

Patient Blood Management Program

Information for patients having orthopedic or spinal surgery at Toronto Western Hospital

Read this brochure to learn:

- how blood conservation may reduce or avoid the need for a blood transfusion during or after surgery
- what you can do before your surgery
- who to call if you have questions

A program of the Ministry of Health and Long-Term Care (MOHLTC)



Patient Education



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What is blood management or blood conservation?

Blood management or blood conservation aims to reduce or avoid the need for a blood transfusion during or after your surgery. Your surgeon and the Patient Blood Management team will assess your need for a transfusion. They may suggest one or more treatments to improve your own blood supply before surgery.

Why is blood management necessary?

Blood conservation:

- may reduce how long you stay in hospital
- may improve how long it takes for you to recover after your surgery
- may reduce your exposure to viruses and infection from receiving blood
- preserves the hospital's blood supply
- gives you options besides a blood transfusion

Why is my blood so important and how does it affect my body?

Your blood is made up of many different parts: one important part is the **red blood cells** (RBC). The red blood cells carry oxygen to all your organs and tissues.

The oxygen is released by an iron-rich protein called hemoglobin (Hgb) and is found inside the red blood cells.

Good levels of hemoglobin may also help you to avoid a blood transfusion during your hospital stay.

How do I know if my hemoglobin levels in my body are good?

Your surgeon may order a blood test called a complete blood count (CBC). This test will determine the level of RBC's and hemoglobin in your blood. Normal hemoglobin levels are different in men and women.

Normal hemoglobin ranges for men and women are:

Men: 140 g/L to 180 g/L

Women: 120g/L to160 g/l

For information about hemoglobin ranges visit the Canadian Blood Services website at www.blood.ca

What happens if my test shows my levels are low?

If your blood test shows that your hemoglobin levels are low, this is called **anemia**. People with anemia before surgery may have a higher chance of receiving a blood transfusion during their hospital stay.

Your doctor and Blood Management team assess your anemia and decide if you need more testing and treatment.

Will I need a blood transfusion during my surgery?

You may need a blood transfusion during, or possibly after your surgery to replace any of your blood that was lost during the surgery.

What can be done to decrease my need for a blood transfusion?

The health care team which may include the surgeon and/or anesthetist, and the Patient Blood Management Coordinator will work with you to plan the best way to avoid or reduce the need for a blood transfusion during your hospital stay. You should know that it is not always possible to avoid having a blood transfusion.

There are some safe and effective options that you can do before surgery to enhance your own blood supply, and possibly decrease the amount of blood loss during surgery.

Some of these options are:

- eating meals with a lot of iron
- taking iron supplements (see next page for more information)
- having iron supplements given by intravenous (IV)
- taking a medication called “Erythropoietin” (EPO) which is given by an injection. EPO helps the body make more red blood cells and increase hemoglobin.
- donating your own blood (only available to patients having spinal surgery and at Canadian Blood Services)

Your surgeon and Patient Blood Management Coordinator can talk to you about other options that may be possible to reduce blood loss during surgery, but this depends on the type of surgery you are having and your hemoglobin level.

Ways to build up your hemoglobin 4 to 6 weeks before surgery:

There are 2 types of iron supplements you can take: Heme iron and Non-heme iron. You can buy them over the counter at any pharmacy:

What is Heme iron?

“Organic” iron supplements taken in pill form allow iron to be absorbed better **with little to no side effects**, such as constipation, diarrhea, nausea, cramping and no dark feces (poo). Heme iron can be taken with or without food and is not affected by caffeinated drinks or dairy products. You do not need to take vitamin C when taking Heme iron.

Examples include:

- Optifer Alpha 11 mg (1 pill taken twice a day)
60 pills cost \$38.79 at Shoppers Drug Mart, Fresh Co \$36.99, Sobey’s \$38.99
100 pills cost \$41.00 at Costco and Walmart \$34.00
- Proferrin 11 mg (1 pill taken twice a day)
30 pills cost \$30.29 at Shoppers Drug Mart, \$24.00 at Sobey’s and Costco

What is Non-heme iron?

“Iron salts” or “inorganic iron” are commonly used but not absorbed easily by the body, and **have more side effects**, such as constipation, nausea, cramping, diarrhea and dark feces (poo). These pills are usually taken on an empty stomach. Avoid having milk and caffeinated drinks, which can reduce how much iron salts your body absorbs.

Examples include:

- Feramax 150 mg (1 pill a day)
30 pills cost \$22.99, 100 pills \$69.99
- Ferrous Fumarate (Palafer, Eurofer 300 mg (1 pill taken twice a day)
30 pills cost \$14.49 and \$4.99 (generic brand)
- Ferrous Sulphate 300 mg or Ferrous Gluconate 300 mg (1 pill taken 3 times a day)
100 pills cost \$9.99 at Shoppers Drug Mart

Please check prices at your pharmacy. Prices may vary at different pharmacies.

Important: This is not a full list of brands or vendors. The University Health Network does not recommend one brand or company over another and is not responsible for the products and services provided. Please contact the vendors directly to make sure the information is correct or to find out more about their products.

Please speak with your doctor before you start taking iron pills

Who can I call?

For more information about Blood Management before your Pre-admission appointment call:

Lucia Evans RN, BScN

Patient Blood Management Coordinator

Phone: 416 603 5164



The Ministry of Health & Long-Term Care (MOHLTC) supports blood management or blood conservation. ONTraC is a provincial Blood Management Program developed by the Ministry of Health.

Website: www.ontracprogram.com



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