

## Patient Information Sheet: Vitamin D

### Summary

This leaflet explains the importance of vitamin D for maintaining good bone health, and the changes to the availability of vitamin D supplements for adults and children on NHS prescription.

### Why do we need Vitamin D?

Vitamin D (also called Vitamin D3 or colecalciferol) is important for bone health. It is needed to absorb calcium, phosphate and other nutrients from our diet and helps to keep bones strong and healthy.

### Where do we get Vitamin D from?

#### Sunlight

Around 90% of the vitamin D we require is made when our skin is exposed to direct ultraviolet B (UVB) rays from sunlight. Darker skin needs more sun to get the same amount of vitamin D than lighter skin.

- The sunlight needed must fall directly on to bare skin (through a window is not enough).
- 2-3 exposures of sunlight per week in the spring and summer months (April to September) is enough to achieve healthy vitamin D levels through the year.
- Sunbeds are **not** a recommended source of vitamin D.
- Each episode should be around 15 minutes to uncovered arms and face, without sunscreen (many moisturisers and cosmetics contain sunscreen). This is not the same as sun tanning; the skin simply needs to be exposed to sunlight. Remember it is important to cover up or protect the skin if it starts to turn red or burn. The sun's rays can be damaging, and sunburn should be avoided at all costs, due to the increased risk of skin cancer.

#### Diet

A small amount of Vitamin D comes from the food we eat.

- Between October and early March, there is generally not enough sunlight to maintain adequate vitamin D levels, and so we need to rely on dietary sources of vitamin D and supplements.
- Foods that contain Vitamin D include oily fish (e.g., sardines, herring, salmon and mackerel), red meat, liver, egg yolk, tofu, mushrooms.
- In the UK, some margarine, soya products, breakfast cereals, orange juice and infant formula milk are fortified with vitamin D. It is important to check the content of vitamin D in fortified foods to ensure recommended daily intake is being reached. Children who have more than 500ml of infant formula a day do not need any additional vitamin D as formula milk is already fortified.
- Food sources alone may not provide sufficient Vitamin D during the winter months and so Vitamin D supplements are recommended for everyone, at

least during autumn/ winter. Children under 5 years and other risk groups are advised to take supplements all year round.

## Supplements

See section on [How much Vitamin D should I take?](#)

## Vitamin D Deficiency Risk Groups

Some people are at greater risk of vitamin D deficiency than others. This may be because their bodies need more vitamin D, they cannot produce enough through their skin, their diet is low in vitamin D, or a combination of all the above. High risk groups include:

- Pregnant or breastfeeding women.
- People under 5 years or 65 years and older.
- Limited sun exposure e.g., the housebound or people in institutions such as a care home.
- People whose clothing covers up most of their skin when outdoors.
- Ethnic groups with dark skin.
- People who follow a strict vegetarian or vegan diet.
- People who are obese or significantly overweight.
- Certain medicines may reduce your vitamin D levels (e.g. medicines for epilepsy or HIV, rifampicin or cholestyramine).

## How will I know if my vitamin D levels are low?

Testing of vitamin D levels is not routinely offered. In the UK, without supplementation most people will have low Vitamin D levels during the winter months. Your GP may check your blood levels **if** you have symptoms of vitamin D deficiency or have risk factors that may affect the health of your bones.

## What happens if you do not have enough vitamin D?

Low vitamin D may not cause any symptoms. However, some people may have symptoms such as tiredness, and general aches and pains. A severe lack of vitamin D, known as vitamin D deficiency, can cause bones to become soft and weak, which can lead to bone deformities. In adults, it can lead to osteomalacia, which causes bone pain and tenderness. In children, it can increase the risk of developing rickets. For further information refer to [Patient Info: Vitamin D Deficiency](#).

## How much Vitamin D should I take?

Public Health England recommends that in the autumn and winter months (October to March) **EVERYONE** should consider taking a daily supplement containing 10 micrograms (400 units) of vitamin D. These can be purchased; you do not need a prescription. For further NHS advice refer to [NHS.uk - Vitamin D](#).

**If you fall within a risk group for vitamin D deficiency** (see section on [Vitamin D Deficiency Groups](#)), then it is recommended that you consider taking a Vitamin D supplement dose of 10micrograms (400units) once daily, all year round.

Adults who have previously received treatment for vitamin D deficiency or insufficiency will require more vitamin D, usually 20 to 50micrograms (800units to 2,000units) a day. If you have previously received prescriptions for 20micrograms (800 units) of Vitamin D, it is acceptable to buy a 25micrograms (1,000unit) vitamin D supplement instead, if this strength is more readily available.

Children who have previously received treatment for Vitamin D deficiency or insufficiency will require more Vitamin D, usually 10 to 15micrograms (400 to 600units) a day.

## Where to get Vitamin D supplements

There are a wide range of Vitamin D supplements available to buy at low cost from pharmacies, most supermarkets and health food shops. For maintaining good teeth and bone health **a product that contains 10 to 25micrograms i.e. (400units to 1,000units) of Vitamin D is generally advised.**

Eligible women who are pregnant or breastfeeding and children under the age of 4 years may be able to get free Healthy Start vitamins tablets that contain 10micrograms (400 units) of vitamin D from some baby clinics and children's centers. Speak to your midwife or health visitor for more information, or alternatively visit the [healthy start](https://www.healthystart.nhs.uk) website.

## Can I get Vitamin D on prescription?

**GP practices in South West London will no longer routinely prescribe maintenance vitamin D supplements. This is in line with NHS guidance.**

If you require a treatment course of high dose vitamin D (usually 8 to 12weeks) to replenish your vitamin D levels, this will be given on prescription. Once the treatment course is completed, you will be advised to buy low dose vitamin D supplements long-term, to prevent future episodes of deficiency.

## Are there any risks with Vitamin D?

Although the risk of having too much vitamin D is extremely rare, you are advised to check with a health professional such as a pharmacist, before you start taking vitamin D supplements. This is particularly important if you are already taking or have been advised to take other supplements (e.g., folic acid in pregnancy) as the pharmacist can help you select a product that meets all of your health needs. Do not take more than 4000 units daily unless under specialist advice.

## References/resources

- [NHS.uk - Vitamin D](https://www.nhs.uk/health/a-z/vitamin-d)
- [Patient Info: Vitamin D Deficiency](https://www.nhs.uk/health/a-z/vitamin-d-deficiency)
- [healthstart.nhs.uk](https://www.healthstart.nhs.uk)

## Document History

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