

Neutropenia

Overview

Neutropenia is the medical term for a decrease in the number of circulating white blood cells called neutrophils.

What are neutrophils?

There are three groups of cells that circulate around in the blood stream. These are **red cells** (often referred to as haemoglobin), **platelets** (small cells that help in the blood clotting system) and **white cells**.

Neutrophils are a particular type of white cell. Neutrophils are a very important part of the immune system. Neutrophils are very important in protecting the body against bacterial infections.

What is the normal number of neutrophils?

The number of neutrophils that circulate in the blood stream varies a bit according to age however the usual range of normal neutrophil numbers is $1.5 - 8.0 \times 10^9/l$ (1.5 million – 8 million neutrophils per milliliter) of blood.

What does low neutrophils mean?

Neutrophils are particularly important in fighting bacterial infections. Bacteria cause a lot of different types of infections (e.g. some ear infections, skin and wound infections) but sometimes these can be serious (e.g. blood infections).

Bacterial infections are treated with antibiotics (compared to viral infections e.g. flu like illnesses, the common cold which do not need treatment with antibiotics). Because you have low neutrophils, you may be more susceptible to bacterial infections.

Why do I have low neutrophils?

There are a number of reasons why people have low neutrophils. Some people are born with low neutrophils, other people develop conditions that cause low neutrophils – these include immune problems, exposure to some drugs and some viral infections (such as flu like illnesses). There are a number of other rare causes of neutropenia.

What tests are needed to find out why I have got neutropenia?

The types of blood tests required to determine the cause of the neutropenia will depend on how long you have had the low neutrophils. Sometimes only one or two blood tests are required; other times many blood tests and even a bone marrow test may be required.

What do I need to do about the neutropenia?

The major problem with neutropenia is the risk of developing a (serious) bacterial infection. Sometimes it is difficult to find out if you have a bacterial infection (which needs treatment with antibiotics) or a viral infection (which does not need treatment with antibiotics).

If you develop a high fever (usually above 38.5 degrees) you should really be seen by your local doctor for an examination and blood test.

Do I need to stay away from other people with infections?

Most infections that people pass on to each other are viral infections (e.g. the common cold). Most serious bacterial infections are not easily transferred from one person to the next. Generally you do not need to isolate yourself from other people.



How long will I have neutropenia?

This will depend on the cause of the neutropenia. Although some causes of neutropenia will not get better, most causes of neutropenia get better over a couple of months or sometimes years. Other causes of neutropenia take many years to get better.

Resources used in the development of this information sheet

- James RM. Kinsey SE. The investigation and management of chronic neutropenia in children. *Archives of Disease in Childhood*. 91(10):852-8, 2006 Oct.

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FURTHER QUESTIONS?

The information presented in this fact sheet is intended as a general guide only.

Patients should seek further advice and information about **neutropenia** and their individual condition from their treating haematologist or doctor.

For additional information about blood disorders and their treatment, or to contact one of our specialist haematologists, visit the Melbourne Haematology website: www.melbournehaematology.com.au