PATHOLOGY TESTS EXPLAINED

Information about pathology tests to help everyone take control of their health and make the right decisions about their care.

WHAT YOU SHOULD KNOW ABOUT YOUR **TROPONIN TEST**

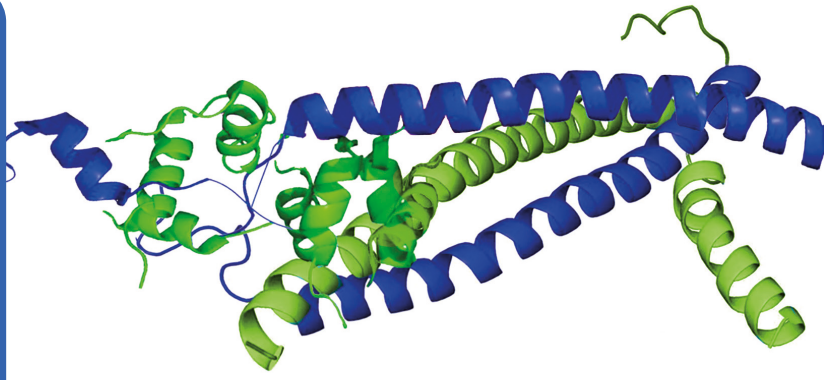
If you're unlucky to be admitted to hospital with a suspected heart attack, the high-sensitivity troponin blood test can quickly help show if you've had one.

In a heart attack, one of the arteries supplying blood to your heart become blocked. This means the blood flow can be limited or blocked entirely. The heart muscle cells are starved of oxygen and they start to die.

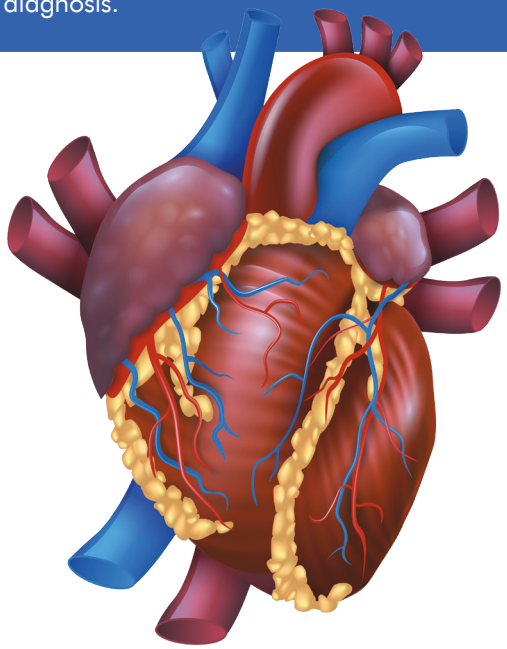
Troponins are proteins found in your heart muscle cells – they help the muscle contract. When these cells are injured or start to die, troponins leak out into the bloodstream.

By measuring the levels of troponins in your blood, your emergency doctors can assess the damage to your heart.

Many hospitals are now using a blood test called high sensitivity troponin which can detect very low levels of troponin and diagnose heart attack very quickly. If your hospital is using less sensitive troponin tests, it may take a little longer to make the diagnosis.



Normally, troponin levels are very low in healthy people. Any rise can indicate some heart damage. They go up dramatically in someone with a heart attack. The more damage there is, the greater the concentration of troponin in the blood.



The medical term for a heart attack is myocardial infarction

Usually, you can expect to have troponin tests repeated over several hours. Troponin levels rise when your heart is damaged and then they fall.

Levels usually rise within three or four hours and they may remain high for 10 to 14 days. The rise or fall in troponin levels is important in working out whether you've had a heart attack or whether it is due to another problem.

If you have a big rise in troponin levels, then it is highly likely that you've had a heart attack or some other form of heart damage. Even a slight rise in troponin indicates some damage to the heart.

Some people have higher troponin levels and their levels don't change. This is sometimes seen in other heart problems such as myocarditis (heart inflammation), weakening of the heart (cardiomyopathy), or congestive heart failure. Some conditions elsewhere in the body such as severe infections and kidney disease can also cause higher troponin levels.

A troponin test on its own can't make the diagnosis of a heart attack and your doctors will do a physical exam and an ECG at the same time.

The test is not generally affected by damage to muscles other than the heart, so injections into muscles and accidents or drugs that damage muscles don't normally affect troponin levels.

What causes chest pain?

By far the largest number of people who come to an emergency department have symptoms that may be a heart attack. Thankfully, after they are investigated, only a very small percentage actually have a heart attack.

Many other problems can cause chest pain, and it is not always possible to tell just from the type of chest pain whether or not you are having a heart attack. Many people have chest pain from straining the muscles in their chest, and it can occur with some lung problems. Chest pain can be a warning sign of hardening of the arteries of the heart called coronary artery disease (CAD).

It's important you seek immediate medical attention if you have chest pain that doesn't go away.

What are reference intervals (reference ranges)?

Your results are shown in your report as a comparison against a set of numbers called reference intervals or reference ranges. This is the range of test results considered 'normal' for the general population.

If a result in your report is outside this range it can be flagged as high (H) or low (L). This does not necessarily mean that anything is wrong and depends on your personal situation. They need to be interpreted by your doctor.

What happens next?

Your emergency team will make treatment decisions based on your results. If your troponin levels are high and the ECG indicates an acute heart attack, you may have a cardiac intervention such as a catheterisation with angioplasty and possibly stents, or an evaluation for surgery may be required.

If your troponin levels are high but your ECG does not indicate a heart attack, your doctors will look at alternative causes.

5 questions to ask your doctor

Why does this test need to be done?

Do I need to prepare (such as fast or avoid medications) for the sample collection?

Will an abnormal result mean I need further tests?

How could it change the course of my care?

What will happen next, after the test?

Having a medical test

The choice of tests your doctor makes is based on your medical history and symptoms. Make sure you tell them everything you think might help.

You play a central role in making sure your test results are accurate. Do everything you can to make sure the information you provide is correct.

For more detailed information on these and many other tests go to **pathologytestsexplained.org.au**

Please use this QR code to access more information

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www.pathologytestsexplained.org.au

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Pathology Tests Explained is managed by a consortium of medical and scientific organisations representing pathology practice in Australia. More details at: **www.pathologytestsexplained.org.au/about**

When you have pathology tests you can have your results sent directly to your My Health Record.

You'll find a direct link to the Pathology Tests Explained website embedded in the pathology results pages of your record.

Click on the link to find information about what your tests are investigating or measuring and what your results can tell your doctor.