

Vitamin D in Pregnancy and Breastfeeding

MotherSafe - Royal Hospital for Women

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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 is also 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 will also have a low vitamin D level at birth. Some, but not all studies have suggested that low vitamin D levels while pregnant may be associated with pregnancy complications.^{2,3} In babies, vitamin D deficiency can be associated with problems such as rickets (brittle bones) and seizures.¹

What are sources of vitamin D?

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), eggs and meat. Some margarines and milk have vitamin D added and some mushrooms which have been UV-exposed contain 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 particular 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.^{1,4} **However, many people are vitamin D deficient without specific risk factors.**⁴

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, many 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.⁵

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 '**Am I at Risk?**' above) would require significantly more exposure than this and are more likely to need supplements to prevent vitamin D deficiency.⁵

How is vitamin D deficiency managed in pregnancy?

In Australia, where it is thought that many pregnant women are deficient, it is not considered necessary to routinely test for vitamin D deficiency.^{4,6} Recent international guidelines recommend that **all pregnant women should have an intake of at least 400IU of vitamin D daily in supplement form.**^{6,7}

Most pregnancy multivitamins contain some Vitamin D (in the form of cholecalciferol or vitamin D3), although the amount varies between preparations. Vitamin D 1000 IU daily can also be taken alone by women who are not taking a pregnancy multivitamin or who are taking a pregnancy multivitamin with low levels of vitamin D(200 IU or less). **Higher doses of Vitamin D are often recommended for women at high risk of deficiency or when blood testing has found deficiency. There may be some variation regarding specific vitamin D recommendations, so it is important to check the correct dose for you with your doctor or midwife.**

Currently, many pregnant women are at home due to COVID- 19 and may be at greater risk of deficiency. **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

To achieve adequate calcium intake, it is important to have 3 to 4 serves of dairy foods (or alternatives fortified with calcium) 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

It is not necessary to take Vitamin D while you are breastfeeding. However, you may be advised to continue taking vitamin D if you remain at risk of deficiency. Vitamin D is contained in many prenatal and breastfeeding supplements but if required, the overall dose of vitamin D should be checked with your doctor.

Will my baby also need treatment with vitamin D?

Some expert bodies recommend that babies are supplemented with vitamin D drops by mouth for the 1st year of life.⁸ This is particularly important if your baby has risk factors for Vitamin D deficiency and is breastfed, as breast milk (unlike infant formula) does not contain sufficient vitamin D.^{6,7,8} In older babies on solids, a supplement ensures adequate vitamin D. This is because older babies generally depend on sun exposure for their vitamin D needs, but it is also important to avoid excess sun exposure to protect babies from sunburn and skin damage. The usual recommended dose is 400IU daily.⁸ Because advice varies depending on where you live, confirm with your midwife or doctor the specific vitamin D recommendation for your baby.

References

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