

# Heart-lung machines prove safe even in the elderly

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One of the scariest parts of bypass surgery—having your heart stopped and going on a heart-lung machine while doctors fix your clogged arteries—is safe even in the elderly and doesn't cause mental decline as many people have feared, two landmark studies show.

[Bypass surgery](#) is one of the most common operations in the world. There is great debate about the best way to do it, and patients often are given a choice.

Usually doctors stop the heart to make it easier to connect new blood vessels to make detours around blocked ones. But some patients later complain of "pumphead"—[mental decline](#) thought to be from the heart-lung machines used to pump their blood while their hearts could not.

So surgeons started doing "off-pump" bypasses on beating hearts. Nearly one quarter of bypasses are done this way now. But that brought a new complaint: Results on the blood vessels seemed not as good.

The new studies were aimed at testing all these factors in a rigorous way to see which method was best.

Dr. Andre Lamy of Canada's McMaster University led a study of 4,752 people in 19 countries. They were randomly assigned to have bypasses with or without the use of [heart pumps](#).

After one year, there were no big differences in the rates of death, [heart](#)

[attack](#), stroke or [kidney failure](#) in the two groups. Slightly more people who had bypasses without a heart-lung machine needed a follow-up procedure to open [clogged arteries](#) but the difference was so small it could have occurred by chance alone.

Mental sharpness and quality of life also was similar in the two groups. That suggests that whatever decline occurred was temporary or a result of anesthesia or something other than the way the operations were done, said Dr. Timothy Gardner, a surgeon and an [American Heart Association](#) spokesman.

"I'm actually somewhat surprised" the methods proved equally good because the operation is so much harder to do on beating hearts, he said. "It seems pretty conclusive" that either way is fine.

That was true even in people 75 or older, a group most worried about going on a heart-lung machine. The second study tested the two bypass methods in 2,539 of these elderly patients in Germany. Again, the methods proved equally safe and effective a year later.

The studies were discussed Monday at an American College of Cardiology conference in San Francisco and published online by the *New England Journal of Medicine*.

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