

Facts About Vitamin D

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Nutraleya

Why do we need Vitamin D?

A main action of Vitamin D is to help calcium and phosphorus in our diet to be absorbed from the gut. Calcium and phosphorus are needed to keep bones healthy and strong.

Studies have found Vitamin D may also help to prevent other diseases such as cancer, diabetes and heart disease. Control of cell growth, nerve and muscle and immune function, and reducing inflammation depends on Vitamin D as well.

A mild lack of vitamin D may not cause symptoms but can cause general aches and pains and this can go unnoticed. A more severe lack can cause serious problems such as rickets (in children) and osteomalacia (in adults).

Where does Vitamin D come from?

It is made in the skin by the action of sunlight. Very few foods contain little or no vitamin D naturally. Foods that contain vitamin D include:

- Oily fish (such as sardines, pilchards, herring, trout, tuna, salmon and mackerel) and cod liver oil.
- Fortified foods (this means they have vitamin D added to them) such as margarine, some cereals, infant formula milk.

There is little or no vitamin D in UK milk and dairy products. Only infant formula milk and margarine have statutory vitamin D supplementation in the UK. Egg yolk, liver, and wild mushrooms contain only small quantities of vitamin D.

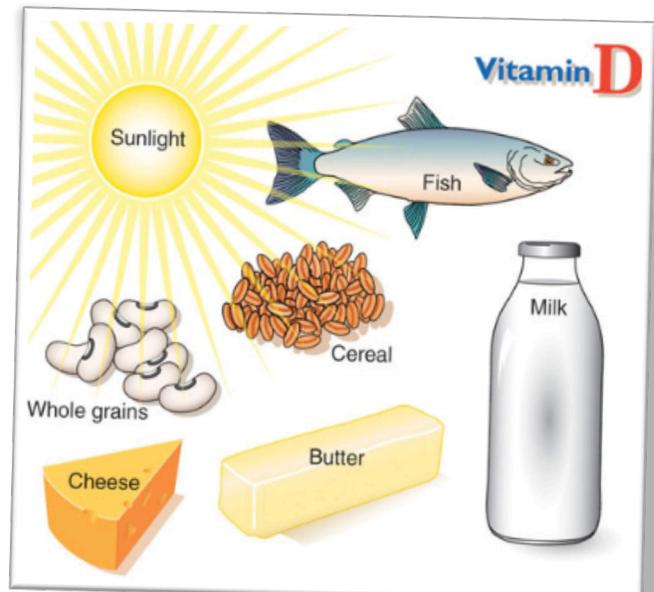


Vitamin D; The Sunshine Vitamin



- ✓ No artificial colours or preservatives
- ✓ No gelatin
- ✓ 100% vegetarian
- ✓ Made in UK
- ✓ 60 tablets
- ✓ Vitamin D3 4,000 IU
- ✓ Take 1 per day

Vitamin D and sunlight Ultraviolet B (UVB) rays in sunlight convert cholesterol in the skin into vitamin D. In Summer months 20-30 mins of bare skin exposure makes 10,000 IU of vitamin D so the recommendation is 2-3 times per week is enough to make vitamin D. Unfortunately, during autumn and winter we don't get enough sun in the UK, so the governments advise is to add a good quality Vitamin D supplement.



Information Source:

