



[Home](#) → [Health Topics](#) → [Seizures](#)

URL of this page: <https://medlineplus.gov/seizures.html>

Seizures

Seizures are symptoms of a brain problem. They happen because of sudden, abnormal electrical activity in the brain. When people think of seizures, they often think of convulsions in which a person's body shakes rapidly and uncontrollably. Not all seizures cause convulsions. There are many types of seizures and some have mild symptoms. Seizures fall into two main groups. Focal seizures, also called partial seizures, happen in just one part of the brain. Generalized seizures are a result of abnormal activity on both sides of the brain.

Most seizures last from 30 seconds to 2 minutes and do not cause lasting harm. However, it is a medical emergency if seizures last longer than 5 minutes or if a person has many seizures and does not wake up between them. Seizures can have many causes, including medicines, high fevers, head injuries and certain diseases. People who have recurring seizures due to a brain disorder have epilepsy [<https://medlineplus.gov/epilepsy.html>] .

NIH: National Institute of Neurological Disorders and Stroke

Start Here

- [Seizures in Adults \(Beyond the Basics\)](https://www.uptodate.com/contents/seizures-in-adults-beyond-the-basics?view=print) [<https://www.uptodate.com/contents/seizures-in-adults-beyond-the-basics?view=print>] (UpToDate)
- [The Epilepsies and Seizures: Hope Through Research](https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Hope-Through-Research/Epilepsies-and-Seizures-Hope-Through) [<https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Hope-Through-Research/Epilepsies-and-Seizures-Hope-Through>]
 (National Institute of Neurological Disorders and Stroke)
Also in Spanish [https://espanol.ninds.nih.gov/trastornos/crisis_epilepticas.htm]

Diagnosis and Tests

- [Computed Tomography \(CT\) -- Head](https://www.radiologyinfo.org/en/info.cfm?pg=headct) [<https://www.radiologyinfo.org/en/info.cfm?pg=headct>]
 (American College of Radiology, Radiological Society of North America)
Also in Spanish [<https://www.radiologyinfo.org/sp/info.cfm?pg=headct>]
- [EEG \(Electroencephalogram\)](https://www.mayoclinic.org/tests-procedures/eeg/basics/definition/PRC-20014093?p=1) [<https://www.mayoclinic.org/tests-procedures/eeg/basics/definition/PRC-20014093?p=1>] (Mayo Foundation for Medical Education and Research)

Treatments and Therapies

- [Convulsions - first aid - slideshow](https://medlineplus.gov/ency/presentations/100212_1.htm) [https://medlineplus.gov/ency/presentations/100212_1.htm] (Medical Encyclopedia)
Also in Spanish [https://medlineplus.gov/spanish/ency/esp_presentations/100212_1.htm]
- [Seizure First Aid](https://www.cdc.gov/epilepsy/basics/first_aid.htm) [https://www.cdc.gov/epilepsy/basics/first_aid.htm] (Centers for Disease Control and Prevention)
Also in Spanish [<https://www.cdc.gov/epilepsy/spanish/primeros-auxilios.html>]

- Vagus Nerve Stimulation [<https://www.mayoclinic.org/tests-procedures/vagus-nerve-stimulation/home/ovc-20167755?p=1>] (Mayo Foundation for Medical Education and Research)

Specifics

- Absence Seizure (Petit Mal Seizure) [<https://www.mayoclinic.org/diseases-conditions/petit-mal-seizure/basics/definition/CON-20021252?p=1>] (Mayo Foundation for Medical Education and Research)
- Frontal Lobe Seizures [<https://www.mayoclinic.org/diseases-conditions/frontal-lobe-seizures/home/ovc-20246878?p=1>] (Mayo Foundation for Medical Education and Research)
- Grand Mal Seizure [<https://www.mayoclinic.org/diseases-conditions/grand-mal-seizure/basics/definition/CON-20021356?p=1>] (Mayo Foundation for Medical Education and Research)
- Temporal Lobe Seizure [<https://www.mayoclinic.org/diseases-conditions/temporal-lobe-seizure/basics/definition/CON-20022892?p=1>] (Mayo Foundation for Medical Education and Research)
- Todd's Paralysis [<https://www.ninds.nih.gov/Disorders/All-Disorders/Todds-Paralysis-Information-Page>]  (National Institute of Neurological Disorders and Stroke)

