

Universal iodine supplementation during pregnancy could offer huge cost savings

August 10 2015

Giving all pregnant women iodine supplements, even in mildly iodine deficient countries like the UK, could result in huge cost savings for health care systems and society, according to new modelling research published in *The Lancet Diabetes & Endocrinology* journal.

The new estimates suggest that introducing [iodine](#) supplementation in [pregnancy](#) in the UK could save the National Health Service (NHS) around £200 per expectant mother and provide monetary benefits to society of around £4500 per child from increased lifetime earnings and lower public sector costs. With around 1.9 billion people and 241 million school-age children (aged 6-12 years) living in the 32 countries that have [iodine deficiency](#), the authors conclude that the benefits of universal iodine supplementation during pregnancy could be substantial.

"Iodine deficiency in pregnancy remains the leading cause of preventable retardation worldwide. Even mild iodine deficiency during pregnancy is associated with children with lower IQs," explains Kate Jolly, a co-author and Professor of Public Health at the University of Birmingham in the UK. "It's time for all women living in iodine deficient countries without universal supplementation of iodine, who are pregnant, breastfeeding, or planning a pregnancy to be advised to take a daily supplement containing iodine."

Iodine is not made naturally in the body and must be consumed by eating foods like dairy and seafood or [supplements](#). Severe iodine deficiency during pregnancy can cause substantial mental impairment and delayed

development in children, resulting in a lower IQ and consequently lower educational attainment and earning potential. International health organisations like WHO and the European Food Safety Authority recommend that pregnant and breastfeeding women take daily [iodine supplements](#). However, no recommendation for iodine supplementation has been issued to pregnant women in the UK, even though mild iodine deficiency has been reported to be widespread.

As a randomised trial might not be approved because of ethical concerns in the untreated group, a team of researchers from the University of Birmingham did a modelling study to examine the cost-effectiveness of iodine supplementation versus no supplementation for pregnant women in the UK. Using data from a systematic review of published studies and expert opinion they modelled both the direct health service savings and monetary benefits to society (lifetime earnings) in terms of gains from an additional IQ point in the children.

By converting the effects of iodine supplementation in pregnancy on developing brains into IQ points, the authors estimate that the benefits equate to 1.22 IQ points per child, with monetary benefits of around £199 per expectant mother for the NHS, and £4476 per pregnancy for society.

According to the authors, "As food fortification alone may not be enough to achieve iodine sufficiency for [pregnant women](#), our results strengthen the case for universal iodine supplementation of all women before and during pregnancy and whilst breastfeeding in mild-to-moderate iodine deficient countries."

More information: *The Lancet Diabetes & Endocrinology*:
[www.thelancet.com/journals/lan ... \(15\)00212-0/abstract](http://www.thelancet.com/journals/lan... (15)00212-0/abstract)

Provided by Lancet

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