



The  
Fertility Society  
of Australia

# Vitamin and mineral (micronutrient) supplements

Vitamins and minerals (micronutrients) are essential for the body to function. Here is what you need to know about the benefits for fertility and pregnancy health of folic acid, iodine, vitamin D, zinc, and selenium supplements.



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## To take or not to take?

Micronutrients occur naturally in the food we eat but can also be taken as supplements in tablet form. There are national recommended daily intake (RDI) levels for micronutrients and for most people who eat a variety of healthy unprocessed food there is no need to take supplements. But if you are trying to conceive, the risk of birth defects can be reduced by supplementing your diet with certain micronutrients. Some micronutrients may also help improve fertility.

## Folic acid

The RDI of folic acid for women and men is 400 micrograms per day. This increases to 600 micrograms for women who are pregnant and 500 micrograms for women who are breastfeeding.

Folic acid is a B-group vitamin which is essential for the healthy development of the neural tube in the fetus. The risk of neural tube defects (NTD), such as spina bifida, is higher in women who have low levels of folic acid at the time of conception and in early pregnancy. It is difficult for women to get enough folate from their diet. Therefore, women who plan to conceive should supplement their diet with 500 micrograms folic acid daily from at least one month before conception and during the first two months of pregnancy. It is estimated that this prevents seven out of ten cases of NTD.

Some women need higher doses of folic acid to prevent NTD including women who have had a pregnancy affected by NTD in the past or have a relative who has, women who are obese, and women who take anti-epilepsy medication or have diabetes. Talk to your doctor to make sure you take the right dose.

Some studies suggest that folic acid supplementation can improve fertility in some people but it is not yet known if this applies generally.

## Iodine

The RDI of iodine for women and men is 150 micrograms per day. This increases to 220 micrograms for women who are pregnant and 270 micrograms for women who are breastfeeding.

The thyroid is a gland in the neck which uses iodine to produce thyroid hormone. During pregnancy the mother's thyroid hormone ensures that the baby gets sufficient nutrients. Thyroid hormone is also needed for the baby's brain development. Mild iodine deficiency during pregnancy and breastfeeding increases the risk of the baby's brain and nervous system not developing as they should and this can

cause mental retardation. To support the development of the baby's brain and nervous system women who are pregnant and breastfeeding and those who consider pregnancy should supplement their diet with 150 micrograms iodine per day.

It is not known if iodine supplementation directly improves male or female fertility.

## Vitamin D

The RDI of vitamin D for women (pregnant and non-pregnant) and men is 5 micrograms per day.

During pregnancy vitamin D is involved in the transfer of calcium to the growing fetus. Most of the vitamin D we need comes from sun exposure. Vitamin D supplementation during pregnancy is not generally recommended unless the woman has vitamin D deficiency. The risk of vitamin D deficiency is higher among women who have dark skin, are veiled, use block-out sunscreen, or take anti-epilepsy medication.

Vitamin D supplementation may improve fertility in women and men who are vitamin D deficient. Ask your doctor for advice about testing and whether you need vitamin D supplementation.

## Zinc and Selenium

The RDI of zinc for average weight women (61 kg) is 8000 micrograms and for average weight men (76 kg) 14000 micrograms per day. For women this increases to 11000 micrograms during pregnancy and 12000 mg during breastfeeding. The recommended maximum intake for both sexes is 40000 mg per day.

The RDI of selenium for average weight women (61 kg) is 60 micrograms and for average weight men (76 kg) 70 micrograms. For women this increases to 65 micrograms during pregnancy and 75 micrograms during breastfeeding. The recommended maximum intake for both sexes is 400 micrograms per day.

High levels of so called 'free radicals' in the body can pose health risks. Micronutrients such as zinc and selenium can reduce the damaging effects of free radicals. Studies among infertile men have found that zinc and selenium, taken separately or in combination up to the recommended daily intake, can reduce the damage to sperm caused by free radicals and improve sperm quality. Whether this improves their chance of fathering a child is not yet known but it may be a good idea for men who want to be fathers to boost their zinc and selenium intake. The easiest way to do this is

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through a healthy diet. There are also supplements that can be bought over the counter.

It is not known if zinc or selenium supplementation improve female fertility.

## Main points to remember

- The risk of some serious birth defects can be reduced if women supplement their diet with the recommended doses of folic acid and iodine.
- Zinc and selenium supplementation up to the recommended levels can improve sperm quality.
- The best way to be sure to get the micronutrients the body needs is through a healthy well-balanced diet [www.betterhealth.vic.gov.au](http://www.betterhealth.vic.gov.au)
- Supplements up to the daily recommended intake is likely to be beneficial and there is no evidence that it is harmful.
- Consult your doctor before you take supplements.

For more information about pre-conception health visit



[www.yourfertility.org.au](http://www.yourfertility.org.au)