

## IRON DEFICIENCY ANAEMIA IN CHILDREN

Iron deficiency anaemia is a common blood disorder that occurs when red blood cell counts are low due to a lack of iron. Red blood cells need iron to produce a protein called haemoglobin that helps them carry oxygen from the lungs to all the parts of the body.

Iron helps move oxygen from the lungs to the rest of the body. It also helps muscles store and use oxygen. If the child's diet lacks iron, the child might develop an iron deficiency.

Children with iron-deficiency anaemia may tire easily, have pale skin and lips, and have a fast heartbeat. Iron deficiency anaemia is usually discovered by a blood test during a routine medical examination. Mild iron deficiency anaemia is usually treated by consuming an iron-rich diet or taking oral iron supplements.

Iron deficiency anaemia cannot be corrected overnight by oral supplementation, but generally, a child will begin to feel better a week after they begin oral supplementation. However, it may take weeks or months to replenish the body's iron reserves

Groups by age and gender	Haemoglobin (g/dL)
Children aged between 6–59 months	11
Children aged between 5–11 years	11.5
Children aged between 12–14 years	12
Girls aged >15 years	12
Boys aged >15 years	13

### CAUSES

**Diets low in iron:** Only 1 mg of iron is absorbed for every 10 to 20 mg of iron-rich food ingested.

**Body changes:** Body changes, such as rapid growth spurts in infants and adolescents, require increased iron and red blood cell production.

**Gastrointestinal tract abnormalities:** Any abnormality in the digestive tract limits iron absorption. Difficulty absorbing iron is common after some gastrointestinal surgeries.

**Blood loss:** Blood loss, such as gastrointestinal bleeding or injury, can decrease the amount of iron in a child's body.

**Genetic causes:** Rarely, children are born with iron-refractory iron-deficiency anaemia (IRIDA), caused by a gene mutation that causes iron deficiency.

## **RISK**

Children at the highest risk of iron deficiency include those who:

Are ages 1 to 5 and drink more than 24 ounces (710 milliliters) of cow's milk, goat's milk, or soy milk a day.

Have certain health conditions, such as chronic infections or restricted diets.

Have been exposed to lead.

Don't eat enough iron-rich foods.

Are overweight or obese.

## **SIGNS AND SYMPTOMS**

Light pink color, also called pallor, to the lips, gums, edge of the eyelids, or to the nail beds.

Tiredness and low energy, are also called fatigue.

Shortness of breath during exercise.

Cold hands and feet.

Slowed growth and development.

Poor appetite.

Irregular rapid breathing.

Behavior problems or more short-tempered than usual.

Frequent infections.

Unusual cravings for things that contain few or no nutrients, such as ice, dirt, paint or starch.

## **DIAGNOSIS**

All babies have a blood test done within the first year of life that screens for anaemia, this usually happens around one year of age. Some babies will have this done earlier than others, depending on risk factors for anaemia, such as premature babies or babies who were considered very low birth weight.

In older children, a doctor may check a blood test depending on the symptoms that the child is having. They may also check a stool sample to make sure the child is not losing blood through their gastrointestinal tract.

The common blood tests that are used to check for iron deficiency anaemia are hemoglobin, hematocrit, or iron level.

## **TREATMENT**

To help prevent iron-deficiency anaemia in young children:

Don't give cow's milk to babies under 1 year old.

Limit cow's milk in kids over 1 year old to less than 2 cups of milk a day. Giving them more can make them feel full and lower the amount of iron-rich foods they eat.

Start giving the baby an iron supplement at age 4 months. Keep giving baby the supplement until the baby eats two or more servings a day of iron-rich foods. These include iron-fortified baby cereal, pureed meat and pureed sweet potato.

It is important that iron supplements are taken on an empty stomach, or with a small amount of food, in order for them to be absorbed properly. Children should not take iron with milk or caffeinated drinks.

It is helpful for kids to take iron with foods that are high in vitamin C, such as orange juice, strawberries, bell peppers, and tomatoes. These foods will help to absorb the iron.

