

FACTSHEET No. 24

FLOUR FORTIFICATION

Is all UK flour fortified?

The Bread and Flour Regulations 1998 lay down specific rules for bread and flour produced in Great Britain. Separate rules apply in Northern Ireland. Under these rules all wheat flour (except wholemeal flour) produced in Great Britain is required to have added to it specified quantities of four nutrients, namely calcium, iron, niacin and thiamin.

Nutrient	mg/100g flour
Calcium (calcium carbonate)	≥235 to 390
Iron	≥1.65
Thiamin (thiamin hydrochloride)	≥0.24
Niacin	≥1.60

Why is flour fortified?

White flour was first fortified with calcium in the UK in 1941. This was introduced to prevent rickets which had been found to be common in women joining the Land Army. Fortifying flour was a means of providing more calcium in the diet at a time when dairy products were scarce.

Around the same time, the Ministry of Food was charged with reducing the amount of wheat that was imported, while continuing to keep bread freely available (at this time bread-making wheat was mainly imported from North America and Canada). Their solution was to make the wheat go further by instructing millers to produce wheatmeal flour in place of white flour for bread making. This wheatmeal flour was roughly equivalent to today's brown flour and the bread that was produced was known as the National Loaf. Because more of the grain was used, it meant that there were more vitamins and minerals naturally present from the wheat grain.

In 1953 when controls on the milling of white flour were lifted, it was decided that the nutrients lost during milling of white and brown flours should be restored in order to maintain the nutritional value of our bread. Regulations were introduced to add iron, thiamin and niacin, and to continue the addition of calcium in all wheat flour (except wholemeal).

Is this still relevant today?

In June 2012, the Scientific Advisory Committee on Nutrition (SACN) conducted a review of the impact of removing mandatory fortification and concluded that the case for maintaining this was strongest for calcium, followed by iron. They felt the impact of removing the added thiamin and niacin from wheat flour would be small, but stated that the effect of repealing the Bread and Flour Regulations could be greater for lower socio-economic groups.

The SACN review shows that cereals and cereal products provide around 30% of calcium intakes, the majority from bread and flour containing products, and nearly 40% of iron intake in adults (50% in older children), again about half of which comes from bread and other flour-containing products.

In January 2013, Defra consulted on the continued need for mandatory fortification of flour in England and in August 2013 they announced that the Government had reached a decision, concluding that the Bread and Flour Regulations 1998 should be retained in their current format.

What about folic acid?

At the end of 2006 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.

The baking industry is committed to respond positively to any call for a discussion on folic acid fortification, but believes that this is a medical decision. 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.

References

SACN "Nutritional Implications of Repealing the UK Bread and Flour Regulations"
June 2012