<https://patient.info/health/osteoporosis-leaflet/vitamin-d-deficiency>

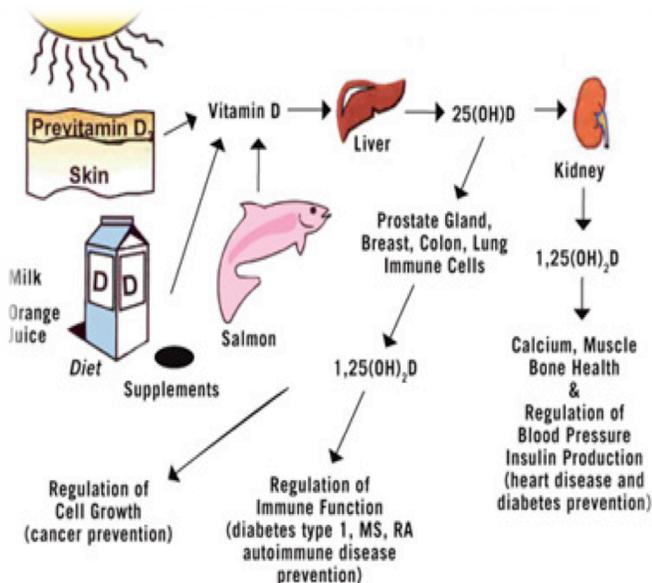
<https://www.nhs.uk/conditions/vitamins-and-minerals/vitamin-d/>
www.vitaminscouncil.org.uk

Scientific Advisory Committee on Nutrition (SACN) report 2016,
www.vitaminscouncil.org.uk

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Vitamin D cycle in the body



Vitamin D Supplement risks!

NHS advises that care should be taken when taking supplements:

- ✓ If you are taking certain other medicines: digoxin (for an irregular heartbeat - atrial fibrillation) or thiazide diuretics such as bendroflumethiazide (commonly used to treat high blood pressure). In this situation, avoid high doses of vitamin D. If you have other medical conditions: kidney stones, some types of kidney disease, liver disease or hormonal disease. Specialist advice may be needed.
- ✓ Vitamin D should **not** be taken by people who have high calcium levels or certain types of cancer. Ask your GP.
- ✓ You may need more than the usual dose if taking certain medicines which interfere with vitamin D. These include: carbamazepine, phenytoin, primidone, barbiturates and some medicines for the treatment of HIV infection.

Symptoms of Vitamin D deficiency

Symptoms in adults when there is severe deficiency can include:

- ✓ Vague aches and pains and a general sense of not being well
- ✓ Severe deficiency can cause osteomalacia, causing severe pain and weakness. Muscle weakness may cause difficulty in climbing up and down stairs or getting up from a low chair, or floor or can lead to the person walking with a limping pattern.
- ✓ Bones can feel painful (often more noticeable in the ribs or shin bones).
- ✓ Bone pain often also occurs in the lower back, hips, pelvis, thighs and feet.

Vitamin D deficiency symptoms in babies and children includes;

- ✓ Babies with severe vitamin D deficiency can get muscle spasms (cramps), seizures and breathing difficulties. These problems are related to consequent low levels of calcium.
- ✓ Children may have soft skull or leg bones (bow-legged) may complain of bone pains, in the legs, and muscle pains or muscle weakness causing a condition known as rickets.
- ✓ Poor growth usually affecting height more than weight. Affected children might be reluctant to start walking.
- ✓ Children may be late teething as the development of the milk teeth has been affected.
- ✓ Irritability in children, more prone to infections.
- ✓ Respiratory, breathing can be affected because of weak chest muscles and a soft ribcage.



Who needs Vitamin D

- ✓ Growing children, pregnant women and breast-feeding women need extra vitamin D because it is required for growth.
- ✓ People who get very little sunlight on their skin are at risk of vitamin D deficiency.
- ✓ People who stay inside a lot. For example, those in care homes, or housebound people who have little or no sun exposure.
- ✓ People who cover up most of their body when outside. For example, wearing veils, hijabs, burka,
- ✓ People with darker skin (because less sunshine gets through the skin).
- ✓ Strict sunscreen use can potentially lead to vitamin D deficiency, particularly if high sun protection factor (SPF) creams (factor 15 or above) are used. Nevertheless, always be protected from the harmful effect of the sun's rays.
- ✓ Elderly people have thinner skin than younger people and so are unable to produce as much vitamin D. This leaves older people more at risk of vitamin D deficiency.
- ✓ People who have certain medical conditions and medicines can affect the way the body handles vitamin D in the body.

Safe intake of Vitamin D deficiency

UK government, NHS have recommended at least an average of 10 micrograms / 400 IU of Vitamin D for everyone above the age of 4 years old. Vitamin D Strengths vary depending on age, stage in life, environment/climate and adverse medical conditions.