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**The Society
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Tests before heart surgery

When you need them—and when you don't

Your doctor may order some tests before you have a heart bypass or another kind of heart surgery. The purpose of the tests is to make the surgery safer.

Two common tests are a breathing test and a carotid ultrasound test. But you probably don't need these tests, unless you have a breathing problem or symptoms that put you at risk for a stroke. Here's why:

Breathing tests usually aren't helpful for people without symptoms.

Breathing tests look for problems in the lungs. If you have a lung disease or symptoms of lung disease, the tests can help your doctor look at your risk of breathing problems or pneumonia. If the tests find problems, your doctor can change how your surgery is managed. For example, you might be given a medicine to control the lung disease or exercises to strengthen your breathing muscles.

But for people without symptoms of lung disease, breathing tests rarely find problems or change the way surgery is managed.



A carotid ultrasound test usually isn't helpful for people without a history of strokes.

A carotid ultrasound test uses sound waves to examine the two main arteries in the neck (the carotid arteries). The test looks for severe clogging in one of these arteries in people who have had a stroke or mini-stroke. In that case, a procedure to clean out the artery can help prevent another stroke.

But for people without a history of stroke, the risk of stroke from heart surgery is low. There is no evidence that the procedure to clean out the artery can lower the risk more. So checking the arteries is not useful.

The tests have risks.

In people without symptoms, these tests may produce false alarms. That can lead to follow-up tests, visits to specialists, unnecessary medicines, and delayed surgery. For example, a carotid ultrasound may be followed by more testing, which can lead to unneeded procedures that have a risk of stroke or death.

The tests can cost a lot.

- Breathing tests can cost up to \$800. The cost depends on which tests you have and how many.
- A carotid ultrasound costs hundreds of dollars. It can lead to follow-up tests and a procedure and hospital stay, which costs thousands of dollars.

When should you have the tests before heart surgery?

- Breathing tests can be useful if you have a lung disease such as asthma or chronic obstructive pulmonary disease (COPD). They also make sense if you have symptoms such as shortness of breath.
- A carotid ultrasound makes sense if you have a history of stroke or mini-strokes (transient ischemic attacks, or TIAs).

This report is for you to use when talking with your healthcare provider. It is not a substitute for medical advice and treatment. Use of this report is at your own risk.

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