



# Colecalciferol for vitamin D deficiency

Colecalciferol (also known as vitamin D3) is a fat-soluble vitamin which helps the gut to absorb calcium from food. Colecalciferol is used for the prevention and treatment of low vitamin D levels, which is linked to osteoporosis and muscle weakness.

In infants and unborn babies, low vitamin D levels may result in slow growth and rickets (bone weakness), weak tooth enamel and tooth decay and increased risk of fractures in later life. Vitamin D may also play a role in maintaining the immune system, healthy skin and muscle strength.

Other at-risk groups include older people living in residential care, people who take medicine that affects vitamin D levels or have certain medical conditions that affect fat absorption (eg: coeliac disease or inflammatory bowel disease).

Human milk contains very little vitamin D and breast-fed infants at risk of low vitamin D levels are unlikely to receive enough vitamin D from their mother's milk.

## Classification of vitamin D deficiency

Severity	Serum 25-hydroxyvitamin D (vitamin D3) level
Ideal	Above 78 nanomol/L
Normal	50 to 77 nanomol/L
Mild deficiency	30 to 49 nanomol/L
Moderate deficiency	12.5 to 29 nanomol/L
Severe deficiency	Lower than 12.5 nanomol/L

## Colecalciferol supplements

There is a wide range of vitamin D3 products available in Australia; some examples are below. **Colecalciferol is safe to use during pregnancy and while breastfeeding.** Take colecalciferol with a meal or as directed by your doctor or pharmacist. The oral liquid may be taken in a glass of water or juice. The dose prescribed will vary according to vitamin D levels.

Trade name®	Vitamin D3 content
OsteVit-D®	1000 IU tablets/capsules
Vita-D®	1000 IU tablets/capsules
Caltrate Bone & Muscle®	1000 IU WITH Calcium 600mg
Ostelin®	1000 IU capsules
Phyta D oral spray	1000 IU/dose
Liquid Preparations	
D3 Drops Forte oral liquid	1000 IU/drop
Ostelin® oral liquid	1000 IU/0.2mL
Bio-Logical Vitamin D3 oral liquid	5000 IU/mL (1000 IU/0.2mL)
OsteVit-D® oral liquid	1000 IU/mL (400 IU/0.45mL)
<b>25 micrograms = 1000 IU Vitamin D3</b>	



## Vitamin D dose during pregnancy and breastfeeding

*Serum level less than 30 nmol/L:* Oral, 2000 IU daily plus calcium (RDI) for six weeks, followed by 1000 IU daily until you stop breastfeeding. Repeat vitamin D blood test is not required.

*Serum level between 30 - 49 nmol/L:* Oral, 1000 IU daily plus calcium (RDI), until you stop breastfeeding.

*Serum level equal to or greater than 50 nmol/L:* Oral, 400 IU daily, as part of a pregnancy multivitamin, until you stop breastfeeding.

## Colecalciferol side effects

Side effects are usually due to hypercalcaemia (excess calcium) and symptoms include nausea, vomiting, stomach pain, constipation, loss of appetite, muscle weakness, headache, thirst and frequent urination. Avoid taking other medicines, including over the counter and health food products, that contain vitamin D. Ask your pharmacist or doctor if you are unsure.

## Sources of vitamin D

### Sunlight

The main source of vitamin D is from exposure to sunlight. Adequate sun exposure to your hands, face and both arms is the best way to maintain vitamin D levels and correct mild deficiency. Aim for at least 6–7 minutes mid-morning or mid-afternoon in summer and 7-40 minutes at noon in winter on most days.

## Dietary sources

Vitamin D3 is found in oily fish such as herring, salmon, and mackerel. Other sources include eggs yolks, meat, and fortified foods such as margarine, milk powder and cereal.

## Calcium supplements

If you are treated for vitamin D deficiency, it is recommended that you also take a calcium supplement according to the recommended daily intake.

## Recommended daily intake (RDI)

Group	Vitamin D*		Calcium
	Minimum RDI	Upper RDI	RDI
12 to 18 years	200 IU	3200 IU	1300mg
19 to 50 years	200 IU	3200 IU	1000mg
51 to 70 years	400 IU	3200 IU	1300mg
> 70 years	600 IU	3200 IU	1300mg
Pregnancy:	200 IU	3200 IU	14 - 18 years: 1300mg 19 - 50 years: 1000mg
Breastfeeding:	200 IU	3200 IU	14 - 18 years: 1300mg 19 - 50 years: 1000mg

\* IU = International units; 25 micrograms (microg) = 1000 IU vitamin D3

For further information, see [health.gov.au/resources/pregnancy-care-guidelines/part-g-targeted-maternal-health-tests/vitamin-d-status](https://www.health.gov.au/resources/pregnancy-care-guidelines/part-g-targeted-maternal-health-tests/vitamin-d-status)

If you have any concerns or questions, please contact the WNHS Pharmacy Department.

