

Risks of Folic Acid and Excessive Folate Intake in Pregnancy

1. Risks of Folic Acids

Scientific studies show clearly that unsuitable folic acid intake in moms can change DNA methylation levels and gene expression in babies. One of the studies was performed in rats because it is impossible to be done in humans because of ethical reasons. The study shows that there are differences between folic acid intake during different time points or stages in pregnancy. For example, folic acid intake in early stages like the 2nd or 3rd week can increase liver folate remarkably. But when it is taken in late stages of pregnancy, it may cause incredibly lower DNA methylation levels in the brain. Surprisingly, when folic acid is taken throughout the pregnancy, the Brain DNA methylation reaches the lowest levels.

This study indicates that we need to re-consider carefully when supplying folic acid to our babies, and we need to avoid causing genomic and epigenetic changes. It suggests that supplying folic acid in the 1st week and extending it to the 2nd week of pregnancy may be enough for neuroprotection in the brain. It also suggests that folic acid supplementation in late stages of or throughout pregnancy may not be a good idea because it may cause unwanted changes in genome DNA methylation.

Most significantly, