

Iron in Your Child's Diet

A practical guide to increasing iron in your child's diet

Information for patients, parents
and carers



leeds children's
hospital

caring about children

This leaflet gives information and advice on iron in your child's diet, why it is important and ideas for iron rich foods.

Why do we need iron in our diet

Iron is an important nutrient as it helps to make red blood cells which carry oxygen around the body. It is important that we eat a balanced diet that not only includes food rich in iron but also foods to help aid its absorption, i.e. to help our bodies use the iron from food.

If we do not have enough iron in our diet then we may be at risk of iron deficiency anaemia, this means we will not be able to carry oxygen around our bodies properly.

Symptoms of iron deficiency anaemia could be:

- Pale appearance
- Poor appetite
- Poor weight gain
- Irritability
- Tiredness and lethargy
- Developmental delay, if left untreated.

How can we reduce the risk of iron deficiency anaemia?

The amount of iron we need in our diet varies with age. On the next page is a table showing the Estimated Average Requirement (EAR) for iron per age group.

Age	Iron (mg/day)
0 - 3 months	1.3
4 - 6 months	3.3
7 - 9 months	6.0
10 - 12 months	6.0
1 - 3 years	5.3
4 - 6 years	4.7
7 - 10 years	6.7
Females 11 - 18 years	11.4
Males 11 - 18 years	8.7

There are many factors that can affect the amount of iron we get in our diet and how our bodies absorb it.

The following points will help to ensure your child is getting enough iron in their diet:

- Until six months of age, breast milk or infant formula will give your child enough iron to meet the EAR. From six months to one year old, breast milk / infant formula will need to be supplemented by the weaning diet to meet the EAR. Cows' milk should not be given as the main milk source until one year of age as it does not contain all the vitamins and minerals your child needs.
- Follow on milks and growing up milks are fortified with iron. These could be given after six months of age if you are worried that your child is not eating enough iron rich foods.

- 'Haem' iron from red meat (beef, lamb, and pork), poultry (the dark meat from legs and thighs), meat products and oily fish is well absorbed so should be included at least once a day unless your child is vegetarian.
- 'Non haem' iron found in leafy green vegetables, grains, pulses and beans is less well absorbed so vegetarians need to ensure that they are including vegetarian sources at least three times a day.
- 'Tannins' found in some tea, e.g. English breakfast, prevent the absorption of iron and therefore children should avoid tea at mealtimes.

Sources of Vitamin C

Vitamin C helps the body to absorb iron from food so try to eat and drink some of these vitamin C containing foods with meals:

Sources of Vitamin C

Includes amount of vitamin C per 100g of food

Vegetables

- Broccoli (44mg/100g)
- Brussels sprouts (60mg/100g)
- Cabbage (20mg/100g)
- Red pepper (Raw - 140mg /100g / Boiled - 81mg/100g)
- Tomatoes (17mg/100g)



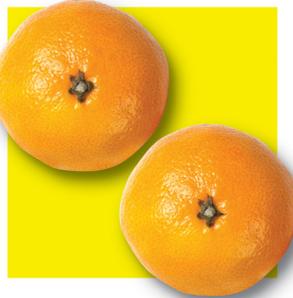
Fruits

- Guavas (230mg/100g)
- Mangoes (37mg/100g)
- Raspberries (32mg/100g)
- Strawberries (77mg/100g)



Citrus fruits

- Grapefruits (36mg/100g) and grapefruit juice (31mg/100ml)
- Lemons (58mg/100g) and lemon juice (36mg/100ml)
- Oranges (54mg/100g) and orange juice (210mg/100ml)



Potatoes

- Chipped potatoes (9mg/100g)
- Jacket potatoes (14mg/100g)
- New potatoes (15mg/100g)



How can we reduce the risk of iron deficiency anaemia?

Iron rich foods should be included at each meal. The following foods are the best sources of iron in the diet:

Food containing iron that is easily absorbed

- Breast milk and infant formula
- **Red meat** - lamb, beef, pork, ham, bacon, sausages, corned beef
- **Poultry** - chicken and turkey. The dark meat from the leg and thigh have higher amounts of iron
- **Liver and liver patè** - should be limited to once per week due to high vitamin A content (not suitable for children under one year old)
- **Oily fish** - tuna, salmon, sardines, mackerel, pilchards, fish paste



Food containing iron that is less well absorbed

- **Breakfast cereals fortified with iron** - Shreddies, Weetabix, Cheerios
- **Bread** - white, brown, wholemeal, bread sticks, chapatti
- **Pulses and beans** - chickpeas, lentils, baked beans, peas, kidney beans, hummus, dhal
- **Nuts** - whole, ground or chopped, nut butters
- **Tofu**
- **Egg yolk**
- **Dark green vegetables** - broccoli, spinach, Brussels sprouts, green cabbage, watercress
- **Dried fruit** - raisins, sultanas, dried apricots, prunes
- **Chocolate** - including cocoa powder and chocolate spread
- **Biscuits** - digestive and ginger
- **Malt loaf or fruit cake**



Check the nutritional information on the back of food packaging to see how much iron the product contains.

