

Folate levels of Aboriginal people in West Australia before mandatory fortification of flour for bread-making with folic acid

What was the study about?

- Good folate levels before and during the early stages of pregnancy means a woman is less likely to have a baby with a neural tube defect (such as spina bifida, which is a hole in the spine). The rate of Aboriginal babies born with a neural tube defect is much higher than non-Aboriginal babies.
- Therefore, women should eat foods high in folate and/or take vitamin supplements before they get pregnant and in the early stages of their pregnancy.



Above: Baby with spina bifida

- In September 2009 Australia introduced regulations so that folic acid is added to wheat flour that is used to make bread. This means that all bread you buy from a shop contains folic acid and is called mandatory fortification.
- The aim of this is to reduce the number of babies being born with neural tube defects.
- We want to see if the mandatory fortification of flour for bread-making with folic acid will increase the blood folate levels of Aboriginal and non-Aboriginal people in WA. First we needed to see what the levels were before this mandatory fortification occurred (this is what this study is about). Later we will see what the levels are after mandatory fortification.
- To do this, we obtained blood from Aboriginal and non-Aboriginal people before September 2009 to determine their red blood cell folate levels before mandatory fortification.

How was this study done?

Aboriginal people who presented at a health service were asked to take part in the study

- Broome Regional Aboriginal Medical Service
- Derbarl Yerrigan Health Service (Perth)
- WA Country Health Service - Goldfields

Those who agree to take part were given information about the study, and if they agreed to participate, they gave informed consent

Participants were asked to:

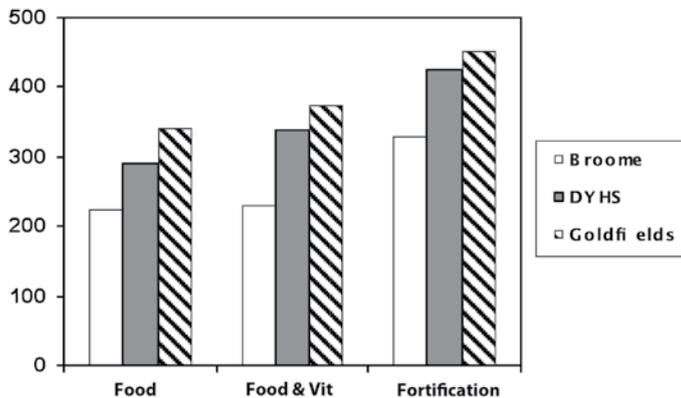
- Completed a 5 minute questionnaire on diet and vitamin supplements
- Gave information about themselves
- Gave a two 5 ml samples of blood to measure folate

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What were the results?

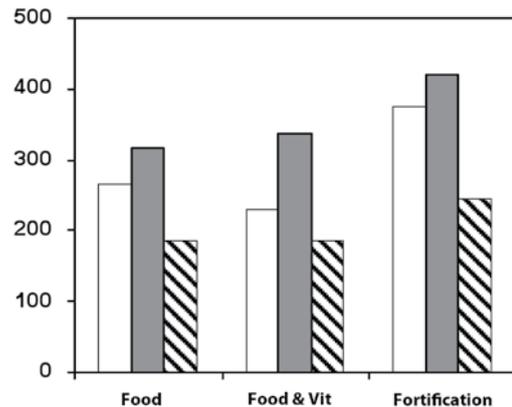
- That some Aboriginal women (10%) and Aboriginal men (26%) have low levels folate in their red blood cells
- 57% of women and 53% of men ate shop bought bread every day.
- 11% of women and 16% of men took vitamin supplements.



Estimated folate intake for Aboriginal women

What does this mean?

- Adults need 400 mcg a day
- Women during pregnancy need 600 mcg a day
- With the new government regulation of businesses having to add folic acid to wheat flour that is used to make bread, we think that the number of Aboriginal babies born with neural tube defect will decrease.



Estimated folate intake for Aboriginal men

Many thanks to the patients who took part in this study. Thanks to Mary Lane, and to all the clinical staff who helped with the study. Without your help this research would not have been possible.

This study was a joint project between the Department of Health WA, Derbarl Yerrigan Health Service, Kimberley Aboriginal Medical Services Council, The University of WA and the Telethon Institute for Child Health Research. If you have any questions or comments please direct them to Carol Bower, Phone 08 9489 7777 or email carolb@ichr.uwa.edu.au



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