Briefing: 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

What's this all about?

The issue here is whether the UK Government should enact legislation, covering all four nations, making it a legal requirement that folic acid (Vitamin B9) to be added to most flour produced in the UK.

The UK Government has now launched a public consultation on this topic. *Views in favour or against this legislation (or offering advice/evidence) must be submitted before noon on Monday 9 September 2019.*

Both Spina Bifida Hydrocephalus Scotland (SBH Scotland) and the Queen's Nursing Institute Scotland (QNIS) are in favour of mandatory Vitamin B9 fortification of flour. So, too, are the:

- Scientific Advisory Committee on Nutrition of the Food Standards Agency;
- Food Standards Scotland;
- UK's Chief Medical Officers;
- Scottish and Welsh Governments;
- Relevant Royal Colleges & professional associations; as well as,
- Leading public health & maternal and child health experts across the UK.

There is no equivalent, organised opposition to mandatory folic acid (Vitamin B9) fortification. It is not a party-political issue. However, it is still uncertain whether such legislation will actually be enacted and implemented by this Parliament. There is concern that folic acid (Vitamin B9) legislation will be 'kicked into the long grass', given Westminster's preoccupation with Brexit and other higher priority matters. The best way to overcome inaction on this legislation at Westminster is to create a groundswell of support for fortification.

What are the essential points?

About Neural Tube Defects (NTDs):

- When all goes well, neural tubes are what eventually develop into a person's spine and brain. They are fully formed (or malformed) by the fifth week of pregnancy. This is before most women are even aware that they are pregnant.
- If the neural tube of any fetus does not close properly by the 28th day of pregnancy, then it is classified as a neural tube defect (NTD). *It cannot be closed or corrected later*.
- Sometimes, this NTD is detected by the woman's own body and the fetus is rejected. That is why NTDs are a leading cause of both miscarriages and stillbirths. While the data are imprecise, it is estimated that more NTDs result in pregnancy loss than in live births. There are at least 1,000 NTD-affected pregnancies in the UK each year.
- If the pregnancy continues until a live birth (approximately 1 in 1,000 births), then the NTD causes a spectrum of life-long conditions, including (but not limited to) spina bifida, hydrocephalus and anencephaly (a fatal condition in which part of the brain is missing).

- All pregnant women are offered free screening for NTDs on the NHS. This non-invasive screening is optional. The point is to offer an informed choice about whether to continue the pregnancy or decide to have it terminated. Many (but not all) women choose to have the pregnancy terminated if a neural tube defect is discovered.

About Folic Acid (Vitamin B9):

- More than thirty years of extensive, internationally validated research has proven that Vitamin B9 can **prevent** more than half of all neural tube defects, as well as having other health benefits. The cornerstone study on the preventive power of folic acid was led by Professor Sir Nicholas Wald and the results have been widely known since 1991.
- Vitamin B9 is necessary for the healthy development of cells and DNA/RNA. It is available naturally by eating certain green vegetables, e.g. spinach and broccoli. A synthetic version – that is, folic acid -- also provides the Vitamin B9 every body needs.
- People with a healthy, folate-filled diet can acquire the level of Vitamin B9 normally needed by most people. However, the reality is that only a small proportion of people in Scotland have such a diet (even with the tiny amount voluntarily added to cereals and other products), so folate levels tend to be very low among women of childbearing age. Across the UK, 91% of women of childbearing age have blood folate levels below the thresholds indicating elevated risks of pregnancies affected by neural tube defects.
- The level of Vitamin B9 required to prevent NTDs cannot be attained by eating green vegetables. *Effective prevention depends upon additional Vitamin B9 from folic acid before and during the first trimester of pregnancy*. At the other end of the spectrum, there is no plausible upper limit, after which too much folic acid could become harmful.

About voluntary supplementation:

- Voluntary supplementation with folic acid – i.e. taking folic acid tablets every day on an optional, individual basis – has been strongly advocated and tried throughout the UK for more than a decade. This voluntary strategy has failed to significantly reduce the occurrence of neural tube defects.
- Worse, the voluntary supplementation schemes *increased health inequalities*. That's because the women most likely to take adequate amounts of folic acid regularly, and far enough in advance of becoming pregnant, tended to be in the upper half of the socioeconomic spectrum. So, those in the lower half also are likely to have the lowest Vitamin B9 levels when becoming pregnant.
- **Timing is crucial** to benefit from the preventative effect of Vitamin B9. It takes many weeks for anyone to build up the amount of Vitamin B9 that will greatly lower the risk of NTDs. So, *folic acid must be taken regularly at least three months before conceiving and continued daily at least through the first month of pregnancy*. Waiting to take folic acid supplements until pregnancy has been confirmed is simply too late to prevent NTDs; a health version of 'closing the stable door after the horse has bolted'.
- Another major pitfall for voluntary supplementation is that nearly half of all pregnancies across the UK are unintended/unplanned. Reaching health goals – such as increasing Vitamin B9 levels – during the preconception period is almost impossible when it is unknown when (or if) a pregnancy will begin.

About mandatory fortification:

- Adding folic acid to most UK manufactured flour is the most inexpensive, effective, efficient and egalitarian way to achieve the Vitamin B9 level needed for NTD prevention to have a chance.
- Years of continuing scientific research and evaluations of the lived experience in over 80 countries already fortifying flour (for decades in some nations) have demonstrated there are no significant ill-effects or negative consequences of folic acid fortification.
- For more than half a century*, most flour produced in the UK has already been – and still is -- fortified with four other healthy ingredients: calcium, iron, niacin and thiamine*. In fact, two of these helpful ingredients are also B vitamins; thiamine is Vitamin B1, while niacin (nicotinic acid) is Vitamin B3 – just as folic acid is Vitamin B9. Each performs a different, non-duplicative function in improving nutrition and preventing deficiencies. The addition of folic acid merely replaces the natural folate extracted during the milling process.
- There are detailed issues remaining to be resolved when enacting and enforcing legislation requiring folic acid fortification. For instance, determining how much folic acid to add to have the desired *preventative* effect - or deciding which flours (or other foods) will be included/excluded - are now under consideration. The current consultation is meant to gather views and evidence addressing such specialised matters.