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## Tiny tool helping hearts

*EIRMC unveils new treatment for patients*

Doctors at Eastern Idaho Regional Medical Center have a new tool they believe can save the lives of patients with major heart problems.

The Impella, a motor inside a catheter about the thickness of a cocktail straw, is billed as the world's smallest heart pump. In use at EIRMC since December, the Impella enables doctors to reduce the heart's workload and stabilize a patient's blood pressure.



The key, cardiologist John Chambers said, is that the Impella can be deployed quickly, stabilizing a high-risk patient's condition and allowing doctors to begin procedures aimed at restoring the heart's normal blood flow. The sooner normal flows are established, Chambers said, the less damage the condition will cause to the heart's structure.

"It's allowed us to treat some high-risk patients that we would not have been able to treat in the past," he said.

To introduce the Impella, doctors insert a catheter into the femoral artery in either of the patient's legs and push it several feet through the artery into the heart's left ventricle. A tiny motor inside the tip of the catheter draws oxygenated blood from the left ventricle and pumps it through the aortic valve and back into the artery, where it is pumped to the rest of the body.

In essence, the Impella helps the heart carry out its function of pumping blood. Chambers said the device is capable of pumping up to 2.5 liters of fluids per minute -- about 50 percent to 60 percent of the work a healthy heart does.

Typically, the Impella is a short-term -- at least six hours -- stabilizer meant to buy time for doctors to work on a long-term solution. But it has been used for up to 19 days. Chambers said the amount of blood the Impella pumps can be adjusted, allowing a patient's heart to gradually adjust to a normal workload. EIRMC is one of 325 U.S. hospitals that use the Impella, according to a news release.