

# Folic acid in pregnancy

SELF-CARE FORUM FACT SHEET NO. 23

This fact sheet is for women are planning to have children. It will help you understand what folic acid is, why it is important, and how to eat enough of this essential nutrient.

## Useful facts

### What is folic acid?

'Folate' is a naturally occurring, water-soluble vitamin also known as folacin or vitamin B9. 'Folic acid' is the manufactured version of folate that is used in supplements and fortified food. They both work in a similar way. Folate is needed to make red blood cells and DNA (genetic material) allowing cells to replicate. It is also important for nerve function. Everyone needs enough folic acid, but more is needed before and during pregnancy because requirements are increased.

Folic acid is measured in micrograms. The symbol for micrograms looks like this:  $\mu\text{g}$ .

### Why is folic acid important?

The World Health Organisation (WHO) and most governments advise women who are planning to become pregnant to take 400 $\mu\text{g}$  of folic acid for three months before pregnancy, and for at least the first three months of pregnancy. This helps to protect the unborn child from birth defects which are caused by the neural tube not forming correctly (neural tube defects or NTD) resulting in a spinal malformation called spina bifida.

The neural tube is where the brain and spinal cord develop. It starts as an open tube in the first four weeks of pregnancy, when most women do not even know they are pregnant. Without enough folic acid the neural tube cannot close properly. The open tube can leave the baby's brain and spinal cord exposed at birth and this can only be closed with surgery

## Which foods contain folic acid?

Folate is naturally found in a wide variety of foods, and some foods are fortified with folic acid. Good sources include:

- green leafy vegetables including, broccoli, brussel sprouts, cabbage, kale, spring greens, spinach
- beans and legumes including: chickpeas (eg hummus), kidney beans, peas, lentils, blackeye beans, edamame beans
- Fortified foods including: breakfast cereals fortified with folic acid (check the label)
- Beef and yeast extract eg marmite
- Eggs
- Orange juice and oranges
- Wheat bran and other wholegrain foods
- Poultry, pork, shellfish and liver

Because folate is water soluble it is lost from food if boiled in water. Steaming and microwaving reduces this loss. Always cook for minimum time needed or eat the food raw.

## How much should I eat?

- Adults and children over 11 years: 200 micrograms
- Anyone considering pregnancy: 200 micrograms plus a supplement\* containing 400 micrograms
- If you are pregnant: 300 micrograms plus a 400 micrograms supplement\* during the first 12 weeks of pregnancy
- If you are breastfeeding: 260 micrograms

\* if you are at higher risk of neural tube defects you may need to take 5 milligrams/day of folic acid before conception and up to 12 weeks of pregnancy

## How much should I eat? (continued ...)

### You may have greater risk if:

- you or the baby's biological father have a neural tube defect or a family history of neural tube defects
- you have had a previous pregnancy affected by a neural tube defect
- you have diabetes
- you take anti-epilepsy medicine
- you take anti-retroviral medicine for HIV
- you have sickle-cell disease, thalassaemia, or thalassaemia trait (in which case you should take 5mg throughout your pregnancy)
- you have a BMI of over 30
- you have inflammatory bowel disease

If any of these applies to you, talk to a health care professional soon. They can prescribe the higher dose of folic acid.

200-400ug supplements are widely available from pharmacies,

Eating a varied well-balanced diet with plenty of fruit and vegetables every day should provide the amount recommended for the general population (200ug). Folate is not stored in the body so these foods should be eaten regularly and frequently.

### Food fortification with folic acid

In November 2024 the UK government introduced legislation which will mean all non-wholemeal wheat flour is fortified with folic acid from the end of December 2026.

This legislation is designed to reduce the occurrence of neural tube defects. Approximately half of all pregnancies in the UK are unplanned so the women don't know to take the recommended supplements.

Food fortification of a commonly eaten ingredient (wheat flour) will increase everyone's folic acid intake and make sure women of childbearing age have a higher level of folate at conception, better protecting their unborn child.

The recommendations outlined above to consume more folic acid before and during pregnancy will remain.

### Can I take too much folic acid?

Because folic acid is a water soluble vitamin it is a very safe substance. A daily intake of up to 1,000µg (or 1 milligram) is safe.

The main risk of a high intake is that folic acid may mask vitamin B12 deficiency anaemia. The higher doses which may be prescribed for people at high risk of neural tube defects (up to 5mg) should be monitored by a health professional.

If you have vitamin B12 deficiency you should not take a folic acid supplement unless advised by your doctor.