High temperature (febrile neutropenia)

What is neutropenia?
- Neutropenia (pronounced new-tro-pee-nee-ah) is when a patient has low levels of neutrophils.
- Neutrophils (pronounced new-tro-fils) are white blood cells, which help to fight infection.

Why does it happen?
- Chemotherapy can temporarily stop the body making white blood cells.
- The numbers of neutrophils in the patient’s blood can drop, causing neutropenia.

Why is it a problem?
- Neutropenia increases the risk of infection.

What is febrile neutropenia?
- Febrile neutropenia (pronounced feb-riyl new-tro-pee-nee-ah) is when a patient has a high temperature (over 38°C) and low levels of neutrophils (neutropenia).
- Febrile neutropenia is also known as neutropenic fever or neutropenic sepsis.

Why is it a problem?
- Febrile neutropenia is a sign that the patient may have an infection.
- This can be very serious.

Warning
Febrile neutropenia can kill a person quickly. You should call the doctor or an ambulance if the patient is having chemotherapy treatment and they have:
- a temperature of 38°C or higher (even if the patient feels well)
- shivers, shakes or chills;* or begins to feel unwell.

* not corrected by putting on a jumper.
What are the signs and symptoms of febrile neutropenia?

• The main sign of febrile neutropenia is a high temperature of 38°C or more.
• Other symptoms **may** include:
  • feeling unwell
  • dizziness or fainting (these can be signs of low blood pressure)
  • shivers, chills or shakes*
  • confusion (not talking sense, being muddled)
  • difficulty passing urine (peeing) or a burning sensation when peeing
  • diarrhoea (the runs)
  • shortness of breath (difficulty breathing)
  • sore throat
  • pain, redness or swelling around an infusion device or port (where chemotherapy is given intravenously).

* not corrected by putting on a jumper.

**Important**

The patient might not have all of these symptoms.

• They can have a high temperature without any other symptoms.
• They could have a normal or low temperature with some or all of the other symptoms.

*If in doubt, **ALWAYS** call the doctor straight away.*
What to do if you think your patient has febrile neutropenia

Check the patient’s temperature and keep a record of it.

If the patient is:
- having chemotherapy treatment
- and
- has a temperature of 38°C or more

Call an ambulance to get the patient to a hospital as quickly as possible.

When the patient arrives at the hospital, it is important to tell the Emergency Department staff:
- the patient has cancer and is having chemotherapy treatment
- the name of the chemotherapy treatment (if known)
- the date of their last treatment (if known)
- the patient’s most recent temperature
- any other symptoms the patient has
- any drug allergies the patient has (especially to antibiotics).
Educate your patient

Infections can be dangerous for patients on chemotherapy.

How do infections happen?

Infections are caused by germs, including bacteria, viruses and fungi. Germs can get into a patient’s body in different ways, such as:

- through the mouth from things they touch or eat
- through the skin if it is damaged
- through the air by breathing them in.

Everyone has germs that live in their body; for example, on their skin and in their gut. These germs do not usually cause infections in healthy people, but they can cause them in people having cancer treatment. This is one of the most common ways that cancer patients get infections.

Other ways that patients can get infections are from other people with illnesses like colds or stomach bugs, and from things that carry germs like animal poo, or food that is not cooked properly.

Make sure your patient knows:

- how to check their own temperature
- who to contact if their temperature is above 38°C.
Talk to your patients about ways to reduce their risk of infection

How to stop infection getting in through the mouth

- Keep hands clean, and always wash them after using the toilet.
- Keep the mouth clean (see ‘mouth care’ on page 38).
- Wash hands before cooking or eating.
- Wash (or peel) all fruits and vegetables before eating.
- Don’t share drinking glasses or cutlery with anyone else.
- Don’t share toothbrushes with anyone else.
- Don’t eat raw meat and fish (and some fresh cheeses), as these may contain bacteria that can cause infection.

How to stop infection getting in through the skin

- Clean any cuts, scrapes, sores or stings straight away, using warm water, soap and antiseptic.
- Try not to squeeze or scratch pimples.
- Wear gloves when cleaning to stop germs getting into any cuts.
- Wear gloves and shoes when gardening to reduce the chance of getting scratches, scrapes, or insect bites that could get infected.

How to avoid infection spread through the air

- Stay away from people who are sick, especially if they are coughing or sneezing.
- Stay away from crowded places.
- Keep away from any garden compost as this contains germs that cause disease.
- Keep away from house renovations as some of the dust can carry germs.

How to keep away from germs

- Keep away from people who are sick with any illness you can catch.
- Don’t touch or clean up any pet or animal poo or clean fish tanks or bird cages.
- Try not to do gardening or have contact with soil. If this is not possible, wear gloves and boots when gardening.