

## Collection & Content: **About blood**

**Iron and Nutrition:** Iron deficiency can occur well before blood tests indicate anaemia is present. Being iron deficient increases morbidity after surgery, and can lead to unnecessary blood transfusions.

### **There are two types of iron in food -**

"haem iron" which is found in meat and "non-haem iron" which is found in plants. Haem iron is absorbed much more readily than non-haem iron. Meat also contains a lot more iron than plants; however a well-balanced vegetarian diet can still provide sufficient iron. Red meat contains a lot of haem iron and it also increases the absorption of non-haem iron. A small portion of lean beef in your stir-fry will work wonders with your iron levels.

### **Vitamin C also increases the absorption of iron.**

Good sources of vitamin C include fruits and leafy green vegetables. These are at their iron-richest when raw, lightly cooked or steamed. Fruit juices are good too. The secret to absorbing the most iron is the way you put different foods together. For example - a glass of tomato juice with your cereal, or an orange after a bowl of pasta will help your body absorb the iron in the rest of the meal.

### **Some foods and drinks can inhibit iron absorption.**

These include red wine, antacids, tea, coffee, cola drinks, chocolate, unprocessed bran.

**The reason for iron deficiency** must be thoroughly investigated, and the appropriate treatment commenced. Rapid iron replacement can be given safely with modern iron infusion drugs, when oral iron is unsuitable.

HNE LHD Patient Blood Management Officer  
Vicki Martens

### **In YOUR Body....**

- There is 4.5-5.5 litres of blood.
- Blood makes up about 7% of your weight.
- Red blood cells live for 120 days (4 months)
- Haemoglobin is a protein in red cells that carries oxygen.
  - There is enough iron to make a 7.5cm nail.
  - Plasma is 90% water, & 55% of blood volume.
- There are over 130,000km of blood vessels - they could stretch from Newcastle to Perth 33 times!
- Healthy bone marrow makes red cells, plasma and platelets constantly.
  - White cells are the primary defense against infection.

**BloodSafe educational videos are available to download at:**  
<https://bloodsafelearning.org.au/resource-centre/videos/>

**Topics include:** Minimising blood loss in cardiothoracic surgery, Gastrointestinal bleeding - patient assessment and transfusion, The pre-operative patient - communication and consent, Patient blood management - an overview



## ARRC Guide for blood collection

There are many categories of patients who may present as potential problems when drawing blood - for example, arthritic patients, critical care patients, the elderly, children, obese people, patients undergoing chemotherapy, psychiatric patients, those who have had bad experiences before, those who have had repeated blood tests, or those simply frightened of needles. It could be that veins “disappear” or are hard to find, or that blood flows slowly, or that a patient is anxious and panics, or that a patient’s skin is thickened and hardened as in Scleroderma.

### How can the chances of problems taking blood be reduced?

Good communication is the key to effective interactions. Some simple and effective strategies when taking blood will improve the experience.

As a patient there are things you can do to help:

- Learning to be relaxed can reduce the difficulty of the collection, as stress and anxiety can increase your blood pressure and constrict blood vessels making it harder to draw blood.
- If blood draws are painful, ask for the use of some local anaesthetic (EMLA cream) 1 – 2 hours before the draw. You can also consider self-administering an over the counter local anaesthetic preparation such as 1% lignocaine. This can be useful; however, be sure to tell the collector when and where the preparation was used.
- If you are dehydrated the blood will be thicker and your blood pressure may be reduced. Many people with chronic illnesses, such as autoimmune illness and also those of an elderly age are chronically dehydrated. So drinking additional fluids in the hour or two before blood is to be taken often helps.
- If you are cold, there will be less blood flows to the extremities (arms and legs so it is important to be warm as this makes it easier to find a suitable vein. The warmer you are the more the blood flows. If you suffer from the cold or circulation problems, a heat pack on your arm 10-20 mins before the draw may help. Dress warmly, and try to keep your skin temperature a bit higher than you usually would.

For more information please see

[www.autoimmune.org.au](http://www.autoimmune.org.au)