



**Response from the Queen's Nursing Institute Scotland (QNIS)
UK Government's 2019 Consultation on Mandatory Fortification of Flour with Folic Acid**

<https://www.gov.uk/government/consultations/adding-folic-acid-to-flour/proposal-to-add-folic-acid-to-flour-consultation-document>

1. *Do you agree or disagree with the proposal for mandatory fortification of non-wholemeal wheat flour in the UK with folic acid to help prevent neural tube defects?*

QNIS agrees with the proposal.

2. *Please explain your answer:*

There is longstanding, solid, scientific evidence that adequate levels of Vitamin B9 (folic acid) prior to conception, and during at least the first month of pregnancy, can prevent most neural tube defects. The human and financial costs of NTDs are very high. These include voluntary terminations (after screening for NTDs), miscarriages and stillbirths, as well as a variety of serious birth defects (ranging from spina bifida to anencephaly).

Community nurses often witness, and help people deal with, the hidden consequences of pregnancies harmed by NTDs. From the heartbreak of miscarriages and stillbirths to the unhealthy stresses of NTD-driven terminations to the physical, mental and emotional hardships that can accompany having a severely ill baby (for whom full recovery is not an option), the true costs of neural tube defects are rarely acknowledged, and taken into account, across the UK.

However, community nurses understand those human concerns. The nurses in this large and highly diverse workforce are often the ones providing supporting. They help not only affected children, but also parents experiencing NTD-related psychological trauma, as well as the longer term physical and mental health problems caused by such trauma.

There is no persuasive, evidence-based argument for failing to prevent such easily and inexpensively preventable harm. That is especially the case, since both the latest scientific evidence and the experience of the scores of countries that have been fortifying food with Vitamin B9 for years, indicate there is no significant adverse result caused by folic acid (Vitamin B9) fortification.

There is equally clear evidence in the UK that the vast majority of women of child-bearing age do not have sufficient blood folate levels at the time of conception to benefit from the preventive benefits of Vitamin B9. This remains true despite more than a decade of significant encouragement for voluntary supplementation with folic acid. In fact, that has inadvertently increased inequalities between wealthier, more highly educated women (who are more likely to take folic acid supplements) and their poorer counterparts (who are less likely to buy and regularly take these supplements).

The reality across the UK is that approximately half of all pregnancies are unintended or mistimed, which means that NTD prevention -- which, to be effective, must occur during the months before conception -- is too often a missed opportunity. That is because it takes months to raise blood folate levels sufficiently.

Neural tubes are formed (or malformed) by the end of the first month of pregnancy. This is before most women are even aware of being pregnant. Starting to take folic acid while pregnant is the equivalent of 'shutting the stable door after the horse has bolted'.

Neural tube defects can neither be reversed, nor can their adverse effects be cured or fully corrected after the fact. Mandatory fortification with an adequate level (i.e. one having the preventive effect) of Vitamin B9 is the only known way of keeping most NTDs from happening in the first place, as well as reducing the unintentional inequalities accompanying voluntary folic acid supplementation.

The Queen's Nursing Institute Scotland (QNIS) promotes excellence in community nursing to improve the health and wellbeing of individuals, families and localities. Scotland's 14,000 nurses working in the community (rather than in acute hospitals) have a crucial role to play in the prevention of NTDs, as well as in the treatment and care for people whose health and wellbeing has been compromised by neural tube defects that were not prevented. For example, GP nurses, sexual nurses and school nurses all can and do contribute to preconception health (including helping to prevent NTDs), while community children's nurses, district nurses and learning disability nurses are important in the care of those affected by NTDs (plus supporting their families).

Community nurses understand both the causes and consequences of neural tube defects. The high cost of avoiding fortification contrasts unfavourably with the low cost of moving forward by finally taking this important public health action. Therefore, QNIS strongly encourages Westminster to enact - and enforce - legislation mandating prevention-strength Vitamin B9 fortification of flour throughout the UK.

