

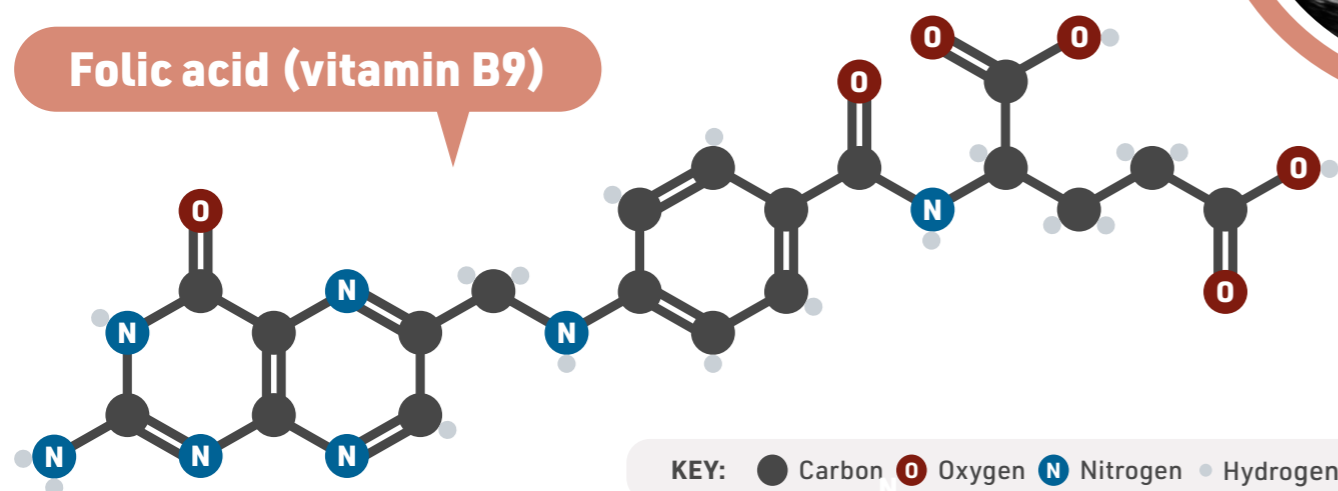
Why is folic acid important during pregnancy?

What is folic acid?

Folic acid is a human-made form of folate, vitamin B9. Folate cannot be created by our bodies so we need to get it from our diet. Folic acid's name comes from the Latin word *folium* (leaf) as it's found in leafy vegetables.



Folic acid (vitamin B9)



Folic acid is converted into folate in the body. Folate can also be obtained naturally from a number of foods. Additionally, in some countries folic acid is added to foods such as rice, pasta, bread and cereals, a process known as folic acid fortification.



Peanuts

246 micrograms



Spinach

146 micrograms



Broccoli

108 micrograms



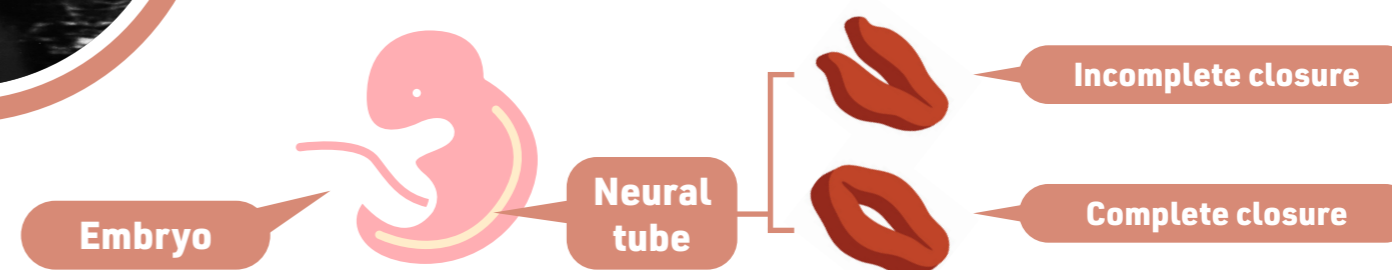
Fortified flour

140 micrograms

Quantities of folate/folic acid per 100 grams. The figure for fortified flour is the quantity added in the US.

Pregnancy and folic acid

In the first month of pregnancy, neural tube defects can occur. They happen when the neural tube, which forms the brain and spinal cord, doesn't develop or close properly. This can lead to conditions such as spina bifida.



Low levels of folate have been linked to neural tube defect (NTD) development. If women take folic acid supplements before and during early pregnancy it reduces the risk of NTDs by around 70%. 400 micrograms of folic acid daily is the recommended dosage.

Prevalence of NTDs in Europe



9.1 per 10,000 births

Folic acid supplementation but no folic acid fortification

Prevalence of NTDs in the US



5.3 per 10,000 births

Folic acid supplementation, folic acid fortification (since 1998)

The mechanism by which folate reduces NTD risk isn't confirmed. Folate is important for the synthesis of nucleic acids, the building blocks of DNA. Large quantities of nucleic acids are required by the developing neural tube for DNA replication, so folate deficiency may impact this.