

Healthy eating for two

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Good nutrition before and after conception affects a woman's reproductive health and the health of her baby

A NUTRIENT-rich diet protects against pregnancy complications such as gestational diabetes, macrosomia (birthweight >4500g) and maternal weight outside the optimal range.

Dietary intake of nutrients among Australian women of reproductive age is relatively poor. Optimal folate and iodine status are crucial pre-pregnancy and hence supplementation is important to reduce the risk of fetal deformities. This is particularly important because about 51% of pregnancies are unplanned¹ and some women might not see a doctor before 12 weeks' gestation. Specific micronutrient supplementation is favoured over multivitamins, depending on the woman's personal nutrition status.

FOLIC ACID

Folate/folic acid is a form of vitamin B9 essential for DNA synthesis and repair as well as prevention of neural tube defects (NTDs). Adequate levels of vitamins B2, B6 and B12 are essential for metabolising folic acid.

Folate supplementation of 400-500mcg per day for low-risk women is ideal one month before fertilisation and recommended for three months post fertilisation. Women at high risk of folate deficiency are advised to take a megadose of 2-5mg/d. High-risk women include those with a personal history of NTDs or first-degree relative with NTDs, users of sodium valproate, BMI >30kg/m² and those with type 1 or type 2 diabetes.

Food sources of folate include broccoli, asparagus, spinach, brussels sprouts, bananas, oranges and strawberries. Commercial bread (except for organic bread) is fortified with folate (three slices=120mcg) as are some breakfast cereals and juices. Check labels for fortification and RDIs.

IODINE

Iodine is necessary for fetal neuronal and general development. Maternal iodine deficiency is linked to thyroid dysfunction, miscarriage, congenital abnormalities and stillbirth as well as being the leading cause of congenital hypothyroidism worldwide. Women planning pregnancy are advised to take an iodine supplement of 150mcg per day from at least one month before fertilisation and continue for three months into pregnancy.² Food sources of iodine include bread, seafood, eggs, meat and dairy.

IRON

Iron is important because of the increase in a woman's blood volume during pregnancy. Iron stores increase slowly over time. Women should meet 18mg/d before pregnancy, because after conception requirements rise to 27mg/d.

Iron deficiency anaemia may lead to maternal fatigue and is associated with preterm delivery. Food sources of iron include cooking with iron cookware, red

meat, pork, poultry, dark leafy vegetables, seafood, pulses and iron-fortified cereals.

CALCIUM

Calcium reduces the risk of pre-eclampsia in pregnancy and is needed for fetal skeletal development. Women aged <50 need an intake of 1000mg/d pre-conception. Food sources of calcium include dairy milk, cheese, sardines, salmon with bones or fortified nut milks (120mg/100ml).

VITAMIN D

There is insufficient evidence to recommend daily vitamin D supplements pre-conception. However, this might be beneficial for women who test severely deficient (<12.5nmol/L) or moderately deficient (26-50nmol/L).³ Vitamin D status should be checked pre-pregnancy.

CONCLUSION

Maternal nutrition status can impact fertilisation, fetal development and future health of mother and child. Obtaining optimal nutrition status is an integral part of pre-conception care. ■

References at medobs.com.au

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