3. Which of the following do you think mandatory fortification with folic acid should apply to? Please choose one.

All flour in the UK and other non-wheat products, such as 'gluten free'

Alternative approaches

4. Are there any alternative ways of helping reduce the number of neural tube defects that you prefer, other than our proposal for mandatory fortification of flour with folic acid?

There are no known, and tested, methods of preventing neural tube defects as effective, safe and inexpensive as fortification of flour with Vitamin B9. Depending upon the level of folic acid added to flour, there may still be a need to encourage and support voluntary folic acid supplementation long before, and in the earliest stage of, pregnancy. However, it makes sense -- especially since the latest evidence reveals no plausible upper limit to the safe consumption of folic acid -- to fortify flour with enough Vitamin B9 to ensure its preventive effect is maximised.

5. Are there any particular groups or individuals that might be negatively affected by mandatory fortification of flour with folic acid, or miss out on the benefits?

There is no current, robust evidence of negative health impacts from folic acid fortification. Since approximately 80 countries have been both fortifying food with folic acid -- and monitoring the outcomes -- for many years, any significant negative outcomes should have become apparent by now.

A woman's inability to tolerate wheat-based, or other gluten containing, products should not automatically place that woman at a higher risk of a pregnancy harmed by neural tube defects. This population would be negatively impacted if fortification is restricted to wheat flour. It would be unfair for a new type of inequality to emerge that disadvantages women (and, eventually, their children) based upon food restrictions or preferences.

However, there is a minority who have principled/philosophical objections to fortification of any food product with any substance (no matter how helpful or benign).

6. How could we make sure these groups or individuals are supported or not affected negatively?

There should be options for people having principled/philosophical objections to buy and consume food products without fortification of any kind.

Conversely, people who need to maintain a gluten-free diet should not automatically be excluded from the preventive health benefits of Vitamin B9 fortification. Thus, that is why fortification should be extended to gluten-free flour, too.

The same principle applies to people for whom wheat is not part of their diet. The implication is that – as in some other countries – Vitamin B9 fortification of corn, rice and other staple foods should also be seriously considered.

7. If the fortification of flour with folic acid is made mandatory, do you agree or disagree that there should be limits on voluntary fortification of other food products and/or supplements with folic acid?

QNIS disagrees

8. Please give reasons for your answer:

This question appears to be based upon a now outdated concern about a safe (plausible) upper limit of folic acid. Imposing - and then trying to enforce - an artificial upper limit will make the fortification process much more complex, confusing and costly.

9. Can you provide any additional evidence to inform the impact assessment?

The recent research of Professor Sir Nicholas Wald and colleagues presents a compelling case against the idea -- and especially against acting on the belief -- that there is an upper (plausible) limit on the amount of folic acid that should be readily available through mandatory fortification of flour, as well as voluntary supplementation. The cost/benefit analysis does not take the latest and best evidence into account, which skews some aspects of that analysis in unhelpful ways.

10. Do you think there are any other benefits, costs or wider impacts of this policy proposal that have not been mentioned yet?

There are three clear benefits of UK-wide legislation mandating a prevention-sufficient level of Vitamin B9 fortification of flour and possibly other staple grains or foods:

1. It will demonstrate that giving priority to primary prevention is real, not just rhetoric;
2. The well-being of prospective parents and their babies will be, and seen to be, taking precedence over unfounded fears about adding ingredients to food (especially since four other health-promoting ingredients -- including two other B vitamins -- have been routinely, beneficially and safely added to UK flour for half a century); and,
3. It will reinforce the notion of public policy being guided by solid evidence. As discussed in this 2018 article in the *Journal of Public Health*, the case for mandatory flour fortification was conclusively made decades ago, but has still not been implemented across the UK:
<https://academic.oup.com/jpubhealth/article/41/2/e209/5076112>

About you

What is your name and title?

Dr Jonathan Sher, Deputy Director, Queen's Nursing Institute Scotland

What is your email address?

jonathan.sher@qnis.org.uk

September 2019