

Left Atrial Appendage Closure



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An option for preventing stroke for
people living with atrial fibrillation



Cardiac Services BC
Provincial Health Services Authority

You have atrial fibrillation and your doctor has confirmed that taking medication to prevent a blood clot might not be the best option for you.

Your doctor thinks a procedure called 'left atrial appendage closure' (also known as LAA closure or LAAC) might be an option for you.

This booklet describes the procedure and what you should know before deciding if LAAC is a therapy you should consider. We hope it helps you understand how treatment recommendations are made and how you will be part of that process.

Please read this booklet, share it with your family, and bring it with you when you come for any LAAC appointments. Think about questions you might want to ask and write them down on the last page of this booklet.

Atrial fibrillation and how it can be treated

Normally, the heart regularly beats. Certain cells in your heart send out electrical signals that trigger your heart muscle to contract and pump blood.

In atrial fibrillation, the electrical signals become irregular and very fast. This causes the upper part of the heart (the atria) to quiver or fibrillate instead of pumping. Some of these chaotic electrical signals get through to the ventricles, making your heart beat irregularly and too fast.

There are 2 options for treating atrial fibrillation:

- Medications to try to slow or regulate the heart rhythm
- Cardioversion where a low-energy electrical shock to the body tries to interrupt the abnormal rhythm and restore a normal heart rhythm

When the atria are not pumping as they should, blood collects or pools in the atria and blood clots can form. A clot could travel to the brain and, if large enough, cause a stroke. As part of the treating atrial fibrillation, most people take blood thinners to keep blood clots from forming.

Some people, however, cannot safely take blood thinners. Maybe they had a serious bleeding event in the past, or they are more likely to have bleeding problems because of another medical condition. Maybe they are taking other medications that cannot be combined with blood thinners. In rare cases, some people are allergic to blood thinners and have had a serious reaction in the past. For people who cannot safely take blood thinners, LAAC might be an option.

Left Atrial Appendage Closure

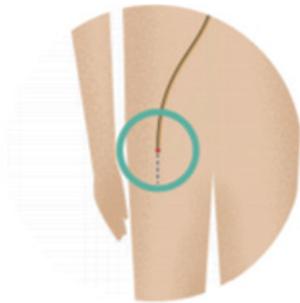
- L:** Left side of the top chamber of the heart
- A:** Atrial referring to the top two chambers of the heart
- A:** Appendage or small sac at the top of the upper left chamber
- C:** Closure or seal off the appendage.

When blood collects in the heart, it usually pools in what is called the left atrial appendage. This is a small sac at the top of the upper left chamber of the heart (the left atrium).

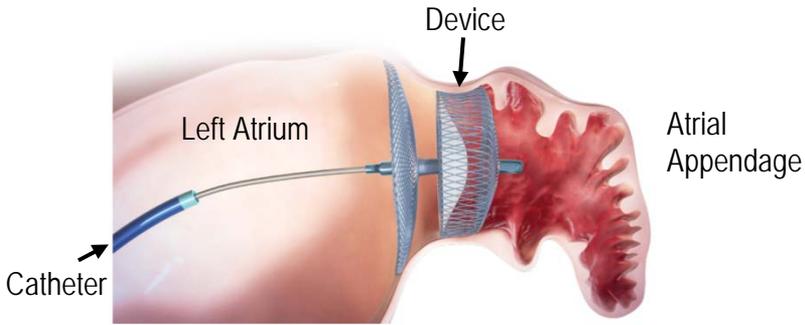
This procedure seals off or closes over the sac, preventing blood clots from forming. Your heart doctor (cardiologist) closes the appendage by implanting a tiny device.

To get the device in place, your cardiologist attaches it to the end of a long thin flexible tube, called a catheter. The catheter is then threaded up into your heart through a large vein in your groin called the femoral vein.

X-ray images and ultrasound are used to help guide the catheter to your heart and left atrial appendage.



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Once in the right place, the device is implanted and the catheter is removed.

Unlike open heart surgery, you do not need a large incision. There is no need to use a heart-lung machine.

You are given medicine to put you into a very deep sleep for the procedure (a general anesthetic).

You will have a breathing tube and an ultrasound probe in your throat. These are both put in after you go to sleep and taken out before you wake up after the procedure.

The LAAC Assessment Process

To determine if LAAC is the right treatment for you, we need to gather a lot of information about your heart and your health.

These are the steps you can expect:

- Step 1** We make an appointment(s) for you to come to our clinic or doctor's office for an assessment. We let you know the days, times, and locations of your heart tests and clinic or office visit(s).

- Step 2** You come in for your LAAC assessment appointment.

- Step 3** You have some heart tests (You might need a few of them).

- Step 4** The LAAC team meets to review the results of your assessment and heart tests. From this, they determine whether LAAC is suitable for you.

