



Ablation for Atrioventricular Node

What is an ‘ablation’

Ablation (sounds like ah-blai-shun) is a medical procedure used to correct certain heart rhythm problems, such as atrial fibrillation. Ablation of the atrioventricular (AV) node is a procedure used to disrupt or break the electrical connection between the upper heart chambers (the atria) and the lower heart chambers (the ventricles). This procedure does not cure atrial fibrillation, but by breaking this connection, the atrial fibrillation is no longer able to cause the heart to beat rapidly and irregularly.

With the electrical connection broken, a permanent pacemaker is needed to support the heartbeat. The pacemaker is put in place before the AV node ablation is done.

Why is it done?

When the heart is in atrial fibrillation (AF), the electrical signals in the upper chambers of the heart (atria) become irregular and very fast. This causes the atrial muscles to quiver (or fibrillate) instead of pumping efficiently. The AV node is the electrical connection between the atria and the ventricles of the heart. When the chaotic electrical signals get through to the bottom chambers of the heart (ventricles), your pulse becomes irregular and fast.

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An irregular and fast heart beat can cause you to feel a fluttering or thumping in the chest (palpitations), a racing sensation, shortness of breath, dizziness, extremely tired all the time (fatigue), and even chest pressure or pain.

Some people with atrial fibrillation have heart rates that are very difficult to control with medications or cannot tolerate certain medications. AV node ablation is an option for these people.

Once the AV node ablation is done, you will continue to have atrial fibrillation but it is likely you will no longer experience the symptoms caused by the atrial fibrillation.

How is it done?

A heart doctor (cardiologist) who specialized in the heart's electrical system and timing (a cardiac electrophysiologist) does the procedure in a special room in the hospital called the Electrophysiology Lab. It does not involve surgery.

The procedure can take 1 to 2 hours. You are given medicines so that you are not awake during the procedure. This means you won't feel anything nor will you know what is happening.

You usually go home the same day.

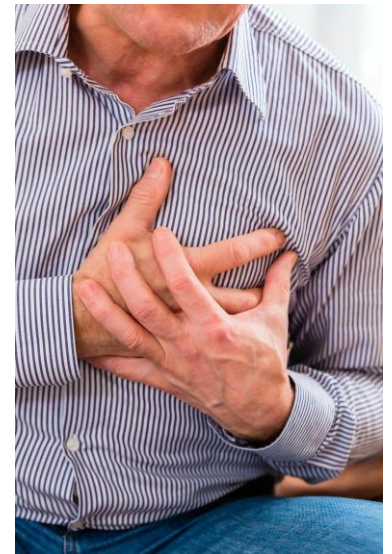
To do the ablation, a long, thin, flexible tube (called a catheter) is inserted into a vein, usually in your groin. The catheter is guided up into your heart using x-ray. Once at the AV node, the doctor uses a special catheter with a metal tip to direct energy to the AV node. This breaks the electrical pathway to the lower part of the heart (ventricles) and should stop the fast, irregular impulses from the atria.

Are there any risks?

Ablation is a relatively safe procedure and is performed routinely. However, as with any medical procedure, there is a small chance of a complication.

Although rare, unexpected complications can include:

- ♥ Significant bleeding or damage to the blood vessel where the catheter enters the skin (1%)
- ♥ Dislodging the pacemaker lead in the heart (1%)



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- ♥ Puncture through the heart wall resulting in fluid leaking out and building up around the heart (<1%)

Your doctor would only recommend you have an ablation if they feel the benefits to your health outweigh these small risks.

What can I expect before and after?

Preparation for the procedure:

The doctor performing your ablation will give you a date, time, and location for your procedure.

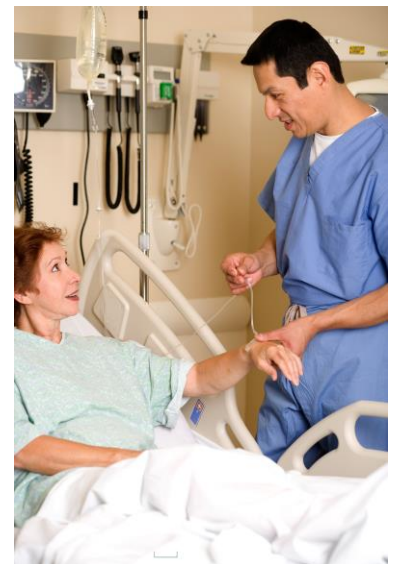
Also, you will get specific instructions, such as:

- ♥ You will need to take your blood thinners as directed by your cardiac electrophysiologist or family doctor.
- ♥ You must arrange for someone to pick you up and to stay with you for at least 24 hours after the procedure.
- ♥ You cannot drive or travel alone for 24 hours after the procedure. You should also defer any important decisions or signing of legal documents during this time. The after effects of the medicine given to make you comfortable during the procedure can make it hard for you to think clearly and react quickly.
- ♥ The electrophysiologist or hospital will give you more detailed instructions.
- ♥ If you do not speak or understand English well enough for medical conversations, either bring someone with you to interpret, or have someone call the location for the procedure and arrange for a medical interpreter.

