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Ischemic Stroke

Also called: Embolic Stroke, Thrombotic stroke

What is an ischemic stroke?

A stroke [<https://medlineplus.gov/stroke.html>] happens when there is a loss of blood flow to part of the brain. Your brain cells cannot get the oxygen and nutrients they need from blood, and they start to die within a few minutes. This can cause lasting brain damage, long-term disability, or even death.

There are two main types of strokes, ischemic and hemorrhagic [<https://medlineplus.gov/hemorrhagicstroke.html>] . Ischemic stroke is the more common type. An ischemic stroke happens when a blood clot [<https://medlineplus.gov/bloodclots.html>] blocks a blood vessel in the brain. Quick treatment can save a life and improve the chances of recovery.

What causes an ischemic stroke?

Ischemic strokes are usually caused by one or more of the following:

- **A blood clot.** A clot can form in an artery that supplies the brain (thrombosis), or it can travel from another part of the body (embolism).
- **Atherosclerosis** [<https://medlineplus.gov/atherosclerosis.html>] . A disease in which plaque, a sticky substance made up of cholesterol, fat, and other substances, builds up inside your arteries.
- **Irregular heart rhythms.** Conditions like atrial fibrillation [<https://medlineplus.gov/atrialfibrillation.html>] can cause clots to form in the heart, which may travel to the brain.
- **Other heart and blood conditions.** Such as heart valve diseases [<https://medlineplus.gov/heartvalvediseases.html>] or sickle cell disease [<https://medlineplus.gov/sicklecelldisease.html>] .

A transient ischemic attack [<https://medlineplus.gov/transientischemicattack.html>] (TIA) is caused by a brief blockage of blood flow to the brain. It usually lasts a few minutes. Having a TIA can mean you are at risk for having a more serious stroke.

What are the symptoms of ischemic stroke?

Symptoms of stroke often happen suddenly. They include:

- Sudden numbness or weakness of the face, arm or leg (especially on one side of the body)
- Sudden confusion, trouble speaking or understanding speech
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden severe headache with no known cause

If you think someone is having a stroke, the **F.A.S.T.** test can help you remember what to look for. Think "FAST" and look for:

- Face drooping on one side when smiling.
- Arm weakness that occurs when the arms are raised, and one arm drifts downward.
- Speech is slurred or strange.
- Time to call 911.

How is an ischemic stroke diagnosed?

To make a diagnosis, your health care provider may do a physical exam, ask about your symptoms and medical history, and use imaging tests [<https://medlineplus.gov/diagnosticimaging.html>] . Other heart tests [<https://medlineplus.gov/hearthealthtests.html>] may be done to help find the cause of the stroke.

How is an ischemic stroke treated?

It is important to treat strokes as quickly as possible. The most common treatments include:

- **Medicines** such as blood thinners [<https://medlineplus.gov/bloodthinners.html>] or thrombolytics (which break up and dissolve existing clots) may be used to prevent or treat ischemic stroke.
- **Surgery or stenting** may be used to open narrowed arteries or remove plaque build-up from the carotid arteries, which supply blood to the brain.

After treatment, rehabilitation [<https://medlineplus.gov/strokerehabilitation.html>] can help you regain lost skills and independence. Your provider may also order other medicines to manage your blood pressure [<https://medlineplus.gov/bloodpressuremedicines.html>] , cholesterol [<https://medlineplus.gov/cholesterollevelswhatarethey.html>] , or other health problems such as diabetes [<https://medlineplus.gov/diabetescomplications.html>] that may increase your risk for stroke.

Can an ischemic stroke be prevented?

The best way to prevent stroke is by making heart-healthy lifestyle changes [<https://medlineplus.gov/howtopreventheartdisease.html>] to lower your risk. If lifestyle changes aren't enough, your provider may prescribe medicine to help manage your risk factors.

NIH: National Institute of Neurological Disorders and Stroke

Start Here

- Ischemic Stroke (Clots) [<https://www.stroke.org/en/about-stroke/types-of-stroke/ischemic-stroke-clots>] (American Stroke Association)
- Let's Talk about Ischemic Stroke [<https://www.stroke.org/en/help-and-support/resource-library/lets-talk-about-stroke/ischemic-stroke>] (American Stroke Association)
Also in Spanish [<https://www.stroke.org/-/media/stroke-files/spanish-resources/ltas-ischemic-stroke.pdf>]

Prevention and Risk Factors

- **New!** Aspirin and Dual Antiplatelet Therapy [<https://www.heart.org/en/health-topics/heart-attack/treatment-of-a-heart-attack/aspirin-and-heart-disease>] (American Heart Association)
- What Are Anticoagulants and Antiplatelet Agents? [<https://www.heart.org/-/media/files/health-topics/answers-by-heart/what-are-anticoagulants-and-antiplatelet-agents.pdf>] (American Heart Association) - PDF

Related Issues

- Atherosclerosis and Stroke [<https://www.stroke.org/en/about-stroke/stroke-risk-factors/atherosclerosis-and-stroke>] (American Stroke Association)
Also in Spanish [<https://www.stroke.org/es/about-stroke/stroke-risk-factors/atherosclerosis-and-stroke>]

