

Vitamins and minerals

for children from 1–5 years old



Islington **NHS**
Primary Care Trust

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For a healthy diet children need to eat a variety of foods each day to provide them with all the nutrients they need to grow and develop. Therefore:

- 🍌 Try to give 4-5 servings of fruit and vegetables to your child a day. Do not overcook the fruit and vegetables, as this will destroy some of the vitamins
- 🍌 Serve some bread, rice, potatoes, pasta or other starchy foods with all meals and snacks. These are good fillers and will give your child the energy to play as well as grow
- 🍌 Give your child meat, fish, eggs, beans and other types of protein twice a day
- 🍌 If not breastfeeding then your child should have a pint (600ml) of milk, as a drink or in food, or other foods that contain calcium

The Department of Health recommends that all children aged 1-5 years take vitamin supplements (vitamin drops), containing vitamins A, C and D. These will supplement the vitamins they get in food. Breastfed babies and babies taking less than 500ml formula should start these at 6 months. It is important to keep to the recommended dosage as giving too much can make your baby ill. These vitamins are free to children up to 5 years old in low-income families through the Healthy Start Scheme. For more information contact your GP or health visitor.

The following information gives an overview of the main nutrients that may be low in the diets of children up to age 5.

Vitamin A

Vitamin A is often said to be the 'anti-infection' vitamin for its important role in the immune system. It is essential for growth and helps with seeing in low light or at night. It also protects against cell damage, which could lead to heart disease or cancer.

Having too little vitamin A or too much can be a problem. About half of all children's diets may not contain enough vitamin A. For this reason, vitamin drops containing vitamin A are recommended for all children under 5.

Foods that provide vitamin A

Excellent Source

Liver*
Liver sausage/pâté*
Carrots
Spinach
Sweet potatoes
Red peppers
Mango
Cantaloupe melon
Dried apricots

Good Source

Nectarine
Peach
Blackcurrants
Apricots
Watercress
Tomatoes
Cabbage (dark)
Broccoli
Brussels sprouts
Runner beans
Broad beans
Margarine
Butter
Cheese
Kidney

Useful Source

Canned salmon
Herrings
Eggs (make sure they are well cooked)
Honeydew melon
Prunes
Orange
Sweetcorn
Peas
Whole milk

* Liver and liver products are very rich in vitamin A. It is recommended that these foods are given to children no more than once a week.

Vitamin D

Vitamin D is needed for healthy bones and teeth as it works with calcium. A lack of vitamin D may lead to rickets, causing bowed legs with bone pain or tenderness and muscle weakness. A child who is lacking vitamin D tends to be miserable and lethargic. The main source of vitamin D is by exposure of the skin to sunlight. Infants and children aged between 6 months and 3 years are particularly at risk of not having enough vitamin D because their bones are growing quickly and they may not be exposed to enough sunlight. Vitamin D is not present in many foods and it is difficult for young children to get enough vitamin D from their diet alone. After the age of 3 years, children are generally able to get enough vitamin D levels from sunlight if they are outside regularly between April and September. The Department of Health recommends giving vitamin drops containing Vitamin D to all children up to 5 years old.

Foods that provide vitamin D

Excellent Source

Fortified breakfast cereals

Oily fish, such as sardines, pilchards, fresh tuna, canned or fresh salmon, herring

Eggs (make sure they are well cooked)

Good Source

Liver* (Other than chicken liver)

Liver sausage / pâté*
Margarine fortified with vitamin D

Useful Source

Chicken liver*

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Folate

Folate, or folic acid, is an essential vitamin for many important functions in the body. Lack of folate can lead to a particular type of anaemia. When a mum-to-be is deficient in folate it can lead to a baby with spina bifida. Folate is partly destroyed by prolonged heating, for example by overcooking food or by keeping it warm for long periods.

Foods that provide folate

Excellent Source

Fortified breakfast cereals
Liver*
Spinach

Good Source

Yeast extract
Green leafy vegetables
Cabbage
Brussels sprouts
Broccoli
Peas
Orange
Melon
Kidney

Useful Source

Wholemeal bread/flour
Wheat biscuits
Cauliflower
Beef
Runner beans
Tomatoes
Parsnip
Potatoes
Green leafy salad
Ackee
Peanut

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Vitamin C

Vitamin C is important for preventing disease and maintaining good health. The body needs vitamin C to produce collagen, used for bones, teeth, skin and tendons. It is also important in wound healing. Vitamin C may also prevent damage to cells and tissues which otherwise may lead to cancer. If vitamin C and iron are in the same meal the vitamin C can help the body absorb iron. A third of children do not have enough vitamin C; mainly due to them not eating enough fruit and vegetables.

Foods that provide vitamin C

Excellent Source

Blackcurrants
Orange (and orange juice)
Strawberries
Canned guava
Spring greens
Green and red peppers

Good Source

Broccoli
Cabbage
Cauliflower
Spinach
Tomato
Brussels sprouts
Watercress
Kiwi fruit
Mango
Grapefruit

Useful Source

Potatoes
Green beans
Peas
Satsumas
Eating apples
Nectarines
Peaches
Raspberries
Blackberries



Calcium

Calcium is required for building and maintaining bones, to carry messages from the brain to the body, for muscles to work and many other body functions. Most children under five get enough calcium as they drink plenty of milk. It is important to make sure that children who do not have breast milk or dairy products (milk, yoghurt, cheese and so on) get enough calcium; for example by drinking soya drink fortified with calcium. A lack of calcium can lead to osteoporosis (brittle bone disease) in later life.

