Iron Deficiency Anaemia

What is iron deficiency anaemia?

A reduced amount of haemoglobin and decreased number of red blood cells in the body causes anaemia. Anaemia leads to less oxygen getting to the cells and tissues affecting their function. Iron is needed to make haemoglobin, which is the oxygen carrying part of the blood. A lack of iron can lead to iron deficiency anaemia, also known as IDA, which is the commonest cause of anaemia.

What causes iron deficiency anaemia?

Dietary factors:

- Exclusive breastfeeding past 6 months of age. In the first 6 months babies have iron stores they live off.
- Poor iron stores at birth - Premature or low birth weight babies, severe maternal iron deficiency.
- Excessive cow’s milk drinking in early years leads to decreased solid intake.
- Introducing cow’s milk too early in the child’s diet i.e. prior to 12 months of age. (There is an inadequate amount of iron in cow’s milk). Most infant milk formulas are iron supplemented.

Iron is obtained from foods in our diet. Your child may suffer from IDA if he/she has an inadequate daily intake of iron or is unable to have a balanced iron rich diet.

Growth spurts leads to increased iron requirements particularly in adolescence or ‘catch up’ growth in premature or low birth weight babies.

Gastrointestinal tract abnormalities can alter iron absorption and result in iron deficiency. I.e. recurrent bleeding from a meckels diverticulum, Celiac disease, inflammatory bowel disease and other less common causes of malabsorption.

Chronic Blood loss

Recurring nosebleeds, menstrual bleeding or injury may cause IDA. Haemorrhage is the most common cause of excessive loss of body iron.
What are the signs and symptoms?

There are many signs and symptoms. However, there may not be any at all if the anaemia is mild.

- Pale skin and pale lips
- Extreme tiredness
- Irritability
- Weakness, dizziness
- Decreased appetite
- Unusual food cravings (called pica)

Rare symptoms include shortness of breath, increased heart rate, enlarged spleen, sore or swollen tongue.

What tests will my child have?

**CBP** - A complete blood test checks the haemoglobin level and indicates the severity of the anaemia. A CBP can be collected through a finger prick.

**Iron studies** are essential to confirm the anaemia is actually due to iron deficiency.

A faecal sample can also be useful to determine the cause of the anaemia.

What is the treatment and what are the side effects?

Iron deficiency anaemia is not a complete diagnosis. The cause must be found and measures taken to correct the primary cause as well as treating the iron deficiency. It is easily treated with usually no complications and expected good outcomes. With treatment, most blood counts should return to normal in a few months.

Treatment may include:

**Oral iron supplements**

Oral iron supplements such as ferrous sulfate can be taken. Initially the anaemia must be corrected which usually takes 2 – 3
weeks then the body iron stores need replenishing hence treatment must continue for about 3 months. Vitamin C can also be taken as an oral supplement to assist iron absorption. Common side effects include stomach pain, cramping or soreness.

Liquid forms of iron supplement tend to stain the teeth. To minimise teeth stains it is recommended to mix the dose in water or fruit juice. A drinking straw can help keep the iron supplement from getting on the teeth. If doses need to be given by dropper, the dose should be placed well back on the tongue and followed with water or juice. Brushing with baking soda can help remove iron stains on teeth.

You also need to be aware that stools can change to dark green or black when oral iron supplements are taken. This is due to unabsorbed iron and is harmless.

If your child cannot tolerate iron orally, intravenous (iron given into the vein) or intra-muscular (iron given into the muscle) iron may be administered.

Common side effects of these methods can include: aches and pains, dizziness, fainting; fast heartbeat; high temperature (above 37.8 degrees), sweating; headache; metallic taste; nausea or vomiting, tingling of hands or feet; skin rash, swelling of mouth or throat; trouble breathing.

Other side effects can occur. These may go away during treatment as your body adjusts to the dietary supplement. Constipation; diarrhoea; leg cramps; nausea; vomiting, darkened urine; heartburn.

**Iron-rich diet**

If the cause is dietary iron deficiency then attention must be given to dietary issues also.

The following foods are good sources of iron- meats (liver is the highest source), fish, poultry, eggs, legumes , whole grain breads, spinach, broccoli, dried fruit and Iron fortified cereal.
References and further information:


http://www.emedicine.com/med/topic1188.htm

http://www.umm.edu/blood/aneiron.htm

http://www.mayoclinic.com/invoke.cfm?id=DS00323

http://kidshealth.org/parent/medical/heart/ida.html

Please refer to section 7 “Sources of More Information” or check the parent’s library in McGuiness & McDermott children’s clinic for further information.