Genetics

- Genetics Home Reference: 15q13.3 microdeletion [<https://ghr.nlm.nih.gov/condition/15q133-microdeletion>]  (National Library of Medicine)
- Genetics Home Reference: 16p12.2 microdeletion [<https://ghr.nlm.nih.gov/condition/16p122-microdeletion>]  (National Library of Medicine)
- Genetics Home Reference: 17q12 duplication [<https://ghr.nlm.nih.gov/condition/17q12-duplication>]  (National Library of Medicine)
- Genetics Home Reference: Alpers-Huttenlocher syndrome [<https://ghr.nlm.nih.gov/condition/alpers-huttenlocher-syndrome>]  (National Library of Medicine)
- Genetics Home Reference: aminoacylase 1 deficiency [<https://ghr.nlm.nih.gov/condition/aminoacylase-1-deficiency>]  (National Library of Medicine)
- Genetics Home Reference: aspartylglucosaminuria [<https://ghr.nlm.nih.gov/condition/aspartylglucosaminuria>]  (National Library of Medicine)
- Genetics Home Reference: ataxia neuropathy spectrum [<https://ghr.nlm.nih.gov/condition/ataxia-neuropathy-spectrum>]  (National Library of Medicine)
- Genetics Home Reference: benign familial neonatal seizures [<https://ghr.nlm.nih.gov/condition/benign-familial-neonatal-seizures>]  (National Library of Medicine)
- Genetics Home Reference: DOORS syndrome [<https://ghr.nlm.nih.gov/condition/doors-syndrome>]  (National Library of Medicine)
- Genetics Home Reference: familial focal epilepsy with variable foci [<https://ghr.nlm.nih.gov/condition/familial-focal-epilepsy-with-variable-foci>]  (National Library of Medicine)
- Genetics Home Reference: familial idiopathic basal ganglia calcification [<https://ghr.nlm.nih.gov/condition/familial-idiopathic-basal-ganglia-calcification>]  (National Library of Medicine)
- Genetics Home Reference: fucosidosis [<https://ghr.nlm.nih.gov/condition/fucosidosis>]  (National Library of Medicine)
- Genetics Home Reference: genetic epilepsy with febrile seizures plus [<https://ghr.nlm.nih.gov/condition/genetic-epilepsy-with-febrile-seizures-plus>]  (National Library of Medicine)

