

## FACTSHEET No. 11

### FOLIC ACID

#### Background and Q&As

##### *What is folic acid?*

Folic acid is one of the B vitamins (vitamin B<sub>9</sub>) and along with Vitamin B<sub>12</sub> is essential for the formation of red and white blood cells in the bone marrow. It is also required to make new cells in the body.

Folic acid is water-soluble, which means it cannot be stored in the body for very long and needs to be included in daily dietary intake.

Folic acid is also known as folate when it occurs naturally in foods

Major dietary sources of folate/folic acid include green leafy vegetables (e.g. sprouts, spinach, green beans, peas, broccoli and lettuce), brown rice, potatoes, fruit (such as oranges and bananas), whole grain breads and fortified breakfast cereals.

##### *How much folic acid do we need?*

Research shows that folic acid can greatly reduce the chance of a baby being born with neural tube defects such as spina bifida, by helping to make sure that the spine develops properly. Medical studies have shown that women who increase their intake of folic acid in the first twelve weeks of pregnancy reduce the risk of having a baby with these conditions. So it is important for **every woman** who might be thinking of having a baby to make sure she is getting enough folic acid.

***The Department of Health<sup>1</sup> recommends that:***

- women planning to conceive should take 400 micrograms of folic acid daily either as a medicinal or food supplement from when they begin trying to become pregnant until the twelfth week of pregnancy.
- women who think they might be pregnant but have not been taking extra folic acid should start doing so immediately and continue until the twelfth week of pregnancy.
- women who have had a previous child with spina bifida should take daily folic acid supplements of 5 milligrams (5,000 micrograms) until the twelfth week of pregnancy. Women taking this much folic acid should only do so under a doctor's supervision.

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<sup>1</sup> Thinking of having a baby: folic acid - an essential ingredient in making babies

[www.nhs.uk/chq/pages/913.aspx?categoryid=54&](http://www.nhs.uk/chq/pages/913.aspx?categoryid=54&)

## Where can I find folic acid?

There are three ways of getting extra folic acid in the diet:

- eating more folate-rich foods
- eating foods fortified with folic acid
- taking folic acid as a supplement.

However, preserving, canning and cooking folate rich foods can all reduce the amount of folic acid present. Therefore if you are planning to have a baby, a healthy diet with plenty of green vegetables may **not** be enough to give you all the folic acid you need.

Bread is a source of folate. Wholemeal bread has 40 micrograms per 100g and white bread 25 micrograms per 100g. (McCance and Widdowson's *The Composition of Foods* 6<sup>th</sup> Summary Edition (2002))

Further information on folic acid and neural tube defects such as spina bifida are available from:

### **Association for Spina Bifida and Hydrocephalus**

**42 Park Road**

**Peterborough PE1 2UQ**

**Tel: 01733 555988**

**Website: [www.shinecharity.org.uk](http://www.shinecharity.org.uk)**

## **Fortification of Flour with Folic Acid**

At the end of 2006 the UK Scientific Committee on Nutrition (SACN) published its report on folic acid and the prevention of disease with a recommendation that there should be mandatory fortification of bread or flour<sup>2</sup>.

Following publication of the SACN report the Food Standards Agency (FSA) launched a consultation giving four options to increase the folate intake of young women.

In May 2007, following the results of this consultation, the FSA Board announced its decision to approve mandatory fortification of food with folic acid and formally advised the Department of Health.

In October 2007, the Government's Chief Medical Officer requested further studies into the links between folic acid and colorectal cancer. Following this review, SACN issued a report in October 2009<sup>3</sup> stating that they upheld their previous recommendation for the introduction of mandatory fortification with folic acid, with controls on voluntary fortification.

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<sup>2</sup> SACN 2006: Folate and Disease Prevention

[http://www.sacn.gov.uk/pdfs/folate\\_and\\_disease\\_prevention\\_report.pdf](http://www.sacn.gov.uk/pdfs/folate_and_disease_prevention_report.pdf)

<sup>3</sup> SACN: Folic acid and colorectal cancer risk: Review of the recommendation for mandatory folic acid fortification

[http://www.sacn.gov.uk/pdfs/summary\\_of\\_sacn\\_report\\_to\\_cmo\\_19\\_october\\_2009.pdf](http://www.sacn.gov.uk/pdfs/summary_of_sacn_report_to_cmo_19_october_2009.pdf)

However they stated that the mandatory fortification of flour should only be introduced in the UK if it is accompanied by:

- Action to restrict voluntary fortification of foods with folic acid
- Measures for careful monitoring of emerging evidence on any adverse effects of long-term exposure to intakes of folic acid above the Guideline/Tolerable Upper Level (GL/UL) of 1mg(1,000 micrograms) per day
- Guidance is given on supplement use for particular population groups

The report also mentions that:

- Individual long-term intakes of folic acid from fortified foods and supplements above the GL/UL per day for folic acid (1 milligram (1,000 micrograms) per day for adults; lower amounts for children) should be avoided
- People over the age of 50 should be advised not to consume folic acid supplements above the recommended nutrient intake (RNI) for folate of 200 micrograms per day since there is an increased risk of developing colorectal adenomas/ colorectal cancer.
- In addition for those with a previous history of colorectal adenomas, folic acid supplementation should also not exceed 200 micrograms per day without medical guidance.
- More reliable diagnostic indices to identify vitamin B<sub>12</sub> deficiency should be developed

In May 2016 the Department of Health decided that in England mandatory fortification of flour with folic acid was not the way forward and therefore have no plans to introduce it.

## **The Baking Industry**

The baking industry has always been very responsive to consumer needs and aspirations launching many products every year. The industry is therefore committed to respond positively to any call for a discussion on folic acid fortification.

The baking industry has always stated that the option to fortify is a medical decision and we have been consistent in our view that, if mandatory fortification is approved, the place to fortify is in the flour mill, and the procedure to do so is available under the Bread and Flour Regulations.

## **Q&As**

### **What are the current levels of folic acid in bread?**

Bread is a source of folate. Wholemeal bread gives 40 micrograms per 100g and white bread 25 micrograms per 100g. (McCance and Widdowson's *The Composition of Food 7<sup>th</sup> Summary Edition (2015)*)

### **Is bread fortified with any other nutrients?**

Yes. The Bread and Flour Regulations require that white and brown flours should contain not less than 0.24mg thiamin (vitamin B1), 1.60mg nicotinic acid and 1.65mg of iron per 100g of flour. These amounts are found naturally in wholemeal flour.

In addition calcium carbonate at a level of not less than 235mg and not more than 390mg per 100g of flour is added to all flours except wholemeal (and certain self raising varieties.)

Consumers can therefore be assured of the high nutritional value of all bread whether white, brown or wholemeal.

**What is the bread industry's view on fortification of bread?**

The bread industry has always been very responsive to consumer needs and aspirations launching many products every year and is therefore committed to respond positively to any call for a discussion on folic acid fortification. However, we feel that any decision should be a medical one, and not one made by the industry alone.

**Are there currently any bread products on the market that are fortified?**

None that we are aware of at this time.

**NOTE:**

**1 gram = 1,000 milligrams**

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