Foods that provide calcium

Excellent Source

Green leafy
vegetables
Sardines
Cheese
Tofu

Good Source

Pilchards
Yoghurt
Milk (all types)
Soya, rice or oat drink
fortified with calcium
Cheese spread
Sesame seeds
Sesame paste (tahini)
Nuts**
Broccoli

Useful Source

Canned salmon
Muesli
Bread
Peas
Beans
Lentils
Dried fruit***
Orange
Egg yolks (make sure
they are well cooked)
Rhubarb

** Only use nuts if your child does not have a nut allergy. Do not give whole nuts to under 5's as they may choke.

*** Dried fruit should be given as part of a snack or meal to prevent tooth decay. When offering dried fruit to your toddler it is important to either cook it until softened or chop it into small, safe pieces, to prevent choking.






Iron

Iron is essential for several body functions and is needed to carry oxygen in the blood. A deficiency in iron can cause anaemia, which means that the blood cannot carry enough oxygen for all the body's needs. Therefore, children who are lacking in iron will most likely be lethargic rather than active. They are often pale and tired. They may suffer from poor growth and weight gain, find it difficult to concentrate and may not feel like eating much. A lack of iron may also affect brain development and behaviour making it difficult to do well at school later. Most children in Britain have low iron intakes and almost one in five have very low intakes.

Children who are very dependent on cow's milk are more at risk of iron deficiency. Cow's milk is low in iron and the child may fill up on milk rather than iron rich foods. Try and offer milk drinks after meals rather than during meals, as this will give your child a chance to eat a variety of foods. A diet with plenty of meat, poultry, fish and fruit & vegetables will give enough iron. If your child does not eat meat or fish make sure his or her diet has lots of different foods such as cereal foods, pulses, finely ground nuts, vegetables and fruit.

Although it is more difficult for the body to absorb iron from vegetables and cereals, there are ways of increasing the amount absorbed:

-  Vitamin C helps the body to take up iron. For example having a piece of fruit with an iron-fortified breakfast cereal will help the iron to be absorbed
-  Meat also helps the absorption of iron from non-meat foods
-  Tannic acid in tea and coffee can reduce the amount of iron taken up. It is better not to give these drinks to your child

Foods that provide iron

Excellent Source

Fortified breakfast cereals
Kidney
Liver*
Liver sausage/pâté*
Heart lamb

Good Source

All red meat (fresh, tinned or frozen): beef, lamb, pork
Wholemeal products such as wholemeal chapattis, bread
Oily fish such as: sardines, pilchards, mackerel, salmon, fresh tuna, herring
Beans, such as chick peas, soya beans, baked beans
Lentils, dahl
Green leafy vegetables such as spinach, cabbage, spring greens
Other green vegetables such as broccoli, peas, runner beans, broad beans
Dried fruit like apricots, raisins, sultanas, dates, figs***

Useful Source

White bread
Blackcurrants
Sausage
Poultry such as chicken, turkey: the light meat (breast) contains only a small amount of iron, the dark meat (leg) contains more
Eggs (make sure they are well cooked)
Tofu
Nuts**

* Liver and liver products are very rich in vitamin A. It is recommended that these foods are given to children no more than once a week.

** Only use nuts if your child does not have a nut allergy. Do not give whole nuts to under 5's as they may choke.

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Zinc

Zinc plays a major role in the functioning of every organ in the body and helps the hormone insulin to control the body's energy. Zinc is also involved in the immune system, working with vitamin A, and in wound healing. More than half of children under five may be deficient in zinc.

Foods that provide zinc

Excellent Source

Liver*
Kidney
Lean meat
Corned beef

Good Source

Bacon
Ham
Poultry
Canned sardines
Shrimps and prawns
Tofu
Whole grain breakfast cereals
Nuts**

Useful Source

Sausage
Cold cooked meats
Canned tuna
Pilchards
Egg yolks (make sure they are well cooked)
Milk
Cheese
Beans
Lentils
Wholemeal bread
Plain popcorn
Sesame seeds

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Fibre

Fibre is the part of cereal and vegetable foods that is not broken down in the gut. Fibre is very important to prevent constipation and other gut problems. Constipation can be caused by lack of fluid and fibre in children's diet, emotional upsets and changes in routine. Encouraging your child to drink more water and giving them more fibre-rich food may improve constipation. Raw bran should never be given to children under five as it can cause bloating and wind and will fill their tummy, stopping them from eating enough other foods.

Foods that provide fibre

Excellent Source

Porridge or oats
Whole grain or
wholewheat breakfast
cereals such as wheat
bisks, Shreddies,
shredded wheat
Wholemeal breads
Baked beans
Beans such as kidney
beans, chick peas and
so on
Lentils
Dried fruit ***

Good Source

Wholemeal pasta
Brown breads
White bread with
added fibre
Baked potato with skin
Sweet potato
Broad beans
Fresh or frozen peas
Sweetcorn
Broccoli
Brussels sprouts
Quorn
Blackberries
Dried dates ***
Almonds and
hazelnuts **

Useful Source

Puffed wheat cereal
Brown rice
Pizza
Potato
Yam
Houmous
Peas
Cabbage
Carrots
Plantain
Banana
Mango
Raisins
Sunflower seeds
Potato crisps

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Reference: Caroline Walker Trust: Eating well for under 5s in child care. Nutritional and practical guidelines. 2nd Edition (www.cwt.org.uk)

Photographs in this leaflet were taken at Rosedale Early Years Centre by Tessa Hallman and at Kate Greenaway Nursery School and Children's Centre by Lottie Davies.

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