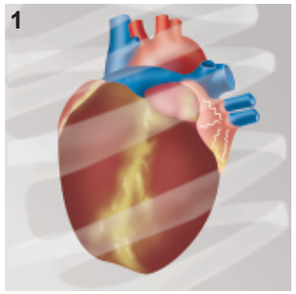
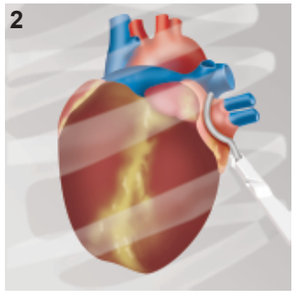
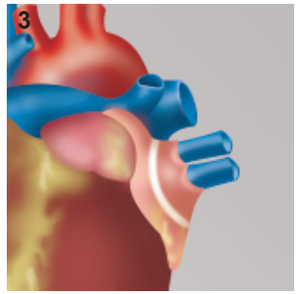
HOW MINI-MAZE SURGERY WORKS



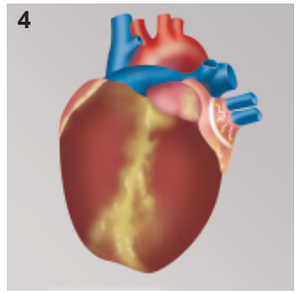
Atrial fibrillation is an irregular heart rhythm caused by abnormal electrical impulses that begin at the top of the heart and travel down the upper chambers, or atria.



In Mini-Maze surgery, doctors use a very precise instrument that fits around the top of the atrium and destroys a small amount of tissue in the area near where the irregular impulses start.



The damaged tissue can no longer conduct electrical signals, thereby interrupting the transmission of the impulses.



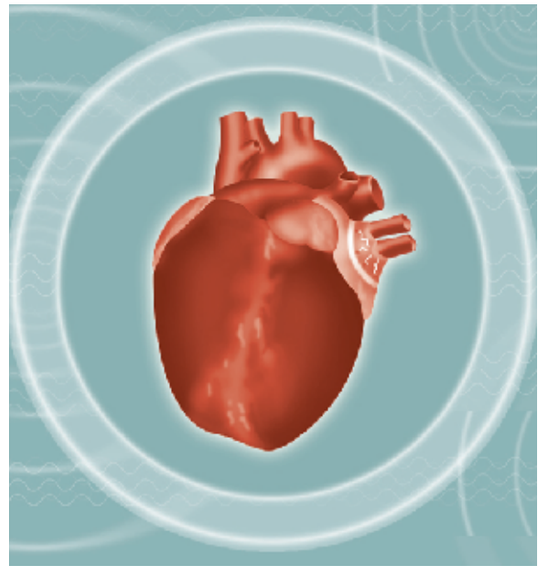
With the abnormal signals unable to cross the zone of defense, the atria resume beating normally.

TREATMENT OPTIONS FOR ATRIAL FIBRILLATION

TYPE OF TREATMENT	WHAT IT DOES	HOW SAFE AND EFFECTIVE IT IS
Drugs		
Anticoagulants (e.g., Coumadin)	Does not treat afib itself but helps prevent blood clots that can cause stroke.*	Anticoagulant therapy is lifelong and can cause serious bleeding. Patients must have frequent blood tests to ensure that the level of medication is in the right range.
Antiarrhythmics	Intended to treat the abnormal heart rhythm.	These drugs are generally not very effective for afib and are rarely used.
Catheter Ablation	Destroys the source of the abnormal electrical signals.	These procedures take many hours to perform, may require a permanent pacemaker, and can cause life-threatening damage to organs near the heart. As a result, they are reserved for the most severe cases of afib.
Mini-Maze Surgery	Creates a “zone of defense” to permanently eliminate afib.	Experience to date indicates that the surgery corrects afib in more than 85% of patients.

* Because the atria fail to pump effectively, blood pools in the chamber and begins to form clots. These clots can break off and travel to other parts of the body, including the brain. For this reason, afib increases a person’s risk of stroke fivefold.