Specifics

- CADASIL [<https://www.ninds.nih.gov/health-information/disorders/cadasil>]
 (National Institute of Neurological Disorders and Stroke)
Also in Spanish [<https://www.ninds.nih.gov/es/health-information/disorders/cadasil>]

Genetics

- Adenosine deaminase 2 deficiency: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/adenosine-deaminase-2-deficiency/>]  (National Library of Medicine)
- Cerebral autosomal recessive arteriopathy with subcortical infarcts and leukoencephalopathy: MedlinePlus Genetics [<https://medlineplus.gov/genetics/condition/cerebral-autosomal-recessive-arteriopathy-with-subcortical-infarcts-and-leukoencephalopathy/>]  (National Library of Medicine)

Images

- Stroke - series [https://medlineplus.gov/ency/presentations/100218_1.htm] (Medical Encyclopedia)
Also in Spanish [https://medlineplus.gov/spanish/ency/esp_presentations/100218_1.htm]

Videos and Tutorials

- Stroke [<https://medlineplus.gov/ency/anatomyvideos/000123.htm>]  (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/anatomyvideos/000123.htm>]
- Stroke - secondary to cardiogenic embolism [<https://medlineplus.gov/ency/anatomyvideos/000124.htm>]  (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/anatomyvideos/000124.htm>]

Statistics and Research

- Stroke Facts [<https://www.cdc.gov/stroke/data-research/facts-stats/>] (Centers for Disease Control and Prevention)

Clinical Trials

- ClinicalTrials.gov: Brain Ischemia [<https://clinicaltrials.gov/search?cond=%22Brain+Ischemia%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Carotid Stenosis [<https://clinicaltrials.gov/search?cond=%22Carotid+Stenosis%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Ischemic Stroke [<https://clinicaltrials.gov/search?cond=%22Ischemic+Stroke%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

Journal Articles

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

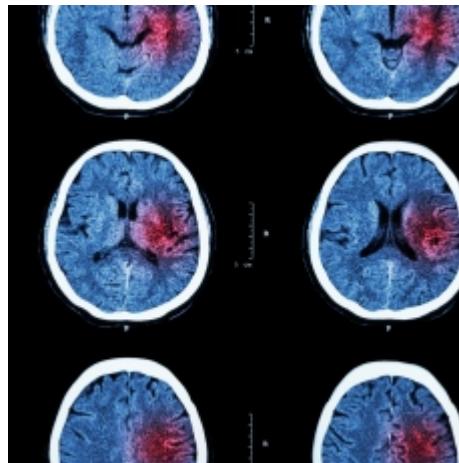
- Article: Intra-arterial selective hypothermia for acute ischemic stroke neuroprotection: A multicenter pilot... [<https://www.ncbi.nlm.nih.gov/pubmed/40705740>]
- Article: Different light color temperatures in the morning on the effectiveness of... [<https://www.ncbi.nlm.nih.gov/pubmed/40660285>]
- Article: Relationship Between Neutrophil Count and 90-Day Outcomes and Effect of Dual... [<https://www.ncbi.nlm.nih.gov/pubmed/40654232>]
- Ischemic Stroke -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Ischemic+Stroke%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22ast+1+Year%22+%5Bdat%5D+AND+%28patient+education+handout%5Bpt%5D+OR+guideline%5Bpt%5D+OR+clinical+trial%5Bpt%5D%29++NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

Teenagers

- **New!** Young Adult Learns to Live After Ischemic Stroke [<https://www.stroke.org/en/about-stroke/types-of-stroke/ischemic-stroke-clots/melodys-story>] (American Stroke Association)

Patient Handouts

- Carotid artery surgery - open [<https://medlineplus.gov/ency/article/002951.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/002951.htm>]
- Preventing stroke [<https://medlineplus.gov/ency/patientinstructions/000678.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000678.htm>]
- Stroke - discharge [<https://medlineplus.gov/ency/patientinstructions/000132.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000132.htm>]
- Thrombolytic therapy [<https://medlineplus.gov/ency/article/007089.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007089.htm>]



MEDICAL ENCYCLOPEDIA

- Carotid artery surgery - open [<https://medlineplus.gov/ency/article/002951.htm>]
- Stroke [<https://medlineplus.gov/ency/anatomyvideos/000123.htm>]
- Stroke - secondary to cardiogenic embolism [<https://medlineplus.gov/ency/anatomyvideos/000124.htm>]
- Stroke - series [https://medlineplus.gov/ency/presentations/100218_1.htm]
- Thrombolytic therapy [<https://medlineplus.gov/ency/article/007089.htm>]

Related Health Topics

- Hemorrhagic Stroke [<https://medlineplus.gov/hemorrhagicstroke.html>]
- Stroke [<https://medlineplus.gov/stroke.html>]
- Stroke Rehabilitation [<https://medlineplus.gov/strokerehabilitation.html>]

National Institutes of Health

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

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National Library of Medicine 8600 Rockville Pike, Bethesda, MD 20894 U.S. Department of Health and Human Services National Institutes of Health

Last updated July 31, 2025