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Troponin test

A troponin test measures the levels troponin T or troponin I proteins in the blood. These proteins are released when the heart muscle has been damaged, such as occurs with a heart attack. The more damage there is to the heart, the greater the amount of troponin T and I there will be in the blood.

How the Test is Performed

A blood sample is needed.

How to Prepare for the Test

No special steps are needed to prepare, most of the time.

How the Test will Feel

You may feel slight pain or a sting when the needle is inserted. You may also feel some throbbing at the site after the blood is drawn.

Why the Test is Performed

The most common reason to perform this test is to see if a heart attack has occurred. Your doctor will order this test if you have chest pain and other signs of a heart attack. The test is usually repeated two more times over the next 6 to 24 hours.

Your doctor may also order this test if you have angina that is getting worse, but no other signs of a heart attack. (Angina is chest pain thought to be from a part of your heart not getting enough blood flow.)

The troponin test may also be done to help detect and evaluate other causes of heart injury.

The test may be done along with other cardiac marker tests, such as CPK isoenzymes or myoglobin.

Normal Results

Cardiac troponin levels are normally so low they cannot be detected with most blood tests.

Having normal troponin levels 12 hours after chest pain has started means a heart attack is unlikely.

A normal value range may vary slightly among different laboratories. Some labs use different measurements or test different samples. Also, some labs have different cutoff points for "normal" and "probable myocardial infarction." Talk to your doctor about the meaning of your specific test results.

What Abnormal Results Mean

Even a slight increase in the troponin level will often mean there has been some damage to the heart. Very high levels of troponin are a sign that a heart attack has occurred.

Most patients who have had a heart attack have increased troponin levels within 6 hours. After 12 hours, almost everyone who has had a heart attack will have raised levels.

Troponin levels may remain high for 1 to 2 weeks after a heart attack.

Increased troponin levels may also be due to:

- Abnormally fast heart beat
- High blood pressure in lung arteries (pulmonary hypertension)
- Blockage of a lung artery by a blood clot, fat, or tumor cells (pulmonary embolus)
- Congestive heart failure
- Coronary artery spasm
- Inflammation of the heart muscle usually due to a virus (myocarditis)
- Prolonged exercise (for example, due to marathons or triathlons)
- Trauma that injures the heart, such as a car accident
- Weakening of the heart muscle (cardiomyopathy)
- Long-term kidney disease

Increased troponin levels may also result from certain medical procedures such as:

- Cardiac angioplasty/stenting
- Heart defibrillation or electrical cardioversion (purposeful shocking of the heart by medical personnel to correct an abnormal heart rhythm)

- Open heart surgery
- Radiofrequency ablation of the heart

Alternative Names

TroponinI; TnI; TroponinT; TnT; Cardiac-specific troponin I; Cardiac-specific troponin T; cTnI; cTnT

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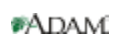
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