- Genetics Home Reference: juvenile myoclonic epilepsy [<https://ghr.nlm.nih.gov/condition/juvenile-myoclonic-epilepsy>]  (National Library of Medicine)
- Genetics Home Reference: Mabry syndrome [<https://ghr.nlm.nih.gov/condition/mabry-syndrome>]  (National Library of Medicine)
- Genetics Home Reference: malignant migrating partial seizures of infancy [<https://ghr.nlm.nih.gov/condition/malignant-migrating-partial-seizures-of-infancy>]  (National Library of Medicine)
- Genetics Home Reference: Miller-Dieker syndrome [<https://ghr.nlm.nih.gov/condition/miller-dieker-syndrome>]  (National Library of Medicine)
- Genetics Home Reference: molybdenum cofactor deficiency [<https://ghr.nlm.nih.gov/condition/molybdenum-cofactor-deficiency>]  (National Library of Medicine)
- Genetics Home Reference: myoclonic epilepsy myopathy sensory ataxia [<https://ghr.nlm.nih.gov/condition/myoclonic-epilepsy-myopathy-sensory-ataxia>]  (National Library of Medicine)
- Genetics Home Reference: Nicolaidis-Baraitser syndrome [<https://ghr.nlm.nih.gov/condition/nicolaidis-baraitser-syndrome>]  (National Library of Medicine)
- Genetics Home Reference: paroxysmal extreme pain disorder [<https://ghr.nlm.nih.gov/condition/paroxysmal-extreme-pain-disorder>]  (National Library of Medicine)
- Genetics Home Reference: phosphoglycerate dehydrogenase deficiency [<https://ghr.nlm.nih.gov/condition/phosphoglycerate-dehydrogenase-deficiency>]  (National Library of Medicine)
- Genetics Home Reference: pyridoxal 5'-phosphate-dependent epilepsy [<https://ghr.nlm.nih.gov/condition/pyridoxal-5-phosphate-dependent-epilepsy>]  (National Library of Medicine)
- Genetics Home Reference: pyridoxine-dependent epilepsy [<https://ghr.nlm.nih.gov/condition/pyridoxine-dependent-epilepsy>]  (National Library of Medicine)
- Genetics Home Reference: sepiapterin reductase deficiency [<https://ghr.nlm.nih.gov/condition/sepiapterin-reductase-deficiency>]  (National Library of Medicine)
- Genetics Home Reference: sialidosis [<https://ghr.nlm.nih.gov/condition/sialidosis>]  (National Library of Medicine)
- Genetics Home Reference: succinic semialdehyde dehydrogenase deficiency [<https://ghr.nlm.nih.gov/condition/succinic-semialdehyde-dehydrogenase-deficiency>]  (National Library of Medicine)
- Genetics Home Reference: X-linked creatine deficiency [<https://ghr.nlm.nih.gov/condition/x-linked-creatine-deficiency>]  (National Library of Medicine)

Clinical Trials

- ClinicalTrials.gov: Seizures [<https://clinicaltrials.gov/search/open/condition=%22Seizures%22>]  (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Pharmacotherapy for Seizures in Neonates with Hypoxic Ischemic Encephalopathy. [<https://www.ncbi.nlm.nih.gov/pubmed/28770451>]
- Article: Radiosurgery with a Rotating Gamma System: A Very Effective Treatment... [<https://www.ncbi.nlm.nih.gov/pubmed/28668867>]
- Article: Risks and Benefits of Immediate Antiepileptic Drug Treatment for a... [<https://www.ncbi.nlm.nih.gov/pubmed/28541990>]

- Seizures -- see more articles [[https://www.ncbi.nlm.nih.gov/pubmed?term=\(seizures\[majr\]+OR+seizures,febrile\[majr\]\)+NOT+epilep*\[tiab\]+AND+english\[la\]+AND+humans\[mh\]+AND+\(review\[pt\]+OR+guideline\[pt\]+OR+clinical+trial\[pt\]+OR+jsubsetk\[text\]+OR+patient+education+handout\[pt\]\)+NOT+\(letter\[pt\]+OR+editorial\[pt\]\)+AND+%22last+1+Year%22\[edat\]](https://www.ncbi.nlm.nih.gov/pubmed?term=(seizures[majr]+OR+seizures,febrile[majr])+NOT+epilep*[tiab]+AND+english[la]+AND+humans[mh]+AND+(review[pt]+OR+guideline[pt]+OR+clinical+trial[pt]+OR+jsubsetk[text]+OR+patient+education+handout[pt])+NOT+(letter[pt]+OR+editorial[pt])+AND+%22last+1+Year%22[edat])]
- Epileptic seizures -- see more articles [[https://www.ncbi.nlm.nih.gov/pubmed?term=\(seizures\[majr\]+AND+epilepsy\[majr\]\)+AND+english\[la\]+AND+humans\[mh\]+AND+\(review\[pt\]+OR+guideline\[pt\]+OR+clinical+trial\[pt\]+OR+jsubsetk\[text\]+OR+patient+education+handout\[pt\]\)+NOT+\(letter\[pt\]+OR+editorial\[pt\]\)+AND+%22last+1+Year%22\[edat\]](https://www.ncbi.nlm.nih.gov/pubmed?term=(seizures[majr]+AND+epilepsy[majr])+AND+english[la]+AND+humans[mh]+AND+(review[pt]+OR+guideline[pt]+OR+clinical+trial[pt]+OR+jsubsetk[text]+OR+patient+education+handout[pt])+NOT+(letter[pt]+OR+editorial[pt])+AND+%22last+1+Year%22[edat])]

