

# PFO Closures

*Complications—such as stroke—can be a result of a hole in the heart wall between the right and left atrium. When open-heart surgery is not indicated, physicians are able to seal the hole with an artificial implant, set in place by a catheter.*

## *Expertise in Matters of the Heart*

Patients experience strokes or arterial clots for a variety of reasons. In some cases, a stroke is caused by a piece of debris that becomes lodged in an artery, blocking blood flow to the brain. When the cause of stroke is debris (*embolic*) or unknown (*cryptogenic*), physicians may find that it is an indirect result of a hole in the wall of the heart. Debris from the right atrium is able to pass into the left atrium through such a hole, called a *patent foramen ovale (PFO)*, where it can enter the arteries and possibly become a blockage.

This condition is initially treated with medications, including blood thinners like Coumadin, which reduce the amount of debris present in the bloodstream. When drug therapy does not relieve the problem, patients may opt to have the hole repaired, either by open-heart surgery or by the lower risk method of catheterization.

**How it works:** A PFO closure implant is a small device that looks like two opposite-facing umbrellas. Ranging from the size of a dime (17mm) to the size of a half-dollar, a PFO closure is constructed from special fabric and metal, commonly used for surgical implants. Each umbrella-shaped side has special springs that,



along with blood pressure inside the heart, hold the device in place over the hole. Over time, heart tissue grows around and through the fabric, making the PFO closure a permanent part of the heart wall.

### **Patient Preparation:**

- Do not eat or drink after midnight the day before or for at least 8 hours prior to the procedure.
- Do not take any medications the morning of your procedure, unless otherwise directed by your physician.
- If you take Coumadin, please obtain instructions from your physician 5-7 days before the procedure regarding when to stop and restart the medicine.
- If you have diabetes, take half of your morning insulin dose.

Check your blood sugar, and relay this information to the nurse or technician. Ask your doctor for further instruction, especially if you take Glucophage.

- Bring your medications with you, along with a list of your daily dosages.
- Plan to arrive at the hospital 1 hour before your scheduled procedure.
- Arrange for transportation home following your procedure. Do not plan to drive or operate machinery for several days.
- Resting for 24 hours following the procedure is recommended. You will receive written instructions upon discharge.
- Many people stay overnight at the hospital to ensure complete recovery.

**What to expect:** The procedure is performed in the Cardiac Catheterization Lab by a physician. Your vital signs will be monitored throughout the procedure.

A long narrow tube, called a catheter, is passed through a small incision in your groin and up through your veins until it reaches the heart. The doctor may use a transesophageal echocardiogram, an ultrasound picture taken from inside the esophagus, to confirm the size of

*(continued on back)*

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the PFO closure device required. At the beginning of the procedure, the patient swallows a small ultrasound device. Information is reviewed during the procedure and the device is then removed. When the catheter is in position near the hole, your cardiologist will place the PFO closure device. The catheter will be removed and pressure maintained on your groin for 20 minutes.

**How it feels:** The incision site is numbed with local anesthetic, but you may be aware of pressure on your groin as the catheter is advanced. You and your physician will have determined whether you will be under conscious sedation or general anesthetic while the catheterization is performed. People usually experience little or no pain during the procedure and some report tenderness at the incision site afterward. You will not be able to feel the implant.

**After the procedure:**

Your physician will give you specific instructions, which will likely include a few days of bed rest and restrictions from heavy lifting or physical activity, to allow the implant to stabilize. You may receive a prescription for a blood thinning medication and antibiotics. You will be asked to schedule a follow-up visit with your doctor. Call your doctor at any time if you have questions.

**Risks:** The risks are similar to those associated with other heart catheterization procedures. There are additional risks associated with artificial implants. Your doctor will review all related risks with you and address any concerns prior to scheduling the procedure.

**Details of Your Upcoming PFO Closure Placement:**

Appointment Date: \_\_\_\_\_

Appointment Time: \_\_\_\_\_

Please check in 1 hour prior to your appointment.

**Location:**

- Medical Center of the Rockies  
2500 Rocky Mountain Avenue, Suite 100  
Loveland, CO 80538  
(970) 624-1800, (800) 459-4241



For more information call (970) 221-1000, (800) 459-4241, or visit [www.heartcenteroftherockies.com](http://www.heartcenteroftherockies.com)