Meal ideas

Below are some meal ideas to provide you with iron rich foods at breakfast, lunch, evening meal and snacks.

Breakfast

- Breakfast cereal fortified with iron, e.g. Cheerios, Shreddies, Weetabix (check packaging)
- Egg (boiled, scrambled or poached) with wholemeal toast
- Bacon or sausage sandwich made with wholemeal bread



Serve with a glass of fresh orange juice or a handful of berries or dried fruit

Lunch

- Toast or baked potato with baked beans
- Roast beef or corned beef sandwich
- Liver patè on toast (not suitable for children under one year)
- Fish paste sandwich
- Peanut butter sandwich
- Sardines in tomato sauce on toast



Serve with a glass of orange juice or offer berries or citrus fruits as a dessert

Main meal

- Shepherd's pie
- Lasagne
- Roast dinner - beef, lamb, chicken or pork
- Salmon or tuna fillet
- Liver* and mashed potato with vegetables
- Beefburger



* Liver is high in vitamin A and is therefore not suitable for children under one year old

Unless stated serve with potatoes, rice or pasta and salad or vegetables to form a balanced meal

Vegetarian meals

- Mixed bean casserole
- Lentil curry with chapatti
- Vegetables in tomato sauce served with spaghetti

Snacks

- Hummus with cucumber, pepper sticks and cherry tomatoes
- Handful of dried fruit and nuts
- Two digestive biscuits and a handful of strawberries or raspberries
- Slice of malt loaf or fruit cake



Quick iron calculator

Below is a list of some foods and the amount of iron they contain. This can be used as a quick guide to help you estimate how much iron your child is getting. Try to choose foods from the first box where possible, as the iron in these foods is more easily absorbed.

Iron rich foods that are <i>easily</i> absorbed		Iron content
Cow and Gate 1 - First infant milk	100ml	0.53mg
SMA Pro 1 - First infant milk	100ml	0.64mg
Aptamil 1 - First milk	100ml	0.53mg
Cow and Gate 2 - Follow on milk	100ml	1mg
SMA 2 - Follow on milk	100ml	1.2mg
Aptamil 2 - Follow on milk	100ml	1mg
Lean beef (1 thin slice)	25g	0.7mg
Lean lamb (1 thin slice)	25g	0.5mg
Dark turkey meat (1 slice)	25g	0.3mg
Pork (1 thin slice)	25g	0.2mg
Pork sausage (1 thick)	40g	0.44mg
Minced beef (stewed)	100g	2.7mg
1 beefburger (grilled)	40g	1mg
Liver patè* (thick spread)	40g	2.36mg
Sardines in tomato sauce (½ tin)	60g	1.7mg
Salmon (1 average fillet)	100g	0.5mg

*Liver is high in vitamin A and is therefore not suitable for children under one year old

Iron rich foods that are <i>less easily</i> absorbed		Iron content
Shreddies	40g	3.5mg
Cheerios	30g	3.5mg
Weetabix (1 biscuit)	19g	2.2mg
Ready Brek	30g	3.6mg
SMA 2 - Follow on milk	100ml	1.2mg
Wholemeal bread (average)	1 slice	1mg
White bread (average)	1 slice	0.6mg
Baked beans (average)	100g	1.4mg
Chickpeas (1 tablespoon)	35g	0.7mg
Hummus (1 tablespoon)	30g	0.6mg
Peanut butter (thick spread)	20g	0.4mg
Tofu	50g	1.75mg
Egg (small)	1 egg	1mg
Broccoli (2 tablespoons)	30g	0.3mg
Curly kale	50g	1mg
Raisins	20g	0.8mg
Chocolate (plain)	25g	0.6mg
Plain digestive biscuit	2 biscuits	0.8mg
Ginger biscuit	2 biscuits	0.8mg
Fruit cake (average slice)	60g	1mg

