

Vitamin D deficiency

Information and advice for patients

Nutrition & Dietetics

What does vitamin D do?

Vitamin D helps the normal development of bones, teeth, and nerves. It also keeps your heart healthy.

What happens if I don't get enough vitamin D?

If you do not get enough vitamin D then you will have a deficiency (low level) in your body. Over a long period of time, this causes a condition called rickets in children and osteomalacia in adults. Rickets leads to symptoms such as bone pain, bending of bones, muscle weakness, and waddling when walking. Osteomalacia leads to bone pain and muscle weakness.

A vitamin D deficiency is also linked to diseases such as cardiovascular disease, diabetes, bowel and breast cancer.

How can I find out the level of vitamin D in my body?

Low vitamin D levels can be picked up before any symptoms occur by having a blood test.

Who is at risk of developing a vitamin D deficiency?

In the UK, more than 50% of adults have vitamin D deficiency and 16% have severe deficiency during winter and summer.

People at higher risk include:

- Pregnant and breast feeding mothers
- Babies who are breast fed after the age of 6 months
- Babies who take less than 500ml (18 ounces) a day of formula milk
- People with coloured skin e.g. Asian, Afro-Caribbean, African and Middle Eastern populations
- People who wear clothing that covers the majority of the skin
- People who are not exposed to sunlight
- Elderly people
- Obese people

Where do we get vitamin D from?

Vitamin D is made by our bodies when our skin is exposed to sunlight however this is difficult from October – April and you may need to get it from other sources.

There are certain foods that provide us with small amounts. It is difficult to provide recommended daily amounts (RDA) for vitamin D because we should be able to produce all the vitamins D we need within our bodies. As there is no way of measuring how much vitamin D is produced within our bodies we do not know exactly how much people need in their diets.

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Sources of vitamin D

If you are at risk of vitamin D deficiency it is sensible to try and include as many foods as possible from the list below in your diet. However, you will not be able to get all vitamin D you need from food alone as they contain only tiny amounts of vitamin D. You may also need to take a vitamin D supplement.

- Oily fish such as mackerel, sardines, fresh tuna (not tinned), salmon, herring, pilchards
- Cod liver oil
- Egg yolk (the yellow part of the egg).
- Liver
- Wild mushrooms
- Margarine (Please note the food has to say it is margarine for it to contain vitamin D. Products known as a 'spread' do not have to contain vitamin D by law).
- A few breakfast cereals have added vitamin D (see below).
- A few yoghurts contain added vitamin D (see below).

Oily fish should be limited to 2 portions a week for women trying for a baby, who are pregnant, or breastfeeding, and for children because of the dioxin content in it. Dioxins are potentially toxic chemicals if eaten in large amounts. A portion of oily fish is 140 grams.

Examples of foods with added vitamin D

Breakfast cereals				
Asda	Kellogs	Nestle	Sainsburys	Tesco
Choco Flakes	All bran	Cookie crisp	Choco caramel duo	Choco Snaps
Choco Hoops	Branflakes	Golden Nuggets	Choco rice pops	Cornflakes
Cornflakes	Cornflakes	Lion Cereal	Chocolate Hazelnut squares	Frosted Flakes
Frosted flakes	Honey loops	Nesquik Cereal	Cornflakes	Honey & nut cornflakes
Golden Balls	Mini max		Frosted flakes	Instant hot oat cereal
Honey Hoops	Ricles		Multigrain Boulders	Multigrain Boulders
Honey nut cornflakes	Rice krispies		Rice pops	Rice snaps
Rice Snaps	Special K			
	Start			
	Sultana bran			

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Yoghurts	
Frubes	Peppa pig fromage frais
Munch bunch	Petit filous
Munch bunch drinky	Thomas and friends fromage frais
Munch bunch yoghurt	Wildlife fromage frais

Please note:

- This list only shows some examples of foods with added vitamin D and is not a complete list.
- This list was correct at time of printing.
- You should check nutritional labels on a regular basis to ensure the above foods still contain Vitamin D.

Vitamin D Supplements

In the UK it is recommended that all babies, children, adolescents, pregnant or breastfeeding mothers, should have a vitamin D supplement (as drops or tablets) especially those with coloured skin. For pregnant or breastfeeding mothers, this will increase the amount in both your and your baby's body, and reduce your baby's risk of developing rickets.

You should also take a vitamin D supplement if you are in the 'people at higher risk' of vitamin D deficiency list mentioned in this leaflet.

Ask your health visitor, healthcare professional or GP for further information.

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Sources used for the information in this leaflet

- British Medical Journal, 'Diagnosis and management of vitamin D deficiency', January 2010
- Department of Health and Food Standards Agency, 'National Diet and Nutrition Survey', 2011
- National Institute for Health and Care Excellence, 'Maternal and child nutrition', March 2008

If you would like to suggest any amendments or improvements to this leaflet please contact the communications department on 0121 507 5495 or email: swb-tr.swbh-gm-patient-information@nhs.net



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Incorporating City, Sandwell and Rowley Regis Hospitals
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ML4396
Issue Date: February 2014
Review Date: February 2016