

Pediatric Stroke

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What ages are considered “pediatric?”



Typically birth through 18



Some see 21 as the cut-off age, since people are not considered fully grown until they turn 21

Statistics

“Pediatric stroke is a rare condition affecting one in every 4,000 newborns and an additional 2,000 older children each year.”

Johns Hopkins Medicine. (2023). [What is Pediatric Stroke?](#)

Hawaii: Data from 2015 – 2019: Approximately 75 individuals ages 0 – 25 experienced a stroke

Galanis, D. (2021). Report on Neurotrauma in Hawaii: TBI, Spinal Cord Injury, and Stroke. PPT presentation.

“Stroke is the sixth leading cause of death in children.”

Children’s Hospital of Philadelphia. (2022). [Pediatric Stroke](#).

As with adults, children tend to have ischemic and hemorrhagic strokes

Top Risk Factors for Pediatric Stroke

- Heart disease
- Blood vessel abnormalities
- Blood clotting disorders

Boston Children's Hospital. (2019). [Pediatric Stroke: Do You Believe These Three Myths?](#)

Boys and African-American children are at higher risk

Cincinnati Children's. (1999 – 2023). [Stroke, Childhood.](#)

In many children, no cause can be found

- Some children may have a second stroke

Stanford Medicine Children's Health. (2023). [Stroke in Children.](#)

Signs and symptoms are similar to those in adults. They include but are not limited to:

Children and teens:

- Weakness or numbness on one side of the body
- Slurred speech, difficulty with language, difficulty understanding language
- Severe headache, especially with vomiting
- Trouble balancing or walking
- Vision problems, such as double vision or loss of vision
- Sudden lethargy or drowsiness
- Emotional, cognitive, and / or behavioral changes

Johns Hopkins Medicine. (2023). [What is Pediatric Stroke?](#)

Children's Hospital of Philadelphia. (2022). [Pediatric Stroke](#).

Newborns and infants:

- Seizures
- Extreme sleepiness
- Extreme fatigue
- Difficulty waking up
- Poor feeding
- A tendency to use only one side of their body

“When a stroke affects a newborn infant, symptoms may not appear until 4 to 6 months of age in the form of decreased movement or weakness of one side of the body.”

American Stroke Association. (2023). [Pediatric Stroke Causes and Recovery](#).

CHOC Neuroscience Institute. (2023). [Stroke](#).

Diagnosis Issues

- There appear to be no symptoms
- Often delayed or missed in children
- Many are misdiagnosed with more common conditions that mimic stroke, such as:
 - Migraines
 - Epilepsy
 - Viral illnesses

Children's Hospital of Philadelphia. (2022). [Pediatric Stroke](#).

UNC PAR. (2021). [Facts about Pediatric Stroke](#).

Treatment

- Medical therapy in the form of aspirin or other blood thinners, and special vitamins
 - Anti-seizure medication may be needed
 - For children with sickle cell disease, they may need a drug called hydroxyurea, or transfusion therapy, or both
 - Clot-busting medicines are not approved for use in children but could be considered
- For issues with blood vessels, a catheter may be needed to open a vessel or remove a blood clot
- Surgery
 - Remove a piece of bone to relieve swelling (craniectomy)
 - To close abnormal blood vessels
 - Remove abnormal areas of the brain and reroute blood vessels to help provide blood supply to injured areas
- Oxygen
- Blood transfusions
- Various therapies, e.g., physical therapy, occupational therapy, speech therapy

Johns Hopkins Medicine. (2023). [What is Pediatric Stroke?](#)

Stanford Medicine Children's Health. (2023). [Stroke in Children.](#)

Pediatric Stroke Video

“Understanding Stroke in Kids” –
Boston Children’s Hospital
(2021)

<https://www.youtube.com/watch?v=QdaT3z2ulul>



Prevention

In some cases, especially with newborns and infants, strokes can't be prevented.

However, as children grow, there are some preventive measures that can be taken, as with adults:

- Diet
- Control sodium intake
- Exercise
- No smoking or vaping
- Control high blood pressure
- Stress relief

Additional Information

Video – [May is Pediatric Stroke Awareness Month](#) (Mother tells the story of her child who had a stroke)

Video – [Pediatric Exams: Stroke in Children](#)

Video – [Twisted: A Story about Pediatric Stroke](#)

Video – [Pediatric Stroke and Brain Injury Education](#)

[American Stroke Association Pediatric Stroke Infographic](#)

[American Stroke Association Sickle Cell Disease and Pediatric Stroke Risk Infographic](#)

Mahalo for your time and attention

Any questions?

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