Find an Expert

- Find a Doctor [<https://my.aesnet.org/FindaDoctor>] (American Epilepsy Society)
- National Institute of Neurological Disorders and Stroke [<https://www.ninds.nih.gov/>] 
Also in Spanish [<https://espanol.ninds.nih.gov/>]

Children

- Febrile Seizures [<https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Fact-Sheets/Febrile-Seizures-Fact-Sheet>]  (National Institute of Neurological Disorders and Stroke)
Also in Spanish [https://espanol.ninds.nih.gov/trastornos/convulsiones_febriles.htm]
- Infantile Spasms [<https://www.ninds.nih.gov/Disorders/All-Disorders/Infantile-Spasms-Information-Page>]  (National Institute of Neurological Disorders and Stroke)
- Ohtahara Syndrome [<https://www.ninds.nih.gov/Disorders/All-Disorders/Ohtahara-Syndrome-Information-Page>]  (National Institute of Neurological Disorders and Stroke)
- Seizures [<https://kidshealth.org/en/parents/seizures-sheet.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/parents/seizures-sheets-esp.html>]
- Treatment of Seizures in Children (Beyond the Basics) [<https://www.uptodate.com/contents/treatment-of-seizures-in-children-beyond-the-basics?view=print>] (UpToDate)

Patient Handouts

- Absence seizure [<https://medlineplus.gov/ency/article/000696.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000696.htm>]
- EEG [<https://medlineplus.gov/ency/article/003931.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003931.htm>]
- Epilepsy or seizures - discharge [<https://medlineplus.gov/ency/patientinstructions/000128.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000128.htm>]
- Febrile seizures [<https://medlineplus.gov/ency/article/000980.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000980.htm>]
- Generalized tonic-clonic seizure [<https://medlineplus.gov/ency/article/000695.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000695.htm>]
- Partial (focal) seizure [<https://medlineplus.gov/ency/article/000697.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000697.htm>]
- Seizures [<https://medlineplus.gov/ency/article/003200.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003200.htm>]



MEDICAL ENCYCLOPEDIA

Absence seizure [<https://medlineplus.gov/ency/article/000696.htm>]

Convulsions - first aid - slideshow [https://medlineplus.gov/ency/presentations/100212_1.htm]

CPK isoenzymes test [<https://medlineplus.gov/ency/article/003504.htm>]

EEG [<https://medlineplus.gov/ency/article/003931.htm>]

Epilepsy or seizures - discharge [<https://medlineplus.gov/ency/patientinstructions/000128.htm>]

Febrile seizures [<https://medlineplus.gov/ency/article/000980.htm>]

Febrile seizures - what to ask your doctor [<https://medlineplus.gov/ency/patientinstructions/000223.htm>]

Generalized tonic-clonic seizure [<https://medlineplus.gov/ency/article/000695.htm>]

Partial (focal) seizure [<https://medlineplus.gov/ency/article/000697.htm>]

Seizures [<https://medlineplus.gov/ency/article/003200.htm>]

Related Health Topics

Epilepsy [<https://medlineplus.gov/epilepsy.html>]

National Institutes of Health

The primary NIH organization for research on *Seizures* is the National Institute of Neurological Disorders and Stroke [<http://www.ninds.nih.gov/>]

Other Languages

Find health information in languages other than English [<https://medlineplus.gov/languages/seizures.html>] on *Seizures*

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