Study: Mental Changes After Bypass Usually Temporary

Declines in thinking and memory skills that sometimes follow coronary artery bypass surgery may be short-lived, a new small study suggests.

Earlier reports found cognitive problems in up to two-thirds of people being discharged from the hospital after bypass surgery, which is done to improve blood flow to the heart.

The procedure involves grafting a healthy blood vessel around a blocked one, so blood "bypasses" the unhealthy vessel. Researchers have suspected that during surgery small plaques might break off from the blood vessels and travel to the brain or that blood flow to parts of the brain could be slowed, possibly causing mental impairment.

But the new study—and other more recent evidence—suggests cognitive changes shouldn't be a major concern for most people considering a bypass, according to Ola Selnes, a neurologist from The Johns Hopkins Hospital in Baltimore.

"Most patients with a relatively healthy brain … can actually tolerate these ill effects of the surgery," said Selnes, who wrote a commentary published with the study.

"The ones who get into trouble with bypass surgery are the patients who already have some central nervous system disease," he said.

"Even for these patients, the cognitive decline is not permanent. To the best that we can tell, most patients recover to within normal limits by three months or so."

For the new study, Australian researchers compared thinking and memory skills among 16 bypass patients, 15 people

undergoing less-invasive lung surgery and 15 healthy volunteers before and after the procedures, using a battery of cognitive tests.

Bypass patients started off with worse mental functioning than people in the comparison group. One week post-surgery, seven of the bypass patients and five of the lung surgery patients had significant cognitive impairment.

Most of those problems could be linked to patients' stress, depression and anxiety, Stephen Robinson from RMIT University in Melbourne, Australia, and his colleagues reported in The Annals of Thoracic Surgery. The effects of anesthesia and post-surgery pain could also have played a role, they noted.

By eight weeks, only one person who had undergone bypass surgery was still impaired, according to the cognitive tests. What's more, four bypass and two lung surgery patients saw improvements in thinking and memory above their pre-operation scores.

"The possibility exists that if you treat heart disease then perhaps the brain also benefits in a secondary sort of fashion through better blood supply to the brain, and that in turn could have protective effects for cognitive change with old age," Selnes told Reuters Health.

He said that although people shouldn't seek out bypass surgery to boost their brainpower, people who need it because of heart disease shouldn't avoid surgery for fear of mental complications, either.

"They should settle for the type of intervention that their cardiologist or heart surgeon thinks is the best for them," he said. "They shouldn't really be precluding having traditional (bypass) surgery because of the risk of cognitive decline."