

What is Moyamoya?



Boston Children's Hospital
Cerebrovascular Surgery &
Interventions Center

bostonchildrens.org/MoyamoyaDisease | 617-919-1379

Moyamoya disease is a rare blood vessel condition that causes narrowing of the blood vessels that go to the brain.

"Moyamoya" means *puff of smoke* and describes how the blood vessels look when seen on an X-ray or other imaging.

Because moyamoya disease decreases blood supply to the brain, it can lead to stroke if left untreated.

Frequently asked questions

At what age do children typically develop moyamoya symptoms?

The average age of diagnosis is 7, but people of any age can develop moyamoya.

Is it possible that my child's moyamoya will go away without surgery?

No. Moyamoya is a progressive condition. This means the dangerous narrowing in the brain's blood vessels will get worse over time. This can take years or months, but surgery is the only way to reduce the risk of a potentially life-threatening stroke.

Does my child need to cut back on physical activity?

Symptoms of moyamoya may be brought on, or made worse, by activities that can lead to hyperventilation (over-breathing), a drop in blood pressure or dehydration. To lessen the risk of stroke, your child may need to restrict strenuous play or sports that cause overexertion. Your child's clinician can make more detailed recommendations for your child.

What is the long-term outlook for kids with moyamoya?

The good news is that most children who have surgery for moyamoya have an excellent rate of recovery and go on to lead normal, active adult lives, including having families of their own.

Are there different types of moyamoya?

Yes. The childhood form of moyamoya typically causes stroke symptoms, such as slurred speech, headaches and seizures. More rarely, people with moyamoya may also have bleeding in the brain. Ongoing research - including work now being done at Boston Children's Hospital - is revealing that there are many different genetic causes of moyamoya which may have differences in the severity and symptoms of the disease.

About the Moyamoya Program and the Cerebrovascular Surgery and Interventions Center.

The Moyamoya Program at Boston Children's provides diagnostic, consultation, surgical, and follow-up care for kids and teens with moyamoya disease.

The Cerebrovascular Surgery and Interventions Center is an international leader in the treatment of moyamoya.

Led by Edward R. Smith, MD, and Darren B. Orbach, MD, PhD, it is the highest-volume center for surgical revascularization of moyamoya in the U.S. The center takes a multidisciplinary approach to care and includes a diverse team of specialists in neurosurgery, neurointerventional radiology, neurology, anesthesia, nursing, and other fields.

Learn more about moyamoya and Moyamoya Program at:
bostonchildrens.org/moyamoya

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