Folic Acid Deficiency Anaemia

A normal balanced diet contains enough folic acid. However, a lack of folic acid will cause anaemia and sometimes other symptoms.

What is folic acid deficiency?

Folic acid (folate) is a vitamin and is needed to make new cells in your body, including red blood cells. Your body does not store very much folic acid. You need a regular fresh supply to keep healthy. Many foods contain folic acid, including spinach, sprouts, broccoli, green beans, peas, chickpeas, brown rice, kidney, liver and potatoes. A normal balanced diet contains enough folic acid. However, a lack of folic acid will cause anaemia and sometimes other symptoms.

A blood test can confirm anaemia due to folic acid deficiency. It is also very common to have a blood test for your vitamin B12 levels as these can also be low. Read more about vitamin B12 deficiency and pernicious anaemia.

What are the symptoms of folic acid deficiency?

Symptoms due to anaemia are caused by the reduced amount of oxygen in the body.

- Common symptoms include tiredness, having little energy (lethargy), feeling faint and becoming easily breathless.
- Less common symptoms include headaches, heartbeats suddenly becoming noticeable (palpitations), altered taste and ringing in your ears (tinnitus).
- You may look pale.

Other symptoms may include numbness in your hands and feet. Some people may also have depression.

What are the causes of folic acid deficiency?

- **Not eating enough foods containing folic acid (folate)** is the most common cause. This occurs most often in elderly people who do not eat well. Alcohol-dependent people are another group often not eating properly. Foods which are high in folic acid include broccoli, Brussels sprouts, asparagus, peas, chickpeas and brown rice. Other useful sources include fortified breakfast cereals, beans, some bread, oranges and bananas.
- **Pregnancy** causes reserves of folic acid in your body to be used by the growing baby. You are at risk of becoming low in folic acid during the later stages of pregnancy, particularly if you do not eat well during pregnancy.
- **Some uncommon conditions of the gut** may cause poor absorption of folic acid - for example, coeliac disease.
- **Some blood disorders** can lead to a very high turnover of red blood cells - for example, sickle cell disease and thalassaemia. Normal amounts of folic acid in the diet may then not be enough and supplements may need to be taken.
- **Some inflammatory conditions** can lead to low folic acid levels - for example, severe Crohn’s disease. However, this is less common.
- **Some medicines** interfere with folic acid. Therefore, you may need to take extra folic acid whilst taking certain medicines. These include colestyramine, sulfasalazine, methotrexate and some anticonvulsant medicines used to treat epilepsy. If you are needing dialysis then you may be recommended to take folic acid supplements.

What is the treatment for folic acid deficiency?

Treatment is easy and is by taking a tablet of folic acid (folate) each day. You need to take this until the anaemia is corrected and the folic acid stores in the body are built up (usually for about four months). You may need advice on diet to stay well and the tablets can be stopped if your diet improves. You may need to continue with treatment if a poor diet was not the cause of folic acid deficiency. For example, if you have sickle cell disease you may need a folic acid tablet each day indefinitely. Find out more about diets suitable for people with anaemia.

Folic acid and pregnancy

Extra folic acid (folate) is advised for at least the first 12 weeks of pregnancy for all women - even if you are healthy and have a good diet. If you take extra folic acid in early pregnancy you have less chance of having a baby born with a spinal cord problem such as spina bifida. It is best to start taking the extra folic acid before becoming pregnant. If the pregnancy is unplanned then start taking folic acid as soon as you know you are pregnant. You can buy folic acid tablets at most health food shops or pharmacies.

- For most women the dose is 400 micrograms (0.4 mg) a day.
- If your risk of having a child with a spinal cord problem is increased then the dose is higher (5 mg a day - you need a prescription for this higher dose). That is, if:
  - You have already had a previous baby with a spinal cord problem.
  - You, your partner or a first-degree relative have a spinal cord problem.
  - You have coeliac disease, diabetes, sickle cell anaemia or thalassaemia.
  - You are obese - especially if your body mass index (BMI) is 30 or more.
  - You are taking certain medication for epilepsy (your doctor will advise).

See also the separate leaflets called Planning to Become Pregnant and Diet and Lifestyle during Pregnancy.

Further reading & references

- Anaemia - iron deficiency; NICE CKS, February 2013 (UK access only)
- Erythropoiesis-stimulating agents in the treatment of anaemia in cancer patients: ESMO Clinical Practice Guidelines for use; European Society for Medical Oncology (2010)
- Guidelines for the Diagnosis and Management of Adult Aplastic Anaemia; British Committee for Standards in Haematology (2015)
- Clinical Practice Guideline: Anaemia of Chronic Kidney Disease; The Renal Association, 2017

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