



BLOOD TRANSFUSIONS FOR ANAEMIA IN HOSPITAL: HOW MUCH DO YOU NEED?

WHAT IS A BLOOD TRANSFUSION?

A blood transfusion is a treatment arranged by your doctor. It involves giving you blood, or blood components, into a vein.

WHERE DOES BLOOD COME FROM?

In New Zealand, blood is obtained only from unpaid and voluntary donors.

HOW MUCH BLOOD DO YOU NEED?

Getting a blood transfusion in the hospital can save your life. You may need a lot of blood if you are bleeding heavily because of an injury or illness.

But anaemia is usually not urgent. And usually you don't need a lot of blood. You may only need one unit of blood while you are in the hospital. Or you may not need any blood at all. Here's why:

WHAT IS ANAEMIA?

If you have anaemia, your blood doesn't have enough red blood cells, or they don't work properly. Red blood cells carry haemoglobin. This is an iron-rich protein that helps bring oxygen to the body. Anaemia is measured in haemoglobin levels.

There are a number of reasons you may become anaemic while you are in the hospital, including:

- Bleeding
- Liver and kidney damage
- A chronic condition or disease
- Medications
- Kidney disease
- Chronic infections
- Cancer

EXTRA UNITS OF BLOOD ARE NOT HELPFUL

In New Zealand, haemoglobin is measured in grams per litre of blood (g/L).

- The normal haemoglobin range for a man is between 130 – 170 g/L
- The normal haemoglobin range for a woman is between 120 – 160 g/L.

Some doctors believe that hospital patients whose haemoglobin falls below 100 g/dL should get a blood transfusion.

But recent research found that:

- **Many patients with levels over 70g/L may not need a blood transfusion.**
- **One unit of blood is usually as good as two, and it may even be safer.**
- **Some patients in intensive care may do better when they receive less blood.**



USING MORE BLOOD UNITS MAY INCREASE RISKS

In New Zealand, the blood is generally very safe. The risks when you get blood are very small. They include:

- A minor allergic reaction (fever or rash) occurs in 1% to 2% of transfusions.
- A major reaction may cause kidney failure, breathing difficulties, and sometimes other life threatening complications. This is rare – there is roughly 1 case per year in NZ.
- Transfusion of blood products can sometimes cause an infection:
 - Minor virus infections that are common in the community may sometimes be passed on.
 - Infection with viruses such as Hepatitis B and C, and HIV/AIDS are very rare, but these infections are sometimes life-threatening. Tests on blood donations minimise the risk for these infections.
 - For hepatitis B the risk is estimated as 1 in 300,000 transfusions (1 case every 2-3 years).
 - The risks of acquiring hepatitis C, or HIV/AIDS is even lower (less than 1 in every 1,000,000 transfusions in New Zealand).

These problems can happen with any transfusion. But the risks are higher if you get more blood.

THE SUPPLY OF BLOOD RELIES ON DONATIONS

If you only use the blood you need, you are helping to keep a blood supply for other people.

DO PATIENTS EVER NEED MORE THAN ONE UNIT OF BLOOD?

Most patients do well with just one unit of blood, if the transfusion is not for an emergency. But some people may need more blood. Discuss this with your doctor.

You may need more than one unit if:

- You have bleeding that is not well controlled, such as bleeding that continues during surgery.
- You have severe anaemia and unstable chest pain. (“Unstable” means that your symptoms keep changing.)

WHY WAS THIS RESOURCE DEVELOPED?

This Choosing Wisely resource is based on the top five anaesthetic-related practices that, based on clinical evidence, may have limited benefit, no benefit or may potentially cause harm to patients, according to the Australian and New Zealand College of Anaesthetists¹, the Royal Australasian College of Surgeons², the Australian and New Zealand Intensive Care Society³, and College of Intensive Care Medicine of Australia and New Zealand⁴.

Choosing Wisely is a campaign to help health professionals and patients engage in conversations about unnecessary tests and treatments and make smart and effective choices to ensure high quality care. For more information on Choosing Wisely or to see other patient materials, visit www.ChoosingWisely.org.nz

SUPPORTING EVIDENCE FOR THE ISSUES DISCUSSED IN THIS RESOURCE

¹ <http://choosingwisely.org.nz/professional-resource/anzca/>

² <http://choosingwisely.org.nz/professional-resource/racs/>

³ <http://choosingwisely.org.nz/professional-resource/anzics/>

⁴ <http://choosingwisely.org.nz/professional-resource/cicmanz/>



For a list of supporting evidence for the issues discussed in this resource, please see:

<http://choosingwisely.org.nz/professional-resource/anzca/>

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Developed by Choosing Wisely New Zealand, 2018. Adapted from Choosing Wisely USA/Consumer Reports (2015) "Blood Transfusions for Anemia in the Hospital" and the New Zealand Blood Service (2013) "Your Guide to Blood Transfusion". Reasonable care is taken to provide accurate information at the time of creation. This information is not intended as a substitute for medical advice and should not be exclusively relied on to manage or diagnose a medical condition. Choosing Wisely does not assume any responsibility or liability arising from any error or omission or from the use of any information in these resources.

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