-convulsive *epileptic seizures**, particularly *absences**. Epileptic vertigo must be distinguished from *vertiginous epileptic seizure** and vertiginous *epileptic sensation**.

vision, epileptic panoramic. An *ictal epileptic manifestation**, resulting from neuronal discharge in the temporal lobe, during which the subject perceives in very rapid panoramic fashion more or less extended episodes from his past life. The vision may be either an accelerated *ecmnesic hallucinatory epileptic seizure**, or a fleeting *forced thought* (see *seizure, ideational epileptic*).

vocalization, epileptic. See *seizure, vocal epileptic.*

vocalization, iterative epileptic. See *seizure, vocal epileptic.*

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