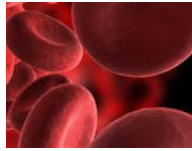


Iron Chelation for Chronically Transfused Patients

Why is Iron Important?

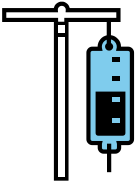
Iron is a mineral that your body needs to survive. It makes up the part of red blood cells called *hemoglobin* that carries oxygen around your body. Iron circulates in the bloodstream and is stored in certain organs. Normally your body absorbs just the right amount of iron it needs to balance out the iron we lose through dead skin cells, urine and blood loss.



Iron is needed for survival, but too much iron can be dangerous for your health. The body cannot get rid of extra iron on its own. If extra iron is given to the body, it builds up in the heart and liver and causes iron overload. Iron overload may not make you feel sick at first, but over time it can cause organ damage, organ failure and even death.

How Do I Get Iron Overload?

One way a person can get iron overload is from receiving blood transfusions. Each unit of blood has 250 milligrams of iron. If you receive 2 units of blood every month for a year, you will have received 6 grams of extra iron. This is on top of your usual dietary absorption of about 0.5 grams a year. That's 12 times the normal amount of iron your body should be getting! If you need regular blood transfusions, it won't take very long to become iron overloaded.



How Do I Get Rid of Extra Iron?

There are two ways to get rid of extra iron: phlebotomy and medication.

Phlebotomy means taking blood out with an IV, and can be used in people who can make healthy red blood cells.

People who do not make healthy blood cells, like thalassemia and sickle cell patients, cannot tolerate the blood loss caused by phlebotomy. Instead, these patients must use medication to lower their iron levels. There are three medications available in Canada that reduce (or *chelate* [kee-late]) iron.

Desferal

Desferal is given by a pump through a needle into the skin, usually as a 12 or 24 hour infusion. *Desferal* has been in use since the 1970s and is extremely effective. Possible side effects of *Desferal* include irritation at the injection site and some long-term effects on hearing, vision and bone growth.



Deferasirox (Jadenu)

Deferasirox is a pill that is taken once daily. Possible side effects of *deferasirox* include gastrointestinal discomfort (nausea, diarrhea, cramping), rash or allergic reaction, and changes in kidney or liver function. Your hematologist will monitor your blood work closely to watch for abnormal changes. *Deferasirox* has been proven to work well in some patients, but others may not be able to tolerate the dose required for effective chelation. In these cases, patients may need combination therapy with another chelator.



Deferiprone (Ferroprol)

Deferiprone is a tablet that must be taken three times a day. It can be taken with a small amount of food. Possible side effects include gastrointestinal symptoms, headache, joint pain and changes in liver function. *Deferiprone* can also cause a serious condition called neutropenia, a sudden drop in a type of white blood cell that fights infection. This is a dangerous condition and must be monitored very closely. In Canada, people on *deferiprone* must get their blood work checked weekly for at least the first 6 months of taking this medication to watch for this complication.

Your hematologist will provide you with more information regarding which chelation medication(s) you should take.

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