

AAN updates recommendation on closure of common heart defect after stroke

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New guidance from the American Academy of Neurology (AAN) concludes that closure of a common heart defect called a patent foramen ovale (PFO) may be recommended for some people who have had a stroke. The updated practice advisory is published in the April 29, 2020, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

Closure may be considered for some people under age 60 to help prevent a second [stroke](#), according to the practice advisory, which is endorsed by the American Heart Association/American Stroke Association, the Society for Cardiovascular Angiography and Interventions and the European Academy of Neurology.

A PFO is a channel between the right and left sides of the heart. All infants have this small flap-like opening between the two sides. In most people, this channel closes on its own by adulthood. But for about one in four people, it remains open.

"It's important to note that having a PFO is common, and that most people with PFO will never know they have it because it usually does not cause any problems," said study author Steven R. Messé, M.D., of the Perelman School of Medicine at the University of Pennsylvania, and a Fellow of the American Academy of Neurology. "However, while there is generally a very low risk of stroke in patients with PFO, in younger people who have had a stroke without any other possible causes identified, closing the PFO may reduce the risk of having another stroke

better than medication alone."

The practice advisory updates a 2016 advisory that concluded there was not enough evidence to support routine PFO closure to prevent a second stroke. Since then, new studies reported that for people with stroke due to a PFO, closure in addition to taking medication to prevent [blood clots](#), reduced the risk of future strokes better than medication alone.

In PFO closure, doctors use a catheter to place a device in the channel between the right and left sides of the heart to prevent [blood flow](#).

For the practice advisory, clinical experts carefully reviewed the available evidence about stroke prevention in patients with a PFO who had already had an ischemic stroke, which is a stroke caused by a blockage in a [blood](#) vessel leading to reduced blood flow.

When considering PFO closure in people who have had a stroke, the practice advisory recommends that doctors with expertise in stroke to first rule out causes other than the PFO, such as hardening or a tear of the [blood vessels](#), heart disease including [abnormal heart rhythms](#), or an increased risk for forming clots, to ensure that PFO is the most likely cause of stroke. The practice advisory does not recommend PFO closure if another higher risk cause of stroke is identified. The advisory also recommends that patients considering closure have a consultation with an expert in PFO closure, to ensure that the procedure can be safely performed.

The practice advisory states for people younger than 60 years old who have had a stroke thought to be caused by a PFO and no other cause, doctors may recommend closure of the PFO after discussing the potential benefits, including a 3.4% reduction in the risk of a second stroke in five years, as well as the potential risks, such as a 3.9% chance of procedural complications and an [increased risk](#) of an abnormal [heart](#)

rhythm called atrial fibrillation of 0.33% per year.

"The risk of a second stroke in people with PFO and no other possible causes of stroke is very low, approximately 1% per year while being treated with just medication alone," said Messé. "Also, it is difficult to determine with absolute certainty that the PFO is the cause of a person's stroke. So it is important that people with PFO are educated about the benefits and risks of PFO closure."

The advisory recommends that for people who choose to take medications alone, without PFO closure, doctors may consider prescribing aspirin or other antiplatelet drugs to prevent blood clots, or anticoagulant drugs such as warfarin, also known as blood thinners.

Provided by American Academy of Neurology

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