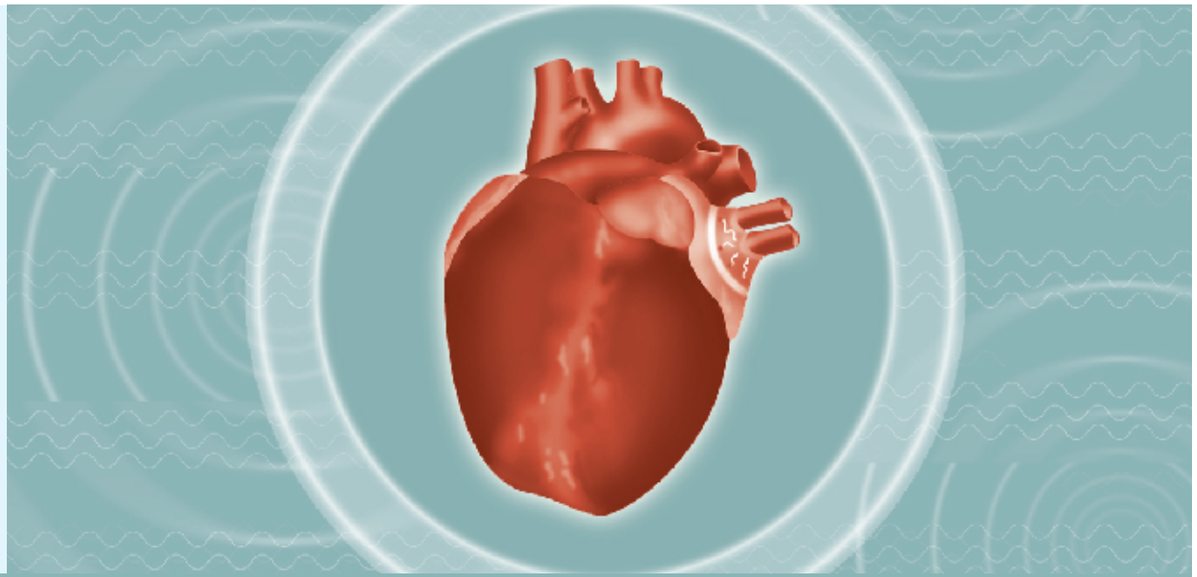
A PATIENT’S GUIDE TO



MINI-MAZE HEART SURGERY FOR **ATRIAL FIBRILLATION**

Atrial fibrillation, or afib, is the most common type of irregular heartbeat. In afib, the upper chambers of the heart (the atria) contract in a rapid and disorganized motion, disrupting the heart's ability to pump blood.

Afib is caused by abnormal electrical impulses that begin at the top of the heart and travel down the atrium. Until now, there has been no simple, effective treatment to correct the underlying cause of afib. With Mini-Maze surgery, doctors are able for the first time to permanently break the circuit of afib in an easy to perform procedure. Mini-Maze can restore normal heart function and help patients with afib maintain a healthy, active life.



QUESTIONS AND ANSWERS ABOUT MINI-MAZE HEART SURGERY

Q: What is Mini-Maze heart surgery?
A: Mini-Maze is a new kind of minimally invasive heart surgery that has the potential to permanently cure afib. In Mini-Maze surgery, doctors create a "zone of defense" at the top of the heart that helps protect the rest of the atrium from the abnormal electrical impulses that lead to afib.

Q: What are the benefits of Mini-Maze surgery?
A: Mini-Maze surgery is the first treatment that can safely, easily and reliably eliminate afib, helping patients avoid lifelong drug therapy and reducing the high risk of stroke and other complications that are associated with afib. (See Treatment Options for Atrial Fibrillation.)

Q: How is Mini-Maze surgery performed?
A: To perform the surgery, doctors make a small incision between the ribs, through which the Mini-Maze instrument is inserted into the chest cavity. With the help of a small fiber optic camera to guide them, surgeons grasp the atrium with the Mini-Maze tool, encircling the top of the chamber. The instrument precisely destroys a small amount of tissue, leaving a thin ring of muscle that can no longer conduct electrical activity. This isolates the abnormal impulses that cause afib, creating a zone of defense that allows the rest of the chamber to beat normally. (See How Mini-Maze Surgery Works.)

Q: Can Mini-Maze surgery be performed with other types of heart operations?
A: Yes. Mini-Maze surgery may be used to treat afib alone or the procedure can be easily incorporated into other types of heart operations such as bypass surgery or valve surgery.

Q: How effective is Mini-Maze?
A: Experience to date indicates that Mini-Maze surgery eliminates afib in more than 85% of patients who undergo the procedure.

Q: What are the risks of Mini-Maze?
A: The Mini-Maze surgery carries the same risks as other forms of heart surgery, including bleeding at the wound site, heartbeat irregularities and stroke.

Q: Which patients are candidates for Mini-Maze?
A: Most patients with afib are candidates for Mini-Maze. Together, you and your doctor can determine if this surgery is right for you.

Q: Which patients are not candidates for Mini-Maze?
A: Patients who should not undergo general anesthesia or who have conditions that put them at high risk from major surgery are not candidates for Mini-Maze.

Q: How long does it take to perform Mini-Maze?
A: It takes only minutes to treat the heart muscle and create the zone of defense. The entire operation usually takes about 3 hours.

Q: Is Mini-Maze covered by private or government health insurance?
A: Mini-Maze heart surgery is usually covered by private insurance or other health care programs. Check with your doctor or insurance provider.