



Vitamin D in Pregnancy and Breastfeeding

Information in this leaflet is general in nature and should not take the place of advice from your health care provider. With every pregnancy there is a 3 to 5% risk of having a baby with a birth defect.

What is vitamin D and why is it important?

Vitamin D is important for general health. It helps in the absorption of calcium from the gut, keeping bones strong and preventing osteoporosis. It also is important for muscle strength and immunity. Low levels are associated with increased risks of fractures and falls and may be associated with other chronic health conditions.¹

In pregnancy, if you have a low level of vitamin D, your baby at birth will also have a low vitamin D level. Some studies have shown that low vitamin D levels while pregnant are associated with pregnancy complications like preeclampsia and diabetes and increased rate of caesarean section.² Preeclampsia is a potentially serious condition in pregnancy associated with developing high blood pressure. It affects both mother and baby.

In babies, vitamin D deficiency can be associated with problems such as low birth weight, rickets (brittle bones), seizures and failure to thrive.¹

What are sources?

Vitamin D is produced mainly by our skin when it is exposed to sunlight. Only 10% of vitamin D comes from food sources: mainly oily fish (such as salmon and mackerel), eggs and meat. Some margarines and milk have vitamin D added and some mushrooms which have been UV exposed produce increased vitamin D levels.²

Am I at risk?

In Australia, it has been found that many pregnant women are deficient in vitamin D. You are at risk of vitamin D deficiency if you have low sun exposure due to spending little time outdoors, live in a climate where there is less sunlight, have dark skin or wear clothes with little skin exposure. You may also be at risk if you have other medical conditions such as obesity or gut absorption issues or are taking specific medications that can affect vitamin D levels.^{1,3}

How can I prevent vitamin D deficiency?

Sun exposure is important to prevent vitamin D deficiency. However this must be balanced with risk of skin cancer from too much sun. **In summer** in Australia, most people with fairer skins will maintain adequate vitamin D from typical outdoor activities. If outside for more than a few minutes, you should use sun protection (such as a hat and sunscreen). Sunscreen reduces vitamin D levels but in practice this does not appear to be a significant issue.⁴

During winter, when the UV index is below 3, you do not require sun protection. Vitamin D maintenance at this time of the year, is helped by being outdoors in the middle of the day on most days of the week. People in specific at-risk groups (see above) would require significantly more exposure than this and may require supplementation.⁴



How is vitamin D deficiency managed?

If you have any risk factors for vitamin D deficiency, you should have a screening blood test either before you are pregnant or early in your pregnancy. If you are found to have a low level (less than 50nmol/L), your doctor will recommend you start taking vitamin D supplements daily. The usual dose is 1000IU per day but may be higher in severe deficiency.^{1,3} The dosage varies so the correct dose for you should be checked with your doctor. Your blood levels of vitamin D should be rechecked in 3 months.⁴ **Taking a vitamin D supplement at recommended doses while pregnant has not been shown to have any harmful effects on mothers and their babies.¹**

Many specific vitamin D preparations are available over the counter. Although, most pregnancy multivitamins contain vitamin D, the dosage is too small to correct a deficiency. Therefore, pregnancy multivitamins should not be used for this purpose.

If you are found to be vitamin D deficient, consider screening the whole family for vitamin D deficiency with a blood test. To achieve adequate calcium levels, it is also important to have 3 to 4 serves of dairy foods per day. If that is not possible, consider taking a calcium supplement. Preparations are available that contain both vitamin D and calcium. This should be discussed with your doctor, midwife or dietitian.

Breastfeeding and Vitamin D deficiency

You should continue taking Vitamin D while you are breast feeding.¹ You may be advised to continue taking vitamin D after weaning if you remain at risk of deficiency.

Will my baby also need treatment for vitamin D deficiency?

If your vitamin D deficiency is not fully treated during pregnancy, your baby will require vitamin D drops by mouth after birth. This is particularly important if your baby has similar risk factors for Vitamin D deficiency as you. Vitamin D drops should continue until your baby is weaned as breast milk does not contain sufficient vitamin D. The dosage should be confirmed with your doctor but the usual recommended dose is 400IU daily. A blood test may be done to check your baby's vitamin D level.^{1,5} Babies fed on formula do not require extra vitamin D as it is already added to the formula itself.

References

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4. Cancer Council Australia. Position statement- Sun exposure and vitamin D-risks and benefits.. January 2016. available at https://wiki.cancer.org.au/policy_mw/index.php?title=Position_statement_-_Risks_and_benefits_of_sun_exposure&oldid=7939. Accessed March 2019
5. Osteoporosis Australia- Vitamin D in pregnancy, infancy, childhood and adolescence. 1st edition 06/13 <https://www.osteoporosis.org.au/sites/default/files/files/vit%20d%2Bpregnancy%2Cinfancy%2Cchildhood%2Cadol%2Cescence.pdf> Accessed March 2019

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