- Step 5** The LAAC team contacts you to let you and your family of the next steps.

Your LAAC Assessment Appointment

Expect to come to the LAAC Clinic or LAAC doctor's office for at least one appointment, and maybe more. Your heart tests might not be done in the same location as your LAAC appointment.

Before your appointment, talk to your family doctor about making an advance care plan and perhaps an advance directive. These help to make sure your choices related to your health care are respected and followed in case you cannot speak for yourself.

Attending these appointments can be quite tiring because the tests take time and you might need to go to different areas of the hospital. It's best to plan to rest before and after your appointments, to come with someone who can help you, and to bring some snacks and water with you.

If you are from out of town, we try to schedule appointments for your heart tests and assessment visit over 2 or 3 days in a row. (Remember to book your hotel for at least 2 to 3 nights.)

If you do not speak or understand English, we can get a medical interpreter. Ask someone in your doctor's office (or someone you know who speaks English) to call the LAAC coordinator at least 3 to 5 days before your appointment to request an interpreter. You do not have to pay for this service.

If a medical interpreter is not available, please bring a friend or family member who is able to translate for you.

What to expect during the appointment

- We review what the procedure is, how it is done, as well as the benefits and risks of this procedure.
- We give you information about how the team decides which treatment option is the best one for you.
- We ask you questions about your everyday life, what you can and cannot do for yourself, and your heart symptoms.
- A doctor might give you a medical check-up and ask you questions about your heart and your health.
- We give you time to ask questions.

Heart tests

These tests help us decide whether LAAC is the best option for you. You might have already had some of these tests done in the past. However, heart test results can change over time and we might need to do them again to get specific and up-to-date information.

Everyone being assessed for LAAC has an echocardiogram and CT Scan of the heart. Some people might have additional tests. We let you know what other tests you might need.

Transesophageal echocardiogram: (a 'TEE' for short) is a special, detailed ultrasound test of the heart. It uses sound waves to see the left atrial appendage and look for blood clots. You lie on a bed and are given medicine to sedate you. Then a small probe is put down your throat into your esophagus. This allows us to get very close, detailed images of the left atrium. It takes about 30 to 60 minutes to complete this test. It takes another 1 to 2 hours to wake up. You must have a responsible adult with you when you leave. You are not allowed to drive for 24 hours.

Computed Tomography Scan: (a 'CT Scan') is a special x-ray that takes many pictures of your heart and blood vessels in small sections or 'slices'. The computer puts these pictures together to create a three-dimensional (3D) view of your heart and blood vessels.

During the test, we give you contrast (x-ray dye) to outline the heart and blood vessels. To give the contrast, we start an intravenous and use this to inject the contrast into your bloodstream. It takes about 30 minutes to complete this test.

Referral to other doctors

Sometimes, we ask other specialists to see you.

In some cases, we might ask a doctor who specializes in caring for seniors (called a geriatrician) to see you.

Other examples of doctors who might see you include a neurologist, a gastroenterologist, or a hematologist.

LAAC Team Meeting

After your LAAC assessment appointment and the heart tests are completed, the team meets to review all of your results. Based on this information, the team recommends the best treatment option for you.

What the team could recommend:

- **Medical management:** This means we think it is best for you to take blood thinners to prevent clots. Your family doctor or heart specialist will continue to monitor and treat your atrial fibrillation with medication. You might see another doctor to help with this. Your doctor might ask you to return to the LAAC Clinic or LAAC doctor's office in the future.
- **Left atrial appendage closure (LAAC):** This means we think this is the best option for you.

It's always a good idea to speak with your family and your doctor about the options. Like any medical procedure, this procedure is not without risks.

Some possible problems during and after LAAC include:

- having a stroke
- bleeding
- the device moving or not staying in place in the heart
- leaking around the new device
- a blood clot on the new device

We give you more information about the risks during your assessment visit.

When will you know?

The LAAC coordinator or LAAC doctor calls you after the team meeting to tell you our recommendation. The LAAC coordinator or LAAC doctor also sends your family doctor or heart specialist a letter describing the team's recommendations.

If the team thinks LAAC is the best option for you, take time to think about whether this is what you want. You might prefer the other option.

If you want to proceed with LAAC:

- Call the LAAC office to let us know what you decided.
- We place you on a waitlist. We let you know approximately how long the wait list is when you call.
- We send you information on what to expect before, during, and after your procedure.
- Your family doctor or heart specialist continues to care for your heart health while you wait for the procedure.

Before the LAAC procedure

Any time before your procedure, call the LAAC office if:

- You have questions about the procedure.
- You are admitted to hospital.

If we are not able to speak to you when you call, please leave a message. We do our best to call you back as soon as we can, however, we might not be able to call you back for a couple of days.

My LAAC Clinic/office contact information:

LAAC doctor: _____

Phone: _____

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