

Unclogging heart arteries through wrist becoming more common

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Opening clogged heart arteries via the radial artery in the wrist is becoming more common. The wrist route may have fewer complications than the traditional route through the femoral artery in the groin. Use of the procedure increased 13-fold in a six-year period.

The way to a man's heart may be his wrist.

More U.S. doctors are unclogging [heart arteries](#) (in men and women) by entering through the [radial artery](#) in the wrist, which is linked to less bleeding complications than the traditional route through the groin, according to new research in the [American Heart Association](#) journal *Circulation*.

Doctors reopen blocked arteries by threading a catheter through the [femoral artery](#) in the groin or the radial artery in the wrist in a procedure called percutaneous [coronary intervention](#) (PCI).

For the study, researchers examined data of almost 3 million artery-opening procedures in 1,381 centers in 2007-12. They found:

- In 2004-07, doctors used the radial artery to reach the heart in less than one out of every 50 PCI procedures.
- By the study's end in 2012, nearly one out of every six PCIs was performed through a radial artery in the wrist—a 13-fold

increase.

"Traditionally, femoral access has been taught and used in the United States for PCI, whereas the radial approach is frequently used in Europe," said Dmitriy N. Feldman, M.D., the study's lead author and assistant professor of medicine at Weill Cornell Medical College, New York Presbyterian Hospital Department of Medicine, Greenberg Division of Cardiology.

Wider use of the wrist-route procedure, particularly in high-risk patients, could improve PCI safety, researchers said.

Bleeding complications are an important concern in PCI because patients are often treated with blood-thinning medications that make it harder to stop bleeding after the procedure. The radial artery is smaller and located closer to the skin's surface compared with the femoral artery, which is why it is easier to compress manually, Feldman said. This makes it easier to prevent or stop internal and external bleeding.

Researchers found:

- Bleeding complications occurred in 2.67 percent of the radial artery procedures, compared to 6.08 percent of the femoral artery.
- Fewer vascular complications occurred in the radial artery group: 0.16 percent vs. 0.45 percent.

High-risk patients—those over age 75, women and people with acute coronary syndromes—benefited most from radial PCI. However, its use and growth of use is lowest in those patients, researchers noted. A "learning curve" is important in developing proficiency in radial PCI

procedures, particularly in high-risk patients, Feldman said.

Doctors in academic institutions and centers in the New England area are using radial PCI at a much higher rate than other centers in the United States, researchers found.

Provided by American Heart Association

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