Daily iron during pregnancy linked to improved birth weight

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Taking iron daily during pregnancy is associated with a significant increase in birth weight and a reduction in risk of low birth weight, finds a study published in *BMJ* today.

The effects were seen for iron doses up to 66 mg per day. The World Health Organization currently recommends a dose of 60 mg per day for pregnant women.

Iron deficiency is the most widespread nutritional deficiency in the world. It is the most common cause of anaemia during pregnancy, especially in low and middle income countries, affecting an estimated 32 million pregnant women globally in 2011.

Studies suggest an association between prenatal anaemia and risk of premature (preterm) birth, but evidence on other birth outcomes is inconsistent. The effect of prenatal iron use on adverse birth outcomes is also unclear.

So researchers in the UK and US analysed the results of over 90 studies (a mix of randomised trials and cohort studies) of prenatal iron use and prenatal anaemia, involving nearly two million women.

Iron use increased a mother's average haemoglobin levels compared with controls and significantly reduced the risk of anaemia.

There was no reduction in risk of preterm birth as a result of iron use.

However analysis of cohort studies showed a significantly higher risk of low birth weight and preterm birth with anaemia in the first or second trimester of pregnancy.

Further analysis indicated that for every 10 mg increase in iron dose per day (up to 66 mg per day), risk of maternal anaemia was 12% lower, birth weight increased by 15 g and risk of low birth weight decreased by 3%.

No differences were seen in duration of iron use after adjusting for dose.

"Our findings suggest that use of iron in women during pregnancy may be used as a preventive strategy to improve maternal haematological status and birth weight," say the authors. They call for "rigorous evaluation of the effectiveness of existing antenatal care programmes in high burden countries to identify gaps in policy and programme implementation."

And they say future research should explore "feasible strategies of iron delivery" as well as "evaluation of the effectiveness of other strategies, such as fortification and dietary diversification."

More information: www.bmj.com/cgi/doi/10.1136/bmj.f3443

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