

# Heparin-induced thrombocytopenia (HIT)

## Your background guide to HIT and the associated laboratory testing

### What is heparin?

Heparin is a drug used to prevent clots in the blood in a range of different circumstances (for example, during heart bypass operations, to manage deep-vein thrombosis or to keep catheters from clotting).

### How does heparin work?

Heparin works by interfering with the body's natural blood-clotting system. This system involves a series of complicated enzyme pathways. Heparin stops an important enzyme in this system (thrombin) from working effectively.

### What are platelets?

Platelets are small cells in the blood that help control bleeding. When there are too few platelets in the blood (known as thrombocytopenia), the body is more likely to bleed.

### What is heparin-induced thrombocytopenia (HIT)?

HIT is a rare condition where a patient has a reaction to heparin. This reaction can destroy the patient's platelets and, in the worst cases, cause clots to form in the patient's blood, which is the opposite of what heparin is meant to achieve.

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### Why are you testing these blood samples?

After reviewing your symptoms, the doctor wants to rule out the possibility of you developing HIT. If there is a possibility that you could develop HIT, the doctor can alter the drugs to give you the best possible treatment.

### How do you test the blood?

Laboratory scientists will carry out investigations using another part of your blood, called serum. Serum contains antibodies which your body's immune system produces normally to fight infections, such as viruses. If you have HIT, your body produces antibodies to heparin which can attack and destroy platelets. We test your blood to look for these antibodies. If we find them, we will tell your doctors immediately so that they can change your treatment.

### What do the test results mean?

The test is positive in approximately 95% of cases of HIT but a positive result can sometimes occur if HIT is not present. Your doctor will interpret the result considering all aspects of your medical history.

### What does it mean if I have HIT antibodies?

If you have HIT antibodies, your doctors will change your treatment to avoid or significantly reduce the effects of the antibodies.

When you are discharged, you will be given a card which describes the antibodies you have. You should carry this card with you in your wallet or purse. Doctors should be aware that you have had HIT antibodies. If you have to go to hospital or to your GP in the future, you should always show them your card at the start of the consultation.

### Can HIT antibodies affect my health?

HIT antibodies can affect your health if you are given heparin. However, they are harmless as long as you avoid medicines which contain heparin. HIT antibodies only survive in your body for a short time (around 100 days). Depending on the circumstances, your doctors will make sure that you are not prescribed heparin or limit the amount you are given.

Sometimes, before we can continue with your treatment, we will need extra blood samples to find out whether the HIT antibodies are still in your blood.

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### What happens to my samples?

We may keep your samples in case we need to test them again in the future (for example, to see if your antibody levels change).

When we no longer need your samples for testing, or we have more samples than we need, the law allows us to use these anonymously for quality control (making sure our tests are working correctly), research (depending on whether this is approved by an ethics committee) or introducing new procedures, or for educating and training doctors, nurses, scientists and other professionals working in healthcare. This helps us maintain accurate testing procedures and improve our knowledge, and so provide the best possible care for all patients.

However, if you do not want us to use your samples for any of the purposes above, you must tell your doctor or the person taking your blood (or both). We will respect your wishes and dispose of any samples we no longer need.

**This patient information leaflet does not replace the guidance provided by your treating clinical team. Your treating clinical team should advise you of the options for treatment, advise of any alternative treatment and associated risks. Your treating clinical team should ensure that you are aware of the material risks associated with the treatment advised.**

**If you are unsure about any aspects of the treatment/care, ask your treating clinical team to explain.**

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