During the procedure:

- ♥ An intravenous (or I.V.) is placed in one of your arms so they can give medicine during the procedure. To place the I.V., a small flexible tube is inserted through your skin into a vein in your arm.
- ♥ You are attached to heart, blood pressure, and oxygen monitors.
- ♥ Your skin is prepared. Certain areas might need to be shaved to allow heart monitor pads to stick to your skin.

The numbers in brackets indicate the chances of this complication happening. For example, 1% means one person for every 100 getting the procedure. The smaller the percent, the rarer the complication.



- ♥ Numbing medicine is injected to ‘freeze’ the skin where the catheter enters your body (called the insertion site).
- ♥ An anesthesiologist gives you medicine so you are not awake during the procedure.
- ♥ A small ultrasound probe might be put down your esophagus. This probe allows the doctor to see the structures of your heart as well as to look for blood clots within your heart during the procedure.
- ♥ The electrophysiologist inserts the long thin catheters into a large vein in your groin. The doctor uses x-ray to guide the catheter into your heart and to the AV node.
- ♥ Once the catheter is at the AV node, energy is directed to the tissue to destroy and scar the AV node, breaking the heart’s electrical pathway to the lower part of the heart.
- ♥ Afterwards, the catheters are removed. Pressure is put over the insertion site to control any bleeding. A bandage is placed over the insertion site.

An anesthesiologist (sounds like ah-nas-the-zee-all-oh-jist) is a doctor who looks after people during procedures or surgeries, keeping them relaxed, ‘asleep’, and free of pain using different medicines.

After the procedure:

You are moved to the recovery area where you are closely monitored for several hours.

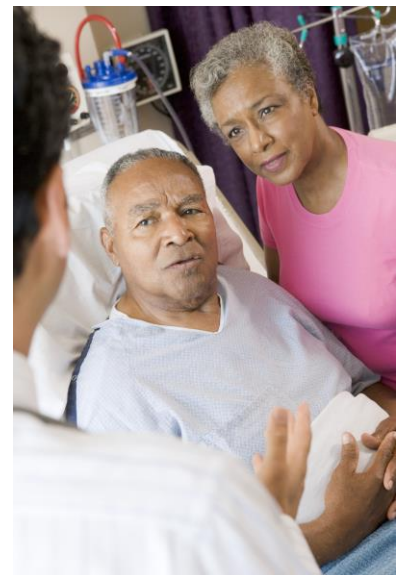
During this time:

- ♥ You rest in bed.
- ♥ You lie flat, keeping your leg straight to prevent bleeding from the insertion site.
- ♥ You might feel groggy, sick to your stomach, or have a headache. This can be from the medications given to help you sleep through the procedure.
- ♥ Once fully awake, you can drink fluids and eat.

Most people go home the same day. Some people stay in the hospital overnight.

Going home

Before you leave the hospital, you get instructions on how to care for yourself at home, what to watch for, and who to follow up with afterwards.



The person staying with you for the first 24 hours should be there to hear the instructions.

Continue to take your heart medications as prescribed. It is important that you do not miss a dose of your blood thinner.

Bruising, soreness, and some swelling around the insertion site is normal and heals with time.

You might notice some mild burning or discomfort in your chest. This is common and goes away in a few days. It can be treated with pain medicine such as regular acetaminophen (regular Tylenol).

Approximately 2 months after your ablation procedure, you will need to have your pacemaker checked and reprogrammed at your local pacemaker clinic.

Continue to take your heart medications as prescribed. It is important that you do not miss a dose of your blood thinner.

When should I get help?

Call your Atrial Fibrillation Clinic** or the electrophysiologist who did the procedure if you have any of the following:

- ♥ Pain with swallowing.
- ♥ A fever over 38°C (100°F).
- ♥ Redness and swelling, and feel warmth around the insertion site (signs of infection).

** After hours, go to the nearest hospital emergency department.

Call 9-1-1 or have someone take you to the nearest emergency department if you have any of the following:

- ♥ Any of the above symptoms get significantly worse.
- ♥ You feel extremely unwell.
- ♥ You are very short of breath, even when sitting still.
- ♥ You have really bad chest discomfort or pain.
- ♥ You can't stand up because of feeling lightheaded.
- ♥ You have fainted.
- ♥ You have signs of a stroke, or mini-stroke.

LEARN THE SIGNS OF STROKE

FACE is it drooping?
ARMS can you raise both?
SPEECH is it slurred or jumbled?
TIME to call 9-1-1 right away.

ACT **FAST** BECAUSE THE QUICKER YOU ACT,
THE MORE OF THE PERSON YOU SAVE.

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- ♥ You notice bright red bleeding and/or severe swelling at the insertion site.

While waiting for the ambulance, put firm pressure over the insertion site. Hold the pressure, or have someone hold it for you, until the emergency personnel take over.

Remember: After your procedure, your atria are still fibrillating - the impulses are just not making it to your ventricles. This means your risk for stroke is the same as before the procedure. You need to continue to take blood thinner(s) to reduce your risk.

If you have questions or concerns:

- ♥ Call your heart doctor or family doctor.
- ♥ Call your Atrial Fibrillation Clinic.
- ♥ Call HealthLink BC at 8-1-1 any time of the day or night to speak to a registered nurse.



Cardiac Services BC

An agency of the Provincial Health Services Authority



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