



Parent information: **Vitamin D**

Vitamin D is essential for bone health. Vitamin D helps calcium absorption in the gut, and maintains normal levels of calcium and phosphate in blood, keeping bones strong. Most of the vitamin D in our body is made when the skin is exposed to sunlight. A small amount of vitamin D comes from foods.



Department of Health



香港家庭醫學學院
The Hong Kong College of Family Physicians



online version





Effect of vitamin D deficiency

- ☹ In infants and children, persistently low vitamin D levels may cause rickets, resulting in soft bones, deformed bones, bone fractures, poor growth, and low calcium level in blood which may lead to convulsion.
- ☹ If pregnant women do not get enough vitamin D, their children might have low calcium level in blood soon after birth or have a higher risk of developing rickets later in childhood.
- ☹ In adults, vitamin D deficiency may result in osteomalacia (soft bones) and osteoporosis (brittle bones) leading to higher chances of bone fractures. Low vitamin D level is also linked with cancer, diabetes and infections.

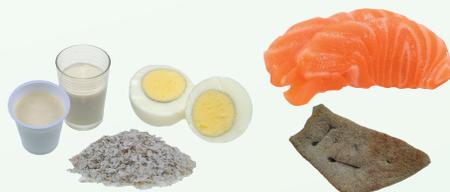


Sun exposure and vitamin D

- ★ Vitamin D is formed when the skin is exposed to sunlight. Exposing to sunlight behind the window glass does not help you get vitamin D because the glass blocks the ultraviolet B (UVB) rays in sunlight needed to make vitamin D. Sun screen cream and skin pigments also reduce the formation of vitamin D because it prevents UVB rays from reaching skin.
- ★ The amount of vitamin D we get from sun exposure depends on how long and how much the skin is exposed, the skin colour, the season, the weather and the time of the day. To get more vitamin D, it is best to expose larger area of your skin (e.g. arms, and lower legs) for a short period of time than a small area (e.g. face and hands) for a longer period.
- ★ For most people, 5 to 15 minutes of casual sun exposure of the hands, face and arms two to three times a week during the summer months is sufficient for keep the vitamin D level high. People with darker skin need a longer period of sun exposure.
- ★ Sunlight is generally less strong in winter. A longer sun exposure may be required the same level of vitamin D in winter.

Food sources of vitamin D

- ★ Few foods contain vitamin D naturally, examples include fatty fish(e.g. salmon, sardines, tuna), egg yolk and liver.
- ★ Some foods, such as cow's milk and milk products, soymilk, fruit juice, breakfast cereals have vitamin D added. Check the food label to know if the product is enriched with the vitamin D.
- ★ Consuming these foods helps your vitamin D intake; however, it is difficult to obtain enough vitamin D from food alone.



Getting vitamin D from casual sun exposure

- ★ Make outdoor physical activities as a routine. Exposure the arms, hands and face to sunlight for a short while daily during outdoor activities or exercise help the body to produce vitamin D.
- ★ Parents should take babies and children outdoors for a short period daily, exposing their head, arms and legs to sunlight.





Vitamin D and infants

- ★ Babies obtain a small reserve of vitamin D from mother before birth. After birth, babies need to get vitamin D from sunlight, breastmilk (or formula milk if they are not breastfed), and from foods.
- ★ Breastmilk provides the best nutrition for babies. However, babies do not get much vitamin D from breastmilk in particular when their mothers have low vitamin D levels. In some countries, such as UK and US, breastfed babies are recommended to take vitamin D supplements.
- ★ Formula-fed babies do not usually need a supplement as vitamin D is already added to infant formula.

People at risk of not getting enough vitamin D

- ✗ Premature babies;
- ✗ Babies born to mothers who are vitamin D deficient or do not expose to sunlight, especially if they are breastfed exclusively;
- ✗ Exclusively breastfed babies who have little sun exposure;
- ✗ Babies and people with darker skin;
- ✗ People who spend most of their times indoors;
- ✗ People who keep all skin covered up by clothing;
- ✗ People with renal diseases, liver diseases and other chronic illnesses.

If you are concerned, please consult your doctor to assess the need for vitamin D supplements.



Family Health Service

website : www.fhs.gov.hk

24-hour information hotline : 2112 9900