

Anemia and Your Young Child

Guidelines for Parents

Adapted from *Caring for Your Baby and Young Child: Birth to Age 5*.



Anemia is a condition that is sometimes found in young children. It can make your child feel cranky, tired, and weak. Though these symptoms may worry you, most cases of anemia are easily treated. This brochure explains the different types of anemia and its causes, symptoms, and treatments.

What is anemia?

Anemia is a condition that occurs when there are not enough red blood cells or hemoglobin to carry oxygen to the other cells in the body. The body's cells need oxygen to survive. Your child may become anemic for any of the following reasons:

- Her body does not produce enough red blood cells.
- Her body destroys or loses (through bleeding) too many red blood cells.
- There is not enough hemoglobin in her red blood cells. *Hemoglobin* is a special pigment that makes it possible for the red blood cells to carry oxygen to all the cells of the body, and to carry waste material (carbon dioxide) away.

Types of anemia

Iron-deficiency anemia is the most common type of anemia in young children. It is caused by a lack of iron in the diet. The body needs iron to produce hemoglobin. If there is too little iron, there will not be enough hemoglobin in the red blood cells. Infants who are given cow's milk too early (before 1 year of age) often develop anemia because there is very little iron in cow's milk. Also, it is hard for young infants to digest cow's milk. Cow's milk can irritate a young infant's bowel and cause slight bleeding. This bleeding lowers the number of red blood cells, and can result in anemia.

A lack of other nutrients in the diet can also cause anemia. Too little folic acid can lead to anemia, though this is very rare. It is most often seen in children fed on goat's milk, which contains very little folic acid. Rarely, too little vitamin B12, vitamin E, or copper can also cause anemia.

Blood loss can also cause anemia. Blood loss can be caused by illness or injury. In rare cases, the blood does not clot properly. This can cause a newborn infant to bleed heavily from his circumcision or a minor injury. Because newborns often lack vitamin K, which helps the blood clot, infants generally get a vitamin K injection right after birth.

Hemolytic anemia occurs when the red blood cells are easily destroyed. *Sickle-cell anemia*, a very severe hemolytic anemia, is most common in children of African heritage. Sickle-cell anemia is caused by an abnormal hemoglobin. Children with sickle-cell anemia may suffer many "crises" or periods of great pain, and need to be hospitalized. *Thalassemia*, another hemolytic anemia, is most common in children of Mediterranean or East Asian origin. If you have a history of sickle-cell anemia or thalassemia in your family, make sure you tell your pediatrician so that your child is tested for it.

Signs and symptoms of anemia

Anemia causes the following signs and symptoms:

- Pale, gray, or "ashy" skin (also, the lining of the eyelids and the nail beds may look less pink than normal)
- Irritability
- Mild weakness
- Tiring easily

Children with severe anemia may have the following additional signs and symptoms:

- Shortness of breath
- Rapid heart rate
- Swollen hands and feet

Also, a newborn with hemolytic anemia may become jaundiced (turn yellow), although many newborns are mildly jaundiced and do not become anemic.

Children who lack iron in their diets may also eat strange things such as ice, dirt, clay, and cornstarch. This behavior is called "pica." It is not harmful unless your child eats something toxic, such as lead paint chips. Usually the pica stops after the anemia is treated and as the child grows older.

If your child shows any of these symptoms or signs, see your pediatrician. A simple blood count can diagnose anemia in most cases.

Treatment for anemia

Since there are so many different types of anemia, it is very important to identify the cause before beginning any treatment. Do not try to treat your child with vitamins, iron, or other nutrients or over-the-counter medications unless your pediatrician recommends it. This is important because such treatment may mask the real cause of the problem. This could delay a proper diagnosis.

If the anemia is due to a lack of iron, your child will be given an iron-containing medication. This comes in a drop form for infants, and liquid or tablet forms for older children. Your pediatrician will determine how long your child should take the iron medication by checking her blood regularly. Do not stop giving the medication until your pediatrician tells you it is no longer needed.

Iron medications are extremely poisonous if too much is taken. Iron is one of the most common causes of poisoning in children under 5 years of age. Keep this and all medication out of the reach of small children.

Following are a few tips concerning iron medication:

- Do not give iron with milk. Milk blocks the absorption of iron.
- Vitamin C increases iron absorption. You might want to follow the dose of iron with a glass of orange juice.
- Liquid iron can turn the teeth a grayish-black color. Have your child swallow it quickly and then rinse her mouth with water. You also may want to brush your child's teeth after every dose of iron. Tooth-staining by iron looks bad, but it is not permanent.
- Iron can cause the stools to become a dark black color. Do not be worried by this change.

Preventing anemia

Iron-deficiency anemia and other nutritional anemias can be prevented easily. Make sure your child is eating a well-balanced diet by following these suggestions:

- Do not give your baby cow's milk until he is over 12 months old.
- If your child is breast-fed, give him foods with added iron, such as cereal, when you begin feeding him solid foods. Before then, he will get enough iron from the breast milk. However, feeding him solid foods with too little iron will decrease the amount of iron he gets from the milk.

- If you formula-feed your baby, give him formula with added iron.
- Make sure your older child eats a well-balanced diet with foods that contain iron. Many grains and cereals have added iron (check labels to be sure). Other good sources of iron include egg yolks, red meat, potatoes, tomatoes, molasses, and raisins. Also, to increase the iron in your family's diet, use the fruit pulp in juices, and cook potatoes with the skins on.

With proper treatment, your child's anemia should improve quickly. Be sure to contact your pediatrician if you think your child might be anemic.

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.

From your doctor

