



NSW Medications in Pregnancy & Breastfeeding Service



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 a vitamin that is important for our health in general. It helps in the absorption of calcium from our gut, keeping our 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. There is increasing evidence that low vitamin D levels **may** also play a role in heart disease, some cancers, diabetes autoimmune diseases and some mental health conditions such as schizophrenia and depression. However, further research is required to confirm this.¹

In pregnancy, if you have a low level of vitamin D your baby will also have a low level when he or she is born. 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. 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 There may be an association between vitamin D levels in babies and food allergies but more scientific research is required to confirm this.

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.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 because you wear clothes with little skin exposure. You may also be at risk if you are obese, have absorption issues from your gut or have liver disease.

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, people with fair skin generally require about 5 minutes per day of exposure to their arms, hands and face. During winter, sun exposure required is often up to 2 -3 hours per week. People with very dark skin and living in colder climates require significantly more exposure. Sunscreen reduces vitamin D levels but in practice this does not appear to be a significant issue.

Overall, it is advisable for sun exposure in summer to be avoided between 11am and 3pm and to always use sunscreen whenever the UV index is above 3.



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 The dosage varies so the correct dose for you should be checked with your doctor.

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 so these should not be used for this purpose.

Your blood levels of vitamin D should be rechecked in 3 months and you may also be advised to take calcium supplements. **You should continue taking Vitamin D while you are breast feeding.** You may be advised to continue taking vitamin D after weaning if you remain at risk of deficiency.

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.

Taking a vitamin D supplement while pregnant has not been shown to have any harmful effects on the mother or the baby.

Will my baby also need treatment for vitamin D deficiency?

If your vitamin D deficiency is not fully treated during pregnancy, your baby will probably require vitamin D drops by mouth after birth. This is particularly so, 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 Babies on formula do not require extra vitamin D as it is already added to the formula.

References

1. Paxton G, Teale G, Nowson C, Mason R et al. Vitamin D and health in pregnancy, infants, children and adolescents in Australia and New Zealand: a position statement. *Med J Australia* 2013; 198:1-8
2. Nowson C.A, McGrath JJ, Ebeling PR, et al. Vitamin D and Health in Adults in Australia and New Zealand : a position statement. *Med J Australia* 2012, 196:686-687

Other resources

Better Health Channel- Vitamin D. http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Vitamin_D

Osteoporosis Australia- Vitamin D in pregnancy, infancy, childhood and adolescence.
<http://www.osteoporosis.org.au/images/stories/vit%20d%20factsheet%202.pdf>