

Student 4: High Achieved

NZQA Intended for teacher use only

The fortification of food means the addition of vitamins and minerals to it at some stage during the processing. This can take the form of these nutrients being added because during the processing of the food a substantial amount of the original nutrient has been stripped from the food, as in Folate from flour; or the addition of new nutrients that were never in the food in the first place or in negligible amounts, as in iodine in salt. The dilemma is whether breakfast cereals and bread should be fortified or not. The reason why foods are fortified is to increase the population's intake of nutrients but is this causing the population to "mass medicate" unnecessarily?

1

Examples of common cereals popular with children are coco pops, milo cereal, nutrigrain and weetbix. These cereals have been fortified with a variety of nutrients such as B vitamins, folate, protein and calcium which are important nutrients for growing children. These cereals contain a high amount of sugar and this is making these breakfast cereals unhealthy. For example nutrigrain contains 32.0 per 100g when a recommended cereal should have less than 15g per 100g (Healthy Food Guide, Sept, 2009), which proves that most cereals are far too sugary and are not meeting the requirements for a healthy breakfast cereal. The packaging and advertising of these products such as nutrigrain puts into people's heads that they are going to "become an iron man." This means that unhealthy cereals such as milo cereal and coco pops are being portrayed as being healthy which makes parents think these are a good option to buy for their kids. Is it ethical to promote a breakfast cereal as being healthy and full of nutrients and when it is so high in sugar particularly as it could be contributing to tooth decay and obesity for children in the future if they continue to eat these cereals? Obesity is continuing to contribute to increase, (1997 17% adult males and 20.6% adult females were obese in 2008/9. These figures increased from 27.7% for females. ("A focus on nutrition: key findings from the 2008/9 NZ adult nutrition survey")

2

Sanitarium has taken the "common good approach" to ethics and believes by fortifying nutrients into their cereals, they are able to help make people healthier. This may be true if this is the only way some people are going to get most of their nutrients. They may lack fruit and vegetables but at least they are getting some nutrients from their cereal.

3

In New Zealand the proposed fortification of folic acid being added to bread has a clear divided line between the positives and negatives of adding this to bread. (Folate is an essential B Vitamin and is found naturally in leafy vegetables, citrus fruits, wholemeal bread, yeast, liver and legumes. Folic acid is the synthetic form of folate. It is more bioavailable (more readily absorbed and used by the body) and stable, than naturally occurring food folate. It is important for cell growth and reproduction. Folate deficiency can result in a type of anaemia called "megaloblastic anaemia" which is a blood disorder which causes enlarged and immature and dysfunctional red blood cells. It is essential for everyone to get adequate supplies of folate not just pregnant women. It helps to ensure healthy development of babies in early pregnancy. In 1999 it was found that a daily dose of 400µg of folic acid alone resulted in a reduction in NTD (neural tube defects) risk when taken at least one month before conception and for 12 weeks after conceiving. NTD are when the brain, spinal cord or the covering of these organs has not developed properly. Spina bifida is the most common NTD. Children with spina bifida can have varying degrees of paralysis of their lower limbs.)

4

Some doctors believe that this will be a positive thing to add folic acid to bread as it will cut down on the incidence of spina bifida by about 80% and total birth defects by 40%.

5

Paediatricians are very much for the addition of folic acid in bread. Dr Morreau, chairman of child health at the Royal Australasian College of Physicians, said though folate occurred naturally in other foods, the average New Zealander's diet is deficient in the vitamin. Bread is cheaper than fruit and people are more likely to eat it. He believes adding folate to bread is "a good decision, endorsed by the World Health organisation, the result of 20 years research and is already done in 57 countries."

The people who are most affected by this dilemma are from the low socio-economic sector of society. Because they don't have much money, they are not able to afford more expensive healthy food like fresh fruit and vegetables which contain important levels of folate but will benefit from eating bread fortified with folic acid.

6

Some parents have also come out and said that they want folic acid added to bread, particularly parents who have had babies with spina bifida. It causes a lot of stress and financial pressures on families and society, to have a baby with this condition. "Surgery alone can cost nearly 1 million dollars per child". (The young face of the folate debate- The Dominion Post. 9/11/ 2010) A family said that if folic acid is added to bread it will greatly reduce neural tube defects and they said "caring for her was a challenge and he wanted to see folic acid fortification made mandatory." Food Standards Australia and New Zealand estimate the addition of folic acid to bread will reduce NTD related pregnancies by 4 -14 per year. ("The addition of folic acid and iodised salt to bread", NZFSA, 18 September, 2009) In 2004, 16 babies were born with spina bifida and 29 pregnancies were terminated after scans showed the condition. ("Folic acid holdup frustrates doctors" by Ruth Hill, 21 July, 2009, The Dominion Post) Another article quoted that as many as 70-75 neural tube defect-affected pregnancies occur in New Zealand each year. ("Folate Fortification of Bread Back on the Table", by Michael Daley, 23 May, 2012, Fairfax NZ News)

7

Some research suggests that folic acid leads to prostate cancer in men and inflammatory bowel disease in children. There is also a concern that it might mask low levels of vitamin B12 in elderly people which could lead to neurological damage. (Editorial – "Spare us our daily folate" – 16/7/2009). Otago University professor Murray Skeaff has said that research has been done but not yet published that shows there has been no significant increase or decrease in cancer rates between those taking folic acid and those who were not. ("Folic acid findings muddy waters, 14/7/2009 by Martin Key)

8

The president of the Bakers Association, Laurie Powell is against the immediate addition of folic acid to all bread as women would still have to take supplements to reach the recommended 800µg/day to prevent Neural Tube Defects in their unborn children, but he was afraid that because the women knew the bread contained folic acid they may not think that they would need to take the supplements anymore ("Folic acid may go into half of NZ bread" – Tracy Watkins The Dominion Post, 2009). (It is expected that the compulsory addition of folic acid to bread will still only supply 140µg a day, as most women only have 1.5 slices of bread per day (Editorial: Spare us our daily folate – The Dominion Post 2009)).

9

The main reason people object to the addition of folic acid to bread is the fact that it is taking away an individual's choice. These people have taken the "rights approach" to ethics where "Each person has a fundamental right to be respected and treated as a free, equal and rational person who is capable of making his or her own decisions." ("Health Education in the NZ Curriculum", compiled by Jenny Robertson and Rachel Dixon, January, 2012).

10