

Iron Chelation Therapy



TGH

UHN Red Blood Cell Disorders Program

What Is Iron Chelation (“Kee-LAY-Shun”) Therapy?

Iron chelation therapy means that you are given medicines (chelating agents) that will remove unneeded iron from your body.

Iron naturally exists in the body. The body uses iron to help make haemoglobin which is a protein that carries oxygen in the blood. Some people, for different reasons, have extra iron in their bodies. This is when chelation therapy is needed.

How did I get too much iron in my body?

There are two main reasons why you may have too much iron in your body:

1. You have an inherited or genetic condition that makes your body take up too much iron from your diet
2. You have had repeated red blood cell transfusions (for example, you have had more than 20 units of blood as needed to treat medical conditions such as thalassemia, sickle cell disease, chronic anemia, or another condition)

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What can happen if I have too much iron in my body?

If you have too much iron in your body it can affect your liver, heart, endocrine system, or all three.

Organ or System	Possible Effects of Too Much Iron in the Blood
Endocrine	<ul style="list-style-type: none">• Diabetes (high blood sugar)
	<ul style="list-style-type: none">• Stunted body growth
	<ul style="list-style-type: none">• Problems with pregnancy and childbirth
	<ul style="list-style-type: none">• Thyroid problems (the gland at the front of your neck)
Liver	<ul style="list-style-type: none">• Liver cancer with cirrhosis (scarring of the liver)
Heart	<ul style="list-style-type: none">• Arrhythmia (abnormal heart beat)
	<ul style="list-style-type: none">• Cardiomyopathy (heart becomes too large)
	<ul style="list-style-type: none">• Pericarditis (an irritation of the heart's lining)

How does my doctor know if I have too much iron in my body?

Your doctor may order different tests to find out how much iron is in your body. Your doctor will talk with you about which tests will be right for you. These different tests may be:

1. A blood test for a ferritin level. This measures how much iron is contained in your blood.
2. A liver iron concentration test is measured by doing a biopsy. This is a special procedure done in the hospital. During a biopsy, the doctor will carefully take a very small piece of your liver to see how much iron is contained in that sample.

- An MRI (magnetic resonance imaging) scan may be done to see how much iron is in your liver, heart and other organs.

What can be done to treat the extra iron in my body?

To lower the iron in your body, you may be given an iron chelating agent. This is a medicine that “sticks to” the iron in your blood. This helps your body to get rid of the iron easier. The extra iron leaves your body in your urine. You will find that your urine will turn slightly red because of the medication and iron found in it.

Your doctor may recommend iron chelating agents for you after talking to you about your medical history and, after you have some tests to see how much iron is in the organs and tissues of your body. There are a few different types of chelating agents. Some chelating agents are given one at a time or, together with another agent.

Iron Chelating Agents You May Receive

Drug Name	Route Given	Possible Side Effects
Deferasirox (Exjade®)	Oral (by mouth)	<ul style="list-style-type: none"> • Rash • Stomach upset (diarrhea, nausea, vomiting or both) • Damage to kidneys, liver, or both
Deferoxamine (Desferal®)	Subcutaneous (by needle below the skin) or Intravenous (by needle into a vein)	<ul style="list-style-type: none"> • Hearing or vision problems • Pain at injection site • Hypotension (low blood pressure) • Tachyarrhythmia (fast, abnormal heartbeat)
Deferiprone (L1)	Oral (by mouth)	<ul style="list-style-type: none"> • Stomach upset (nausea or vomiting) • Joint pains • Neutropenia (a condition that makes it easier to get infections)

What should I do when I am getting iron chelation therapy?

- Ask for your latest iron (ferritin) level when you see your doctor and track or record the result given to you. This will let you see how well the chelating agents are working.

- Ask for the results of your liver and heart MRI when you see your doctor so that you know how well the medicine is working.
- Take your medicines as your doctor, nurse practitioner or pharmacist may have asked you to.
- Tell your doctor or nurse practitioner if you have any side effects related to your iron chelation therapy. Your doctor or nurse practitioner will give you instructions regarding your chelating medicine.

My Iron Chelation Agent is:

I take this medication:

- Orally
- Subcutaneously
- Intravenously

My dose is:

Side effects I should watch for:

Who can I call for more information about chelation therapy?

Please feel free to call:

Red Blood Cell Disorder Program
University Health Network – Toronto General Hospital
12th Floor – NCSB – Room 1239
Telephone: 416-340-4800 ext. 4882