

Folate is one of the B Group vitamins found in foods. Folic acid is the synthetic form of folate used for food fortification, whereas folate is found naturally in fruit, leafy vegetables, dried beans, peas, nuts, eggs and orange juice. Up to 50 – 80% of naturally occurring folate is lost after cooking, while folic acid is much more stable.

Fortification is the addition of one or more essential nutrients in a food. New Zealand has fortified salt with iodine since the 1920's to prevent goitre and cretinism, and milk with Vitamin D to prevent rickets in the 1930's. The New Zealand Government has been debating over the issue of fortifying bread with folic acid as this may lead to implications that will affect our daily lives.

Folate is essential for the synthesis of nucleic acids. The causes of folate deficiency are not eating enough food that contains folic acid. Humans need to take folate, as we are not capable of synthesising folate in the body. When eaten in food as part of the diet, both folic acid and folate are changed to tetrahydrofolate, the active form of folic acid. ①

Folate is needed to aid growth and development in foetuses. It is important to people who are pregnant to prevent neural tube defect. The neural tube is part of an embryo that develops into the spine and brain. Depending on where the defect is located along the backbone, the defect is most commonly Spina Bifida, which results in nerve damage that causes lower body paralysis. Such defects may also result in the brain of the infant not being formed. These babies will die shortly after birth. ①

Though folic acid is good for the body there has also been research done saying benefits of folic acid depends on the individuals and their health conditions. People with pre-cancer or cancer are at risk. ②

Many other countries in the world have already passed a folate standard helped with research. Sixty three other countries in the world have already started fortification with folic acid, fifty-seven of them having mandatory folate fortification. Such countries are the United States of America {1998, all cereal/grain flours}, Canada (1998, white flour and pasta), Chile (2000, flour), and Australia (2009, bread making flour). As these dates show, America, Canada, and Chile are way ahead of Australia and New Zealand.

There have been researches done during long periods of folate fortification. In the USA, the folate fortification resulted in a 25% drop in the rate of Neural Tube Defects. Also, Lydia Buchtman (Food Standards Australia) commented, "Mandatory fortification of folic acid has taken place in the USA for over 12 years and during this period neural tube defects have been reduced and there is no other evidence of ill health." ②

A boy who has suffered from Spina Bifida would like to see New Zealand mandatory fortify bread with folate. For 20 years his father Lyall Thurston has been running a campaign to make this possible. Even though his hope for fortified bread has been crushed many times over he has continued to support this cause enthusiastically by getting involved in disability rights and issues in New Zealand and overseas. He also has many experiences dealing with Spina Bifida as a member of the Coalition of parents of children with Spina Bifida and says, "we'll never know but as a parent of a child with a disability you ask yourself, was this ③

preventable?" Though Simon Thurston has been in a wheel chair most of his life; he hasn't given up but has lived a normal life. He has gained multiple degrees, lives independently and is a member of the Rotorua District Council. Although bakers disagree with getting your daily intake of folate from bread, but can get it from other sources like fruits and vegetables, Simon still supports it as 57 other countries have already done it and World Health organisations supports it. 3

There are differences of opinion concerning the fortification of folic acid in bread in New Zealand. While many countries have introduced mandatory fortification of folate in bread, Laurie Powell (President of the Association of Bakers) finds it inadvisable "to overlook international concerns being raised about the long term effects of higher concentration of folic acid...Though fortifying bread with folate is beneficial to prevent Neural Tube Defects in pregnant women but what about the other effects on everyone else? The government's decisions should have a good understanding, researched and also know that the other children who may not need it or it may be unbeneficial to them. People need to have choices, as supporters who want mandatory folate law may not fully understand the effects of it on children who do not have this rare disease and actually cause dysfunctional brain development. As bakers are now seen as the centre of attention for the cases of Spina Bifida which is not true as...dosing every slice of bread is not a magical cure." 4

The main groups for the mandatory fortification include the NZ Paediatric Society, the Labour party and families affected by NTDs. Rosemary Marks states that such a deferral will result in "perhaps up to 20 preventable NTD pregnancies per year in NZ and up to 15 preventable terminations." (Paediatric Society, 2009). Scientists like Murray Skeaff (Otago University) advocate fortification, arguing that scientific research shows that folate fortification is safe for the whole population. 5

I support mandatory bread fortification with folate as this will reduce kids being born with Spina Bifida and other NTDs. Also because everyone needs folate in their daily diet as low folate can result to other diseases such as anaemia and heart diseases, which are all preventable. The cost associated for those with Spina Bifida can also be deferred to a cure such as cancer. 6