

Epilepsy Classification

The [International League Against Epilepsy \(ILAE\)](#) has updated the operational classification of epileptic seizures, building upon the framework established in 2017.

Epilepsy is classified into four main types

- 1) [Focal Epilepsy](#)
 - 2) [Generalized Epilepsy](#)
 - 3) Combined generalized and focal
 - 4) unknown ¹⁾.
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Over the last few decades the [ILAE](#) classifications for seizures and epilepsies (ILAE-EC) have been updated repeatedly to reflect the substantial progress that has been made in diagnosis and understanding of the etiology of epilepsies and seizures and to correct some of the shortcomings of the terminology used by the original taxonomy from the 1980s. However, these proposals have not been universally accepted or used in routine clinical practice.

Four-dimensional epilepsy classification

A separate classification is known as the “Four-dimensional epilepsy classification” (4D-EC) was developed which includes a [seizure](#) classification based exclusively on ictal symptomatology, which has been tested and adapted over the years. The extensive arguments for and against these two classification systems made in the past have mainly focused on the shortcomings of each system, presuming that they are incompatible. As a furthermore detailed discussion of the differences seemed relatively unproductive, we here review and assess the concordance between these two approaches that have evolved over time, to consider whether a classification incorporating the best aspects of the two approaches is feasible.

To facilitate further discussion in this direction Rosenow et al. outlined a concrete proposal showing how such a compromise could be accomplished, the “Integrated Epilepsy Classification”. This consists of five categories derived to different degrees from both of the classification systems: 1) a “Headline” summarizing localization and etiology for the less specialized users, 2) “Seizure type(s)”, 3) “Epilepsy type” (focal, generalized or unknown allowing to add the epilepsy syndrome if available), 4) “Etiology”, and 5) “Comorbidities & patient preferences” ²⁾.

ILAE 2017 Classification

see [ILAE 2017 Classification](#)

Miscellaneous

[Early seizure](#)

[Focal seizure](#)

[Partial seizure.](#)

[Generalized seizure.](#)

[Infantile spasm syndrome.](#)

[Non-epileptic seizure.](#)

[Psychogenic Non-epileptic Seizures](#)

[Drug resistant epilepsy](#)

[Photosensitive epilepsy](#)

[Posttraumatic epilepsy](#)

[Temporal lobe epilepsy....](#)

[Pediatric epilepsy.](#)

Web-based algorithm

A web-based algorithm provides an accurate classification of seizure types, which can be used for selecting [anticonvulsant](#) in adolescents and adults ³⁾.

Temporal plus epilepsy

[Temporal plus epilepsy](#)

1)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7575300/>

2)

Rosenow F, Akamatsu N, Bast T, Bauer S, Baumgartner C, Benbadis S, Bermeo-Ovalle A, Beyenburg S, Bleasel A, Bozorgi A, Brázdil M, Carreño M, Delanty N, Devereaux M, Duncan J, Fernandez-Baca Vaca G, Francione S, García Losarcos N, Ghanma L, Gil-Nagel A, Hamer H, Holthausen H, Omid S, Kahane P, Kalamangalam G, Kanner A, Knake S, Kovac S, Krakow K, Krämer G, Kurlmann G, Lacuey N, Landazuri P, Lim SH, Londoño LV, LoRusso G, Luders H, Mani J, Matsumoto R, Miller J, Noachtar S, O'Dwyer R, Palmini A, Park J, Reif PS, Remi J, Sakamoto AC, Schmitz B, Schubert-Bast S, Schuele S, Shahid A, Steinhoff B, Strzelczyk A, Szabo CA, Tandon N, Terada K, Toledo M, van Emde Boas W, Walker M, Widdess-Walsh P. Could the 2017 ILAE and the four-dimensional epilepsy classifications be merged to a new "Integrated Epilepsy Classification"? *Seizure*. 2020 Mar 5;78:31-37. doi: 10.1016/j.seizure.2020.02.018. [Epub ahead of print] PubMed PMID: 32155575.

3)

Beniczky S, Asadi-Pooya AA, Perucca E, Rubboli G, Tartara E, Meritam Larsen P, Ebrahimi S, Farzinmehr S, Rampp S, Sperling MR. A web-based algorithm to rapidly classify seizures for the purpose of drug selection. *Epilepsia*. 2021 Aug 22. doi: 10.1111/epi.17039. Epub ahead of print. PMID: 34420206.

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