SUPPLEMENTATION AND FORTIFICATION

There have been many debates about whether supplementation or fortification provides the best solution to the primary prevention of NTDs, but both supplementation and fortification have a key role to play if we are to provide the best protection, and achieve our goal of maximizing the risk reduction of folic acid preventable NTDs.

In an ideal world, all women that could get pregnant would take a daily 400mcg supplement of folic acid, but this is simply an unrealistic goal. Where strategies have been introduced to increase the number of women taking preconceptional folic acid supplements, none has managed to achieve an uptake greater than 40%.

Unfortunately, there are many obstacles to prevention (see following section). For folic acid to be effective in reducing the risk of NTD, a woman must have sufficient stores in her body **before she conceives**, so the fact that over 50% of pregnancies around the world are unplanned makes preconceptional supplementation highly problematic from the start. This is why the mandatory fortification of staple foods such as bread, cereals etc. is so important, and not only in developing countries.

Fortification helps to raise base folate levels across the population, and acts as a safety net to help protect those pregnancies that are either unplanned, or where folic acid supplements are either not available or have not been taken preconceptionally. To date over 80 countries around the world have a mandate to fortify staple foods with folic acid. However, even where staple foods are fortified with folic acid, it's still important for women that are planning a pregnancy to take a daily supplement containing 400mcg of folic acid, and eat a healthy balanced diet, rich in natural source folates.

Supplementation

Since it was proven that folic acid could reduce the risk of neural tube defects by up to 72%, most countries have adopted a national recommendation for all women of childbearing age who could get pregnant, to take a daily supplement containing 400mcg of folic acid. Despite having this knowledge for over 25 years, too few women are taking folic acid at the correct time **(before conception)** and dose for it to be effective in reducing the risk of NTD.

This simple recommendation forms the basis of the WHO standards which provide global guidance and recommendations for the prevention of neural tube defects:

'All women, from the moment they begin trying to conceive until 12 weeks of gestation, should take a folic acid supplement. Women who have had a foetus diagnosed as being affected by a neural tube defect (NTD), or have given birth to a baby with an NTD

should receive information on the risk of recurrence, be advised on the protective effect of preconceptional folate supplementation and be offered high dose supplementation.'

To meet the WHO standards, governments are required to:

- have a national policy and guidelines on folic acid supplementation

- ensure that folic acid is available and affordable to women

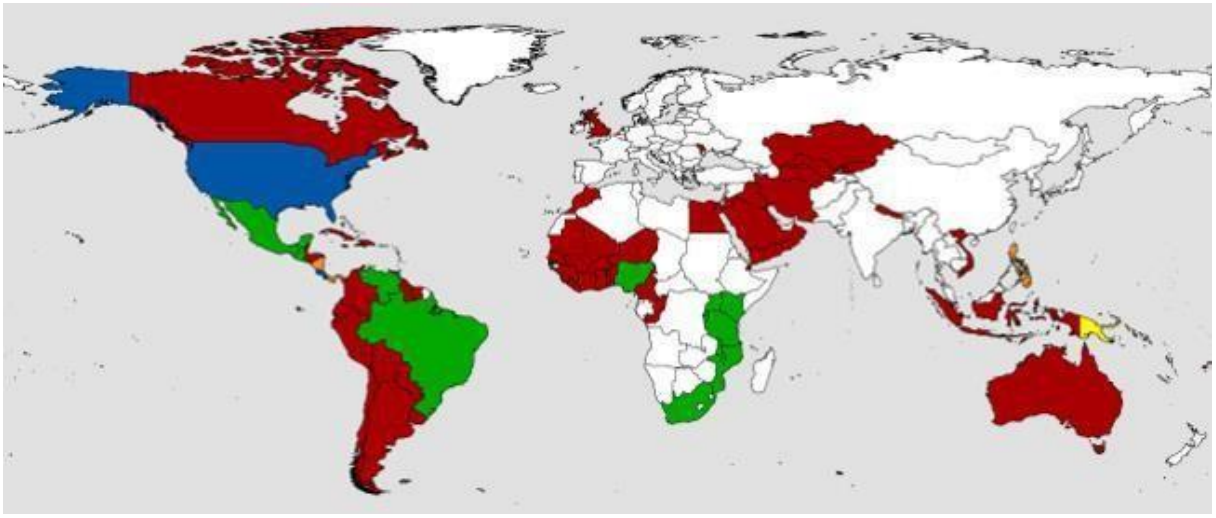
- ensure that health education and awareness raising activities are conducted

- ensure that records are kept of preventative treatments.

Whilst these standards provide key, basic guidance to improve maternal and child health, birth outcomes and reduce the risk of (often preventable) disability, they are rarely implemented. This means that we still have a lot of work to do to encourage and support action by local governments and health professionals to ensure that these standards are implemented and help give more children the best start in life.

Fortification of staple foods

Globally, the most effective method of primary prevention of NTDs has been the mandatory addition of folic acid to staple foods. Over 80 countries across the world now have a mandate to fortify with one or more essential nutrient to improve population health.



Mandatory fortification of staple foods with folic acid (such as wheat and maize flour, rice and most recently, corn masa), will mean that more of the essential, additional folic acid required by women of childbearing age, will reach many more women at the critical time, **before they become pregnant**. Mandatory fortification is supported by the WHO, and provides the most efficient protection against neural tube defects, in addition to improving folate status at population level. Where mandatory fortification has been introduced, an average reduction of 46% in the number of pregnancies affected by NTD has been achieved. Despite this fact, some countries are still either not fortifying with folic acid, or only fortify selected produce on a voluntary basis. Whilst this action helps to increase folate intake in some women, it doesn't meet the levels required to help reduce the risk of NTD. Selective, voluntary fortification can also potentially exclude groups of women at greatest risk of nutritional deficiency.

IF is a member of the Executive Management Team of the Food Fortification Initiative (FFI), and strongly advocates and campaigns internationally for mandatory fortification with folic acid, in order to maximise the global risk reduction of Neural Tube Defects.

For more information, see our Policy Statement on fortification. If you would like more information about fortification policy in your country contact martine.austin@ifglobal.org, or for individual country profiles go to the Food Fortification Network.

IF ivzw
International Federation for Spina Bifida and Hydrocephalus
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Cellebroersstraat 16 - B-1000 Brussels
T: +32 (0) 2 502 04 13 - F: + 32 (0)2 502 11 29
www.ifglobal.org