What is it like to have a Cryoballoon Procedure?

**Pre-procedure**
- Document abnormal rhythms. ECG or Holter, or Event Monitor.
- Cardiac testing including Echo and CT scan.
- Peri-procedure warfarin.
- Continue warfarin 2 months post ablation.
- Some patients with higher stroke risk continue warfarin indefinitely.

**Outpatient Procedure**
- Most patients go home the morning after the ablation, much sooner than with RF ablation.

**General anesthesia**

**IV lines in right and left groins**

**2-3 hour procedure, rest in bed overnight**

**Only mild chest pain or cough post procedure**

**No strenuous activity for 3-5 days**

**Allow the IV sites in the legs to heal. Groin bruises are common.**

**Palpitations post procedure**
- Common to feel normal heart rate variations as palpitations.
- AFib early after ablation often goes away.
- Patients with AF can have other atrial arrhythmias that may need therapy in addition to AFib.
- Recurrent AFib later after ablation can be dealt with with repeat ablation or antiarrhythmic drugs.

**Follow up office visit in 1-2 weeks**
- Reduce and eliminate medications as able in post procedure follow up.

Reducing Risks

**Pericardial tamponade:**
- Leaking of blood into the sac around the heart resulting from perforation of the left atrium is reduced by careful puncture of the intra atrial septum guided by an echo probe in the atrium and by avoiding RF ablation.

**Stroke:**
- Stroke is minimized by maintaining warfarin before and after the ablation and by giving heparin during the procedure.

**Bleeding:**
- Bruising from the IV sites in the groin is common, taking it easy for 3-5 days makes it unlikely to have any serious bleeding from these sites.

**Pulmonary Vein Stenosis:**
- Narrowing of the pulmonary vein results in shortness of breath and is avoided by being careful not to freeze the balloon inside the pulmonary vein.

**Phrenic nerve palsy:**
- Freezing the nerve to the right diaphragm avoided by monitoring phrenic nerve function and stopping freeze if nerve palsy begins. Phrenic nerve palsy is uncommon with this precaution and almost always temporary.

Other things that help!

You can increase the effectiveness of AFib treatment by having a healthy lifestyle: Exercise regularly, lose weight, avoid excessive alcohol, treat sleep apnea, stay hydrated, and work closely with your doctor to treat hypertension and other related heart problems.

My advice for patients with AFib

Don't take chances with stroke! Know your risk and do something about it.

Commit to making beneficial life style changes.

Keep your mind open. Don't prejudge treatments as "good" or "bad" until you understand how they may or may not be useful to improve YOUR quality of life.

Be patient and have a stepwise approach to therapy. Work with a doctor who will explain and navigate the steps with you.

If ablation is needed, strongly consider the Cryoballoon.

Recognize AFib as a life long problem.

Who should have Cryoballoon for AFib?

Both AFib and medications used to treat it can significantly reduce your quality of life. Consider Cryoballoon Ablation to reduce symptoms when medications haven’t.

AFib starts with brief or infrequent symptoms, but over time can become longer lasting and eventually permanent. Consider Cryoballoon Ablation to prevent progression BEFORE AFib becomes permanent.

By far the most experience.
Dr. Svinarich has 20 years of ablation experience, was the first in the region to use the Cryoballoon and is by far the most experienced performing over 225 cases as of 10/13. He teaches others physicians locally and nationally to use the Cryoballoon, and performs research studies evaluating the safety and efficacy of the procedure.
What can be done for AFib?

Keep the heart from going too fast or too slow.
Beta blockers (metoprolol, atenolol, bystolic) and calcium blockers (verapamil, diltiazem) are used when the pulse is TOO FAST during AFib. They lower signal travel from the atrium into the ventricle thereby reducing the pulse rate during AFib. They do not stop or prevent AFib, but they can reduce symptoms. When the heart rate is TOO SLOW inserting a pacemaker can restore a normal heart rate but not prevent the AFib.

Get rid of the AFib.
Cardioversion with electrical shock stops the AFib but does NOT prevent it from restarting.
ANTIARRHYTHMIC medications can prevent the AFib from recurring. These include flecainide, rhytmol, sotalol, Tikosyn, Multaq, and amiodarone. These medications are selected and monitored with care and individualized to each patient’s condition. ABLATION can block the pulmonary vein triggers from entering the atrium and prevent AFib.

Prevent Strokes.
AFib increases the risk of stroke 5 fold. The most important important consideration in AFib treatment is to assess the risk (which varies for each individual) and give anticoagulation therapy (warfarin, Pradaxa, Xarelto, or Eliquis) IF THE BENEFIT OUTWEIGHS THE RISK. Aspirin is not a substitute for coumadin when stroke risk is high.

Calculate Your Risk of Stroke

<table>
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<tr>
<th>Do you have a weak heart, CHF?</th>
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Total Score __________ Risk of stroke

0 —— 0% per year
1 —— 1% per year
2 —— 2% per year
3 —— 3% per year
4 —— 4% per year
5 —— 7% per year
6 —— 10% per year

If your score is 2 or greater the risk of stroke is usually higher than the risk of oral anticoagulant medication.

How does the Cryoballoon work?

1. Access targeted vein
2. Inflate and position
3. Occlude and ablate
4. Assess PVI

TRIGGER

Abnormal electrical firing in the pulmonary vein

TRIGGERS the AFib

Keeping them inside the vein prevents them from starting the AFib

Pulmonary Vein

The CRYOBALLOON freezes a circle around the outside of the pulmonary vein, trapping the abnormal TRIGGERS inside the vein.

Cryoballoon is safer and better tolerated than RF.

Cryoballoon is safer than RF!
The Left Atrium is a very thin structure with the esophagus, pericardium, lungs, and nerves very closely related. RF is cautery which can easily heat through the left atrium. Cryoablation causes much less damage to surrounding structures, including the esophagus.

Cryoballoon makes a complete circle around the vein in one application!

Cryoballoon naturally creates circular lesions reducing the tendency for gaps.

Cryoballoon stays put!
RF catheters are difficult to keep in contact with the moving heart. Cryoballoon catheters freeze and stick.

No char or craters with Cryoballoon!
RF catheters create heat which creates char and craters in the atrial tissue.

Cryoballoon therapy is much better tolerated than RF ablation!
There is very little discomfort with Cryoballoon and patients usually go home much sooner.

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The website that answers your questions about AFib and Cryoablation

WWW.CoolHeartAFib.com    coolheartAF@gmail.com