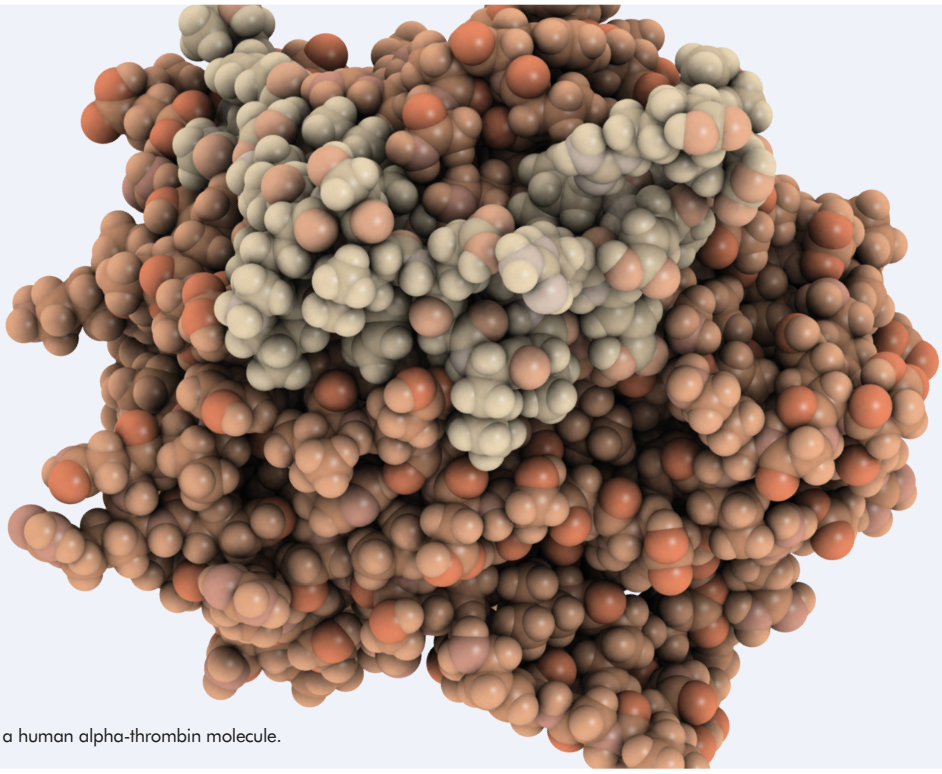
# PATHOLOGY TESTS EXPLAINED

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 **INR/PT TEST**

The INR/PT test measures the time it takes for your blood to clot. It is used to monitor warfarin or similar anti-clotting medications. Your doctor will check your INR/PT regularly to make sure that your prescription is working properly.

Having the right dosage of anti-clotting medication is important. It needs to achieve just the right balance – too much and there is a risk of internal bleeding, too little and there is more chance of your blood clotting. There is no set frequency for doing the test. Your doctor will order it often enough to make sure that your dosage is correct.



Chemical structure of a human alpha-thrombin molecule.

### How blood clotting occurs

Clotting is a normal part of healing. When you have an injury and it starts to bleed, your body triggers a series of chemical reactions to create a blood clot and plug the hole. This is called the coagulation cascade.

Substances called clotting factors are activated one after the other, then threads of a protein called fibrin are produced. These threads are glued together to form a fibrin net that catches cells floating in the blood called platelets and helps hold them together to form a clot.

Once a clot is formed, other substances are activated to slow the clotting process. They eventually begin to dissolve the clot so that the clot is removed when the injury site is healed.

There must be a sufficient quantity of each clotting factor, and each must function properly, in order for normal clotting to occur.

One of these clotting factors is prothrombin. It helps your blood to stay at the right consistency. One of the steps in the clotting cascade is the conversion of prothrombin to thrombin.

## How the test works

The prothrombin time (PT) test measures the number of seconds it takes for a clot to form in your sample of blood. The INR is a calculation based on the results of the PT test.

## Why an INR?

The chemicals and instruments used to perform the PT test vary from one laboratory to another and give different results. To standardise results, in 1984 the World Health Organisation (WHO) developed the Internationalised Normalised Ratio (INR), a calculation based on the results of the PT test, to help work out the dosage for people on warfarin medication.

## What can you results tell you?

Most people on warfarin medication have a target INR range of 2.0 to 3.0. This is a prothrombin time two to three times as long as that of a healthy person, using standardised conditions. For some people who have a higher risk of clotting, the INR needs to be higher – up to 3.0 to 4.0. Your doctor will use the INR to adjust the dose of your medication to get the PT into the range that is right for you.

## Preparing for the test

Some common medications can interfere with the PT test and give a misleading result. Antibiotics, aspirin and cimetidine can increase PT. Barbiturates, oral contraceptives and hormone-replacement therapy (HRT), and vitamin K - either in a multivitamin or liquid nutrition supplement - can decrease PT. Drinking alcohol can also affect PT results as can certain foods that contain high levels of vitamin K. Make sure that your doctor knows all the medications you are taking so that the PT results are interpreted correctly.

### 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?

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

PATHOLOGY TESTS EXPLAINED

**www.pathologytestsexplained.org.au**

Please use this QR code to access more information

Pathology Tests Explained is the primary national source of consumer information on pathology testing. Information is written and edited by practising pathologists and scientists, including leading experts. This ensures integrity and accuracy.

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**

### My Health Record

You'll find a direct link to the Pathology Tests Explained website embedded in the pathology results pages of your My Health Record and the my health app.

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