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Bwrdd Iechyd Prifysgol
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University Health Board

Patient Information

Glutamate dehydrogenase (GDH)

Infection Prevention Team

What is GDH?

GDH is the abbreviation for Glutamate dehydrogenase, which is a chemical found in the bacteria *Clostridium difficile*, more commonly known as C diff.

A faeces sample has been sent by the healthcare professional in charge of your care to see if you have the *C. difficile* bacteria present in your bowel and if found, whether it is causing your diarrhoea.

In order to check for this, testing is done in two stages. The first stage of testing will look for the presence of GDH.

What does GDH positive-toxin negative mean?

As described above, the first test of the sample will look for the chemical GDH, if the chemical is found, the result is known as "**GDH positive**". This means *C difficile* is likely to be present in the bowel and a second test will be done to see if the *C difficile* is "active" and likely to be causing your infection.

If the second test shows that **you do not have** the "active" toxins present, this means you are "**toxin negative**" and **you do not have** a *C difficile* infection, but that you possibly "carry" the bacteria in your bowel and at this time it is not the cause of your diarrhoea.

If this is the case, the diarrhoea you are experiencing is likely to be due to other causes, for example-antibiotics or other medication. However, if the diarrhoea continues, further samples may need to be re-tested for the *C difficile* toxin. Therefore "GDH positive-toxin negative" means you have the GDH chemical but are *C diff* toxin negative.

What happens next?

If a GDH positive result only has been identified, your doctor will review your medication and make any necessary changes, especially to antibiotics as they may cause the *C difficile* bacteria to start producing toxins and become "active".

The majority of patients do not require treatment for a GDH positive result. However, if your symptoms are very severe, your doctor may decide to give you treatment.

Infection control precautions

Although you are thought to be a *C difficile* "carrier" rather than having an "active" infection (that is, *C difficile* is unlikely to be causing your symptoms), it is still possible for the bacteria in your bowel to spread to other people in whom they may then actively produce toxins and cause infection/symptoms. This is because the bacteria from the bowel can spread in the environment, contaminating flat surfaces, equipment, bathrooms, toilets and shower facilities, etc. This is more of a risk when a person is suffering from diarrhoea.

To avoid the spread of the bacteria, strict hygiene measures and thorough cleaning is essential.

NB To avoid the spread of bacteria whilst caring for you, healthcare workers will wear an apron and gloves. They will also wash their hands with soap and water before and after treating or caring for you.

What can I do to help?

- It is important to drink plenty until you stop having diarrhoea, to stop yourself becoming dehydrated.
- Washing your hands **using soap and water** is extremely important. You should wash your hands with soap and water, and dry them carefully after using the toilet, and before eating, drinking or taking medicines.
- In hospital, patients who are GDH positive and have diarrhoea will be cared for in a single room, with either en-suite facilities or their own designated toilet or commode.
- You will be required to remain in the single room until you have not had any further diarrhoea for at least 48 hours and your bowel actions are back to what is normal for you.

How can my visitors protect themselves when visiting?

- Visitors will be advised to wash their hands with soap and water when entering and leaving the single room.
- Once they have visited you, they will be advised not to visit any other areas within the hospital during the same visit. If they need to visit other areas in the healthcare setting, it is advisable they do that before they visit you.
- Visitors should wash their hands with soap and water after using the toilet, before eating/ drinking, and before preparing food or taking medicines of their own.
- It's important that visitors do not bring anything to eat or drink while visiting.
- Visitors do not need to wear gloves and aprons when visiting unless they are providing direct care to you.
- Visitors should not visit if they are unwell or have recently had diarrhoea.
- Visitors should avoid sitting on hospital beds when visiting.
- Visitors should observe any visiting restrictions that are in place as these help staff to make sure the ward is cleaned thoroughly through the day.

It is sensible to maintain the following hand hygiene precautions whilst at home, even if you do not have an infection

