Intravenous iron supplementation

What is iron?

Iron is one of the minerals in the human body. It is one of the components of hemoglobin, the substance in red blood cells that helps blood carry oxygen throughout the body.

If you do not have enough iron, your body cannot make hemoglobin, and you may develop anemia. This is known as iron-deficiency anemia, the most common type of anemia.

Factors that can lower your body's supply of iron include:

- blood loss (caused by ulcers, some cancers, and other conditions; and, in women, during monthly periods)
- a diet that doesn't have enough iron in it
- an increase in the body's need for iron (for instance, in women during pregnancy)

What are the symptoms of anemia?

There are several symptoms that may occur in all types of anemia. They are:

- feeling tired
- paleness
- difficulty breathing
- fast heartbeat
- dizziness
- headache
- feeling cold (including the sensation that your hands and feet are colder than usual)
- pica (craving or eating non-food things, such as ice, chalk, dirt)

Who is most likely to develop iron-deficiency anemia?

Anyone can develop iron-deficiency anemia, although the following groups have a higher risk:

- women: Blood loss during monthly periods and childbirth can lead to anemia.
- people over 65, who are more likely to have iron-poor diets
- people who are on blood thinners such as aspirin, Plavix®, Coumadin®, or heparin
- people who have trouble absorbing iron

How is anemia diagnosed?

Your health care provider can perform blood tests to tell if you have anemia. The type and number of blood tests will depend on what type of anemia your doctor thinks you might have.

The blood tests will measure your hemoglobin and how much iron is in your body. If these levels are low, the doctor can make a diagnosis of anemia.

How is anemia treated?

Your health care provider will decide on the proper treatment, depending on the type of anemia and what is causing it.

Your doctor must first find out if the anemia is being caused by a poor diet or a more serious health problem. You can then be treated for both the anemia and its cause.

One way of treating iron-deficiency anemia is by eating foods that are high in iron. The following foods are good sources of iron:

- oysters
- kidney beans
- beef liver
- tofu
- beef (chuck roast, lean ground beef)
- turkey leg
- whole wheat bread
- tuna
- eggs
- shrimp
- peanut butter
- leg of lamb
- brown rice
- raisin bran (enriched)

Another way to treat anemia is by taking oral (by mouth) iron supplements (pills). The patient may also need to take erythropoietin-stimulating agents (ESAs). ESAs work by helping to make more red blood cells. These cells are then released from the bone marrow into the bloodstream. (For more information, see the handout on ESAs.) ESAs are given by injection (shot) or intravenously.

In cases where the patient cannot take oral iron supplements, he or she may have to have intravenous iron supplementation. As with any medication, do not take any supplements without the advice and direction of your physician.

What is intravenous iron supplementation?

Intravenous (IV) iron supplementation is a method of delivering iron by injection (shot) with a needle, either through a muscle or into a vein.

Who receives intravenous iron supplementation?

Patients who receive IV iron usually do so because they cannot take oral iron. These include the following:

- patients who are bleeding in the gastrointestinal (GI) tract (the gut) and need to replace iron quickly (IV iron is absorbed by the body more rapidly than oral iron);
- patients who have inflammatory bowel disease (diseases of the intestines that cause pain, diarrhea, and weight loss), and cannot take oral iron because it upsets their GI tract;
- patients who are on kidney dialysis, who often lose blood during dialysis. In addition, these patients are usually taking an ESA and may need extra iron.
- cancer patients who have anemia and are taking an ESA.

How is intravenous iron given?

Intravenous iron is delivered into the patient's vein through a needle. The procedure takes place in a doctor's office or a clinic and may take up to several hours, depending on which treatment the physician has prescribed. The patient usually receives iron injections over the course of several visits until his or her iron levels are correct.

What are the side effects of intravenous iron?

The side effects of IV iron are usually minimal, but may include the following:

- gastrointestinal pains, including nausea and cramps
- problems with breathing
- skin problems, including rash
- chest pain
- muscle aches
- low blood pressure
- anaphylaxis (a severe reaction that can include difficulty breathing, itching, or a rash over the entire body)

How effective is intravenous iron?

When you should start to feel better depends on your particular situation. Normally, it may take from a week to a month after you start your iron supplement before you start to feel better. Continue to watch your symptoms and take note of side effects that might be caused by the supplements. If you have any questions or concerns, talk to your health care provider.

NOTES

This information is not intended to replace the medical advice of your doctor or health care provider. Please consult your health care provider for advice about a specific medical condition.

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Developed by the Center for Consumer Health Information
 2/12