
Understanding Remote Pulmonary Artery Pressure Monitoring

Remote pulmonary artery pressure monitoring is used to manage heart failure. It works as an early warning system. It can tell if your heart failure is getting worse before you even notice any changes to your condition. It may lower your risk for a hospital stay and improve your quality of life.

One type of this monitoring has a small, wireless sensor that's placed in your pulmonary artery (PA). The sensor records the pressure in the PA. You collect the pressure readings from the sensor each day with an at-home device. The readings are sent electronically to your healthcare provider. Based on the readings, your provider may make changes to your medicines or other treatments to better control your heart failure. The device is implanted permanently.

Why this monitoring is needed

This type of monitoring isn't right for all people with heart failure. It's often used only in severe cases. Talk with your healthcare provider to see if it may be right for you.

How it works

When you have heart failure, the heart can't pump as well as it should. Blood and fluid may back up into the lungs. And some parts of the body don't get enough oxygen-rich blood to work normally. As the condition gets worse, you may start to have symptoms. These include fatigue, rapid weight gain, shortness of breath, and swelling of the legs and ankles.

Another sign that heart failure is getting worse is a rise in pressure in the PA. This main artery connects your heart to your lungs. It carries blood to your lungs for oxygen. A rise in PA pressure occurs before you notice changes in your symptoms. So by monitoring it, your healthcare provider can tell early on if your heart failure is getting worse. They can then make changes to your treatment to prevent a hospital stay.

Placing the sensor

Your healthcare provider places the sensor in the PA with a procedure called a right heart catheterization. During this procedure:

- You are given medicine to help you relax and not feel pain.
- Your provider makes a cut (incision) in a blood vessel in your neck or groin (femoral vein). They put a thin tube (catheter) into the blood vessel.
- Your provider guides the tube into the right side of the heart and to the PA.
- Once there, your provider can move the sensor into place through the tube.
- Your provider then removes the tube, leaving the sensor in the PA.
- The cut in your neck or groin is closed.

What happens during this monitoring?

The sensor continually records the pressure level in the PA. Each day, you use an at-home device to collect those readings and send them to your healthcare provider. Your provider will teach you how to do this. If your provider notices a rise in PA pressure, they will reach out to you to make changes to your treatment plan.

Keep all follow-up visits with your healthcare provider. Talk with your provider if you have any questions or concerns.

Risks

Remote PA pressure monitoring may have some risks. These are mainly linked to the implant procedure. The risks of right heart catheterization include:

- Infection
- Bleeding
- Blood clot
- Bruising
- Irregular heartbeat
- Injury to the PA
- Stroke or heart attack
- Death

In rare cases, the sensor may move. Or it may not work correctly or stop working.

When to call your healthcare provider

Call your healthcare provider if any of these occur after the sensor is placed:

- Fever of 100.4 °F (38°C) or higher, or as advised by your provider
- Chills
- Increased pain, redness, swelling, or bleeding or other drainage from the insertion site
- Coolness, numbness or tingling, or other changes in the affected leg
- Heart failure symptoms that get worse

Call 911

Call 911 if any of these occur:

- Shortness of breath or trouble breathing
- Chest pain or pressure

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- Nausea or vomiting
 - Heavy sweating
 - Dizziness
 - Fainting