Press Release:

ARCHIVES OF DISEASE IN CHILDHOOD

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

neural tube defect

*UK should follow lead of 78 other countries, to curb toll of*

*associated deaths and disability, say researchers*

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.

**Notes for editors:**

**Research:** Prevention of neural tube defects in the UK: a missed opportunity doi

10.1136/archdischild2015309226

**Journal: *Archives of Disease in Childhood***

**Link to research:**

http://press.psprings.co.uk/adc/december/adc309226.pdf

**Public link**

http://adc.bmj.com/lookup/doi/10.1136/archdischild2015309226

**Author contact:**

Professor Joan Morris, Wolfson Institute of Preventive Medicine, Queen Mary University of

London, London, UK.

Tel: + 44 (0) 207 882 6274; + 44 (0) 7870 100 124

Email: j.k.morris@qmul.ac.uk

**About the journal:**

***Archives of Disease in Childhood*** is one of more than 50 specialist journals published by

BMJ. The title is coowned

with the Royal College of Paediatrics and Child Health.

http://adc.bmj.com

3