

Fortified bread is not enough: Study finds pregnant women need iodine supplements in addition to fortification

By Nathan Gray+, 26-Jun-2013

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The levels of iodine provided by fortified breads is not enough to provide for the requirements of pregnant women and their developing babies, according to new research which recommends the additional use of supplements.

The research, led by a team of Australian scientists, suggests that fortification of bread products with iodised salt used in bread is not enough to provide healthy levels of iodine for pregnant women and their unborn children - prompting calls for pregnant women to also take a dietary supplement which contains the essential element.

Writing in *Nutrition Journal*, Dr Vicki Clifton and her colleagues from the University of Adelaide noted that while mandatory fortification of bread with iodised salt in Australia began in 2009, many pregnant women are still deficient in iodine.

"Iodine is an essential element which is important for human brain development and thyroid function," explained Clifton - who noted that iodine deficiency is recognised by the World Health Organization (WHO) as the most common preventable cause of brain damage in the world.

"We found that South Australian women are mildly iodine deficient," she said. "Despite the inclusion of iodized salt in bread, women who were not taking an iodine supplement during pregnancy were still suffering from iodine deficiency."

"The message is simple: by taking iodine supplements, pregnant women will be able to prevent brain and organ development problems in their babies, and also maintain a healthy level of iodine for themselves," said Professor Basil Hetzel - senior author of the study.

Study details

Clifton and her team analysed data from almost 200 South Australian women who were tested for iodine status throughout their pregnancy and six months after giving birth.

"Our study was aimed at determining whether or not that [fortification of bread] was having a positive impact on iodine levels for pregnant women," explained Clifton.

The team reported that the average iodine levels for women not taking a supplement was in the 'mildly deficient' range (less than 90 µg/L), while women who did take a supplement were within WHO recommendations (150–249 µg/L) for sufficiency and showed an increasing trend through gestation.

Fortification of bread with iodized salt was found to increase the average iodine levels from 68 µg/L to 84 µg/L - however the team noted that this was still in the deficient range.

Hetzel commented that only those women taking a supplement in addition to eating bread with iodized salt received healthy levels of iodine that were 'well within WHO guidelines.'

Source: *Nutrition Journal*

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"The impact of iodine supplementation and bread fortification on urinary iodine concentrations in a mildly iodine deficient population of pregnant women in South Australia"

Authors: Vicki L Clifton et al