NEW RECOMMENDATIONS FOR STROKE SURVIVORS

2020 Practice Advisory Update from the American Academy of Neurology (AAN) and 2021 update to American Heart Association/American Stroke Association (AHA/ASA) supports percutaneous closure of a patent foramen ovale (PFO) to prevent stroke recurrence in select patients[1,2]

Abbott

LESS RISK FOR STROKE SURVIVORS LIVING WITH PFO

PFO IS THE LIKELY CAUSE OF MORE STROKES THAN PREVIOUSLY RECOGNIZED

- Approximately **5%** of all ischemic strokes and **10%** of those occurring in young and middle-aged adults are associated with a PFO[3].
- **80%** of strokes of unknown cause in patients with a Risk of Paradoxical Embolism **(RoPE) score of 7** or greater are due to a PFO[3].

AAN CLINICAL IMPLICATIONS[2]

PFO closure may be recommended for people < 60 years of age:

- When stroke is thought to be caused by a PFO and no other mechanism has been identified.
- After discussing the potential benefits and risks.

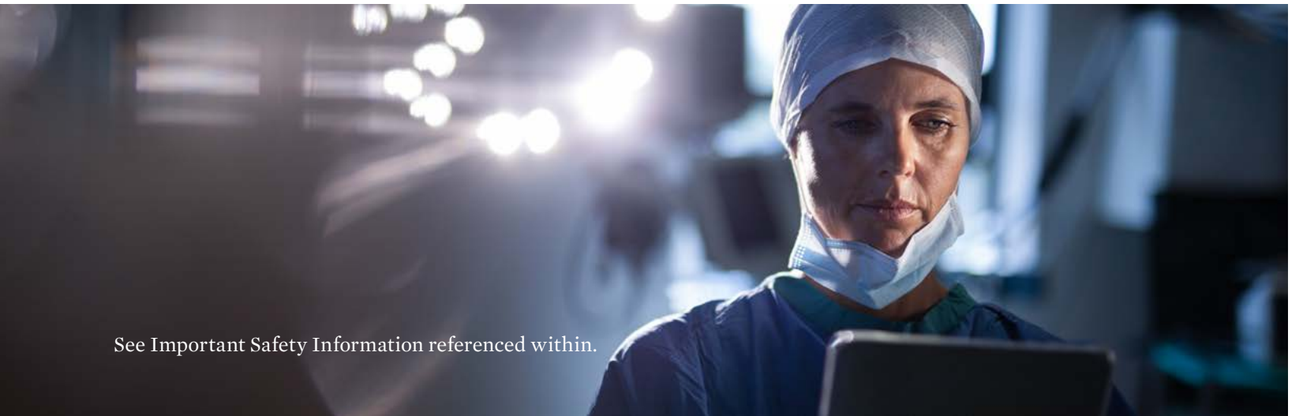
PFO closure may be offered for people 60-65 years of age:

- After a thorough evaluation, including monitoring for atrial fibrillation.
- With very limited degree of traditional vascular risk factors (hypertension, diabetes, hyperlipidemia, smoking).
- In whom no other mechanism of stroke has been detected.

AHA/ASA CLINICAL IMPLICATIONS[4]

PFO closure may be recommended in patients 18-60 years of age:

- When stroke is thought to be caused by a PFO with high-risk anatomic features, such as atrial septal aneurysm and/or large shunt.
- If PFO is considered low risk anatomically and RoPE Score has been factored into clinical decision.



See Important Safety Information referenced within.

HOW TO KNOW IF A PFO IS THE LIKELY CAUSE

HIGHER ROPE SCORES POINT TO PFO AS A CAUSATIVE MECHANISM FOR STROKE[5]

RoPE SCORE CALCULATOR	POINTS	SCORE
CHARACTERISTIC	Select all that apply	
No history of hypertension	1	
No history of diabetes	1	
No history of stroke or TIA	1	
Non-smoker	1	
Cortical infarct on imaging	1	
AGE (YEARS)	Select the one that applies	
18-29	5	
30-39	4	
40-49	3	
50-59	2	
60-69	1	
≥70	0	

TOTAL SCORE	POINTS	SCORE
SUM OF INDIVIDUAL POINTS	Add up your total score from above	
Maximum score (patient <30 y.o. without vascular risk factors, no history of stroke or TIA, and cortical infarct)		10
Minimum score (patient >70 y.o. with vascular risk factors, prior stroke, and no cortical infarct)		0

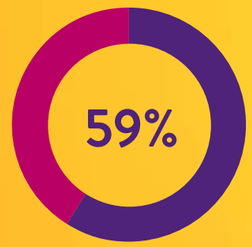
TOTAL RoPE SCORE	PREVALENCE OF PFO (%)	PFO-ATTRIBUTED FRACTION (%)
7	54	72
8	67	84
9-10	73	88

WHY PFO CLOSURE? WHY NOW?

An expanded body of evidence and a review of existing clinical evidence prompted both the AAN and AHA/ASA to support percutaneous PFO closure to reduce the risk of recurrent stroke.

AAN RECOMMENDATIONS

LESS RISK OF STROKE RECURRENCE[2]



Relative risk reduction for recurrent stroke compared to medical management

- Absolute risk reduction of stroke at 5 years: **3.4%**
- Periprocedural complication risk: **3.9%**

AHA/ASA RECOMMENDATIONS

- Closure recommended for patients 18-60 with nonlacunar stroke and PFO with high risk anatomical characteristics over anti-platelet medication alone.
- Joint decision making between patient, neurologist and cardiologist is recommended to determine if PFO closure is appropriate for recurrent stroke prevention.

WHAT'S THE OUTLOOK POST-PFO CLOSURE?

Events including non-periprocedural atrial fibrillation (summary rate difference 0.33% per year [95% CI 0.04% to 0.65%]), were self-limited and of uncertain long-term clinical consequence given the lower rate of stroke in patients whose PFO was closed.[1]

After a median of 5.9 years follow up, data show no difference in the rate of new-onset non-periprocedural atrial fibrillation between participants receiving closure and those receiving medical treatment (difference 0.14% [95% CI, −0.9% to −0.4%]).[1]

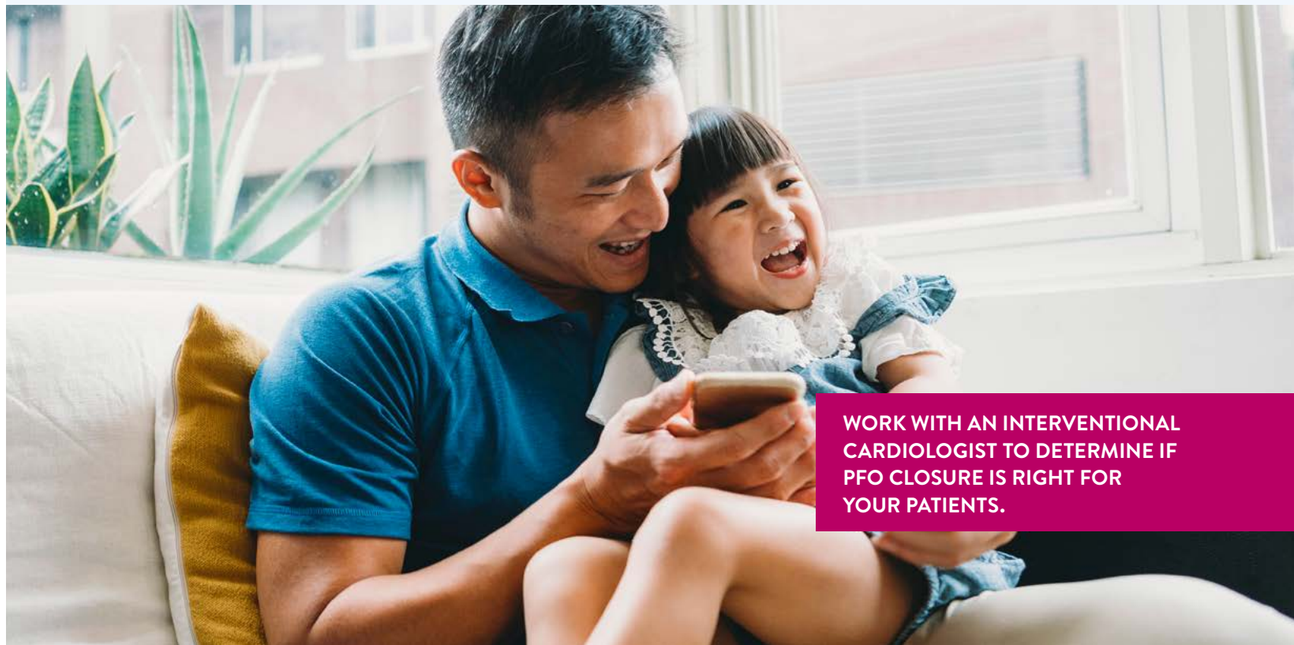
See Important Safety Information referenced within.

PFO CLOSURE: A SAFE, SAME-DAY PROCEDURE WITH LIFE CHANGING OUTCOMES

- MINIMALLY INVASIVE, CATHETER-BASED PROCEDURE
- SHORT PROCEDURE TIME
- PROCEDURE DOES NOT REQUIRE GENERAL ANESTHESIA
- USUALLY AN OUTPATIENT PROCEDURE
- CAN REDUCE THE NUMBER OF ONGOING ANTITHROMBOTIC MEDICATIONS AS SOON AS ONE MONTH AFTER CLOSURE

"This little device has completely been life changing for me. The doctors who recommended it and put it in my body...I'm forever grateful."

- Christine, *stroke at age 33*



WORK WITH AN INTERVENTIONAL CARDIOLOGIST TO DETERMINE IF PFO CLOSURE IS RIGHT FOR YOUR PATIENTS.

EFFECTIVE PFO CLOSURE MADE EASIER,[6] WITH THE AMPLATZER™ TALISMAN™ PFO OCCLUDER

EXTENSIVE EXPERIENCE

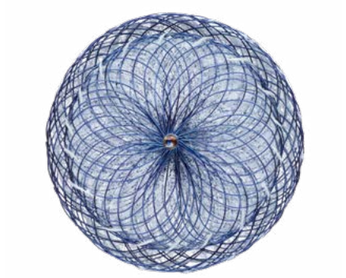
OVER 180,000 PATIENTS TREATED GLOBALLY[4]

#1 device selected for PFO closure

An unmatched track record with over two decades of experience

Widest range of device sizes with addition of 30mm occluder to existing portfolio, enabling closure of extensive range of defects

CONFIDENCE IN CLOSURE



>94% CLOSURE RATE†
at 6 months in RESPECT trial[7]

LONG-TERM PATIENT FOLLOW-UP[7*]

5,810
patient-years of data

5.9
years average patient follow up

EXCELLENT SAFETY[7*]

0
device-related events

< 1% AF
Low risk of atrial fibrillation

OVER 700 INTERVENTIONAL CARDIOLOGISTS IN THE US ARE CERTIFIED AND TRAINED ON THE PFO CLOSURE PROCEDURE.[4]

HOW TO OFFER PFO CLOSURE FOR STROKE SURVIVORS

INTEGRATE PFO CLOSURE INTO YOUR NEUROLOGY PRACTICE WITH THIS THREE-STEP PROCESS:

IDENTIFY POSSIBLE CANDIDATES FOR CLOSURE

Perform a detailed workup using the 2020 AAN practice advisory for specific recommendations

COLLABORATE WITH AN INTERVENTIONAL CARDIOLOGIST TO SELECT APPROPRIATE PATIENTS

Find an interventional cardiologist near you at **PFOstroke.com/us-centers**

PRESENT PFO CLOSURE AS AN OPTION TO YOUR PATIENTS

Access and share information for patients at **PFOstroke.com**

* Rates calculated based on data in final publication. CLOSE Trial data not included as follow-up patient-years was not reported. In RESPECT, serious AF was adjudicated by an independent board of physicians.

† Effective Closure

REFERENCES: 1. Messé SR, Gronseth GS, Kent DM, et al. Practice advisory update summary: Patent foramen ovale and secondary stroke prevention. Neurology® 2020;94:1-10. **2.** Sharrief et al, 2021 Guideline for the Prevention of Stroke in Patients with Stroke and Transient Ischemic Attack. A Guideline from the American Heart Association/American Stroke Association, Stroke, 2021;52:e364–e467. DOI: 10.1161/STR.0000000000000375. **3.** Elgendy AY, Saver JL, Amin Z, et al. Proposal for Updated Nomenclature and Classification of Potential Causative Mechanism in Patent Foramen Ovale -Associated Stroke. JAMA Neurology April 2020. **4.** Abbott Internal Sales Data 1998-2021. **5.** Kent DM, Ruthazer R, Weimar C, et al. An index to identify stroke-related vs incidental patent foramen ovale in cryptogenic stroke. Neurology® 2013;81:619 -625. **4.** Abbott Internal Sales Data 1998-2021. **6.** Tests performed by and data on file at Abbott. **7.** Saver JL, Carroll JD, Thaler DE, et al. Long-term outcomes of patent foramen ovale closure or medical therapy after stroke. N Engl J Med 2017; 377: 1022-32.

See Important Safety Information referenced within.

AMPLATZER™ TALISMAN™ PFO OCCLUDER
IMPORTANT SAFETY INFORMATION

Rx ONLY

INDICATIONS FOR USE

The Amplatzer™ Talisman™ PFO Occluder is indicated for percutaneous transcatheter closure of a patent foramen ovale (PFO) to reduce the risk of recurrent ischemic stroke in patients, predominantly between the ages of 18 and 60 years, who have had a stroke due to a presumed paradoxical embolism, as determined by a neurologist and cardiologist following an evaluation to exclude other causes of ischemic stroke.

CONTRAINDICATIONS

- Presence of thrombus at the intended site of implant, or documented evidence of venous thrombus in the vessels through which access to the defect is gained.
- Patients with intra-cardiac thrombus, mass, vegetation, or tumor.
- Patients whose vasculature, through which access to the PFO is gained, is inadequate to accommodate the appropriate sheath size.
- Patients with anatomy in which the required Amplatzer™ Talisman™ PFO device size would interfere with other intracardiac or intravascular structures, such as valves or pulmonary veins.
- Patients with another source of right-to-left shunts, including an atrial septal defect and/or fenestrated septum.
- Patients with active endocarditis or other untreated infections.
- Patients who are unable to tolerate intra-procedural anticoagulation or post-procedural anti-platelet therapy.

WARNINGS

- Do not use an open or damaged pouch; do not use a damaged device.
- Patients who are at increased risk for venous thromboembolic events should be managed with thromboembolic risk reduction regimen after the PFO closure following standard of care.
- The safety and effectiveness of the Amplatzer™ Talisman™ PFO Occluder has not been established in patients with a hypercoagulable state.
- Prepare for situations that require percutaneous or surgical removal of this device. This includes availability of a surgeon and access to operating room.
- Embolized devices must be removed as they may disrupt critical cardiac functions. Do not remove an embolized occluder through intracardiac structures unless the occluder is fully recaptured inside a catheter or sheath.
- The Amplatzer™ Talisman™ PFO Occluder device consists of a nickel-titanium alloy, which is generally considered safe.
- However, in vitro testing has demonstrated that nickel is released from this device for a minimum of 60 days. Patients who are allergic to nickel may have an allergic reaction to this device, especially those with a history of metal allergies. Certain allergic reactions can be serious; patients should be instructed to notify their physicians immediately if they suspect they are experiencing an allergic reaction such as difficulty breathing or inflammation of the face or throat. Some patients may also develop an allergy to nickel if this device is implanted.
- Transient hemodynamic compromise may be encountered during device placement, which may require fluid replacement or other medications as determined by the physician.
- Prior to device detachment, evaluate the position of the device relative to the free atrial wall and the aortic root using echocardiography.
- Use echocardiography to ensure that the device does not impinge on the free atrial wall or aortic root.
- Do not release the device from the delivery cable if the device does not conform to its original configuration, or if the device position is unstable or if the device interferes with any adjacent cardiac structure (such as Superior Vena Cava (SVC), Pulmonary Vein (PV), Mitral Valve (MV), Coronary Sinus (CS), aorta (AO)). If the device interferes with an adjacent cardiac structure, recapture the device and redeploy. If still unsatisfactory, recapture the device and either replace with a new device or consider alternative treatments.
- DO NOT use the Amplatzer™ Talisman™ PFO Occluder after the Use-by date stated on the package label.
- This device was sterilized with ethylene oxide and is for single use only. Never reuse or re-sterilize the system. Use of expired, reused, or re-sterilized devices may result in infection.
- This device should be used only by physicians who are trained in standard transcatheter techniques.

PRECAUTIONS FOR SPECIAL POPULATIONS

- Pregnancy: The safety and effectiveness of this occluder has not been established during pregnancy. Fluoroscopic x-ray guidance is used during placement of the device. The risk of increased X-ray exposure for patients who are pregnant must be weighed against the potential benefits of this technique.
- Nursing mother: The safety and effectiveness of this occluder has not been established in lactating mothers. There has been no quantitative assessment for the presence of leachables in breast milk.
- Pediatric Population: The safety and effectiveness of this occluder has not been established in a pediatric population.

PRECAUTIONS

- Aspirin (325 mg/day) (or alternative antiplatelet/anticoagulant, if patient has aspirin intolerance) is recommended to be started at least 24 hours prior to the procedure.
- Antibiotics should be administered peri-procedurally.
- Patients should be fully heparinized throughout the procedure using adequate dosing so as to keep the activated clotting time (ACT) greater than 200 seconds.

CAUTION: Intracardiac echocardiography (ICE) or transesophageal echocardiography (TEE) is recommended as an aid in evaluating the PFO and placing the Amplatzer™ Talisman™ PFO Occluder. If TEE is used, the patient's esophageal anatomy must be adequate for placement.

CAUTION: Be cautious when using fluoroscopic X-ray guidance, which may be used during placement of the device.

CAUTION: Do not use a power injection system to put contrast solution through the sheath.

- The safety and effectiveness of the Amplatzer™ Talisman™ PFO Occluder has not been established in patients (with):
  - Age less than 18 years or greater than 60 years because enrollment in the pivotal study (the RESPECT trial) was limited to patients 18 to 60 years old
  - A hypercoagulable state including those with a positive test for a anticardiolipin antibody (IgG or IgM), Lupus anticoagulant, beta-2 glycoprotein-1 antibodies, or persistently elevated fasting plasma homocysteine despite medical therapy
  - Unable to take antiplatelet therapy
  - Atherosclerosis or other arteriopathy of the intracranial and extracranial vessels associated with a ≥50% luminal stenosis
  - Acute or recent (within 6 months) myocardial infarction or unstable angina
  - Left ventricular aneurysm or akinesis
  - Mitral valve stenosis or severe mitral regurgitation, irrespective of etiology
  - Aortic valve stenosis (mean gradient greater than 40 mmHg) or severe aortic valve regurgitation
  - Mitral or aortic valve vegetation or prosthesis
  - Aortic arch plaques protruding greater than 4 mm into the aortic lumen
  - Left ventricular dilated cardiomyopathy with left ventricular ejection fraction (LVEF) less than 35%
  - Chronic, persistent, or paroxysmal atrial fibrillation or atrial flutter
  - Uncontrolled hypertension or uncontrolled diabetes mellitus
  - Diagnosis of lacunar infarct probably due to intrinsic small vessel as qualifying stroke event
  - Arterial dissection as cause of stroke
  - Index stroke of poor outcome (modified Rankin score greater than 3)
  - Pregnancy at the time of implant
  - Multi-organ failure

PATIENT COUNSELING INFORMATION

Physicians should review the following information when counseling patients about the Amplatzer™ Talisman™ PFO Occluder and the implant procedure:

- The safety and effectiveness of PFO closure with the Amplatzer™ Talisman™ PFO Occluder in combination with the required post-implant antiplatelet therapy.
- PFO closure with the Amplatzer™ Talisman™ PFO Occluder can only reduce the risk for a recurrent stroke due to a paradoxical embolism through a PFO.
  - With aging, there is an increased likelihood that non-PFO related risks for stroke may develop and cause a recurrent ischemic stroke independent of PFO closure.
- The procedural risks associated with Amplatzer™ Talisman™ PFO Occluder.
- The need for adherence to a defined adjunctive antithrombotic therapy following implantation of the Amplatzer™ Talisman™ PFO Occluder.
- Patients with a history of DVT or PE may benefit from continuation or resumption of anticoagulation therapy following implantation of the Amplatzer™ Talisman™ PFO Occluder to reduce the risk of recurrent DVT or PE.

It is recommended that the medical team (neurologist and cardiologist) and the patient engage in a shared decision-making process and discuss the risks and benefits of PFO closure in comparison to using antithrombotic therapy alone, while taking into account the patient's values and preferences.

POTENTIAL ADVERSE EVENTS

Potential adverse events that may occur during or after a procedure using this device may include, but are not limited to:

- Air embolus
- Allergic reaction/toxic effect due to: anesthesia, contrast media, medication, or metal
- Arrhythmia
- Arteriovenous fistulae
- Bleeding
- Cardiac perforation
- Cardiac tamponade
- Chest pain
- Death
- Deep vein thrombosis
- Device embolization
- Device erosion
- Endocarditis
- Esophagus injury
- Fever
- Headache/migraine
- Hematoma
- Hypertension/hypotension
- Infection
- Myocardial infarction
- Pacemaker placement secondary to PFO device closure
- Pain
- Pericardial effusion
- Pericarditis
- Peripheral embolism
- Pseudoaneurysm
- Pulmonary embolism
- Reintervention for residual shunt/device removal
- Stroke
- Transient ischemic attack
- Thrombus formation
- Valvular regurgitation
- Vascular access site injury
- Vessel perforation

CAUTION: This product is intended for use by or under the direction of a physician. Prior to use, reference the Instructions for Use, inside the product carton (when available) or at eifu.abbottvascular.com or at medical.abbott/manuals for more detailed information on Indications, Contraindications, Warnings, Precautions and Adverse Events.

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