

UK failure to fortify flour with folic acid has caused 2000+ cases of neural tube defect

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The UK's failure to fortify flour with folic acid has caused around 2000 avoidable cases of neural tube defects since 1998, concludes research published online in the *Archives of Disease in Childhood*.

The UK should follow the lead of the US and 77 other countries, to curb the associated toll of fetal and [infant death](#) and disability, say the researchers.

Neural tube defects, which are [birth defects](#) of the brain, spine, or [spinal cord](#), include [spina bifida](#), anencephaly, and encephalocele.

In 1991 the UK Medical Research Council Vitamin Study showed that a supplement of folic acid taken before and during [early pregnancy](#) cut the risk of [neural tube defects](#) by around 72%.

But it's impractical to achieve a high enough level of folate from diet alone, so taking supplements or eating foods fortified with folic acid is a sensible option for women intending to become pregnant.

In 1992 the Department of Health in England advised women to take folic acid supplements before pregnancy to reduce their risk of having a baby with a [neural tube](#) defect, but the evidence shows that most women don't take them, say the researchers.

They estimated the number of pregnancies with neural tube defects that would have been prevented had the UK opted to fortify flour with folic

acid in 1998—the year that the US adopted this policy (140 µg of folic acid per 100 g of cereal grain).

They used data on the number of diagnoses of neural tube defects and associated terminations of pregnancy for the period 1991 to 2012 from EUROCAT, a European network of registers that track birth defects, which includes the British Isles Network of Congenital Anomaly Registers (BINOCAR).

The prevalence of pregnancies with a neural tube defect during this timeframe was 1.28 per 1000 births. Most (81%) of the affected pregnancies were terminated.

But unlike the USA, there was no significant change in the prevalence of pregnancies with a neural tube defect in the 14 years between 1998 and 2012, nor were there any significant changes in the prevalence of spina bifida, anencephaly with or without spina bifida, or encephalocele, when analysed separately.

The researchers estimated that there would have been 2014 fewer pregnancies with a neural tube defect in the UK had the US policy been adopted: 1798 fewer in England and Wales; 152 in Scotland; and 64 in Northern Ireland. This equates to an estimated fall in prevalence of 21% between 1998 and 2012, they say.

In the USA, the prevalence of pregnancies with a neural tube defect has fallen by around 23% since 1998, and in Chile, where the level of flour fortification is even higher, at 2.2 µg/100 g, the prevalence has fallen by 36%.

"The failure of Britain to fortify flour with folic acid has had significant consequences," say the researchers, who emphasise that its addition is 'remarkably safe,' with fears that fortification might increase the risk of

cancer not substantiated by the evidence.

The longer Britain holds back on this cost effective mandatory supplementation, the more affected pregnancies there are likely to be each year—around 150, nearly all of which would result in the birth of severely disabled babies, if the parents choose to go ahead with the pregnancy, they warn.

The researchers compare the current situation with thalidomide, which resulted in the births of 500 people with disabilities in the UK.

"Justifiably, steps were introduced to immediately halt the epidemic, and regulatory precautions were introduced to avoid another similar epidemic," they write. "Unfortunately, no such sense of urgency has been applied to the prevention of spina bifida," they say.

"It is a public health failure that Britain has not implemented the fortification of flour with [folic acid](#) for the prevention of spina bifida and other [neural tube defects]," they write. This failure "has caused, and continues to cause, avoidable terminations of pregnancy, stillbirths, neonatal deaths and permanent serious disability in surviving children," they conclude.

More information: Prevention of neural tube defects in the UK: a missed opportunity, *Archives of Disease in Childhood*, [DOI: 10.1136/archdischild-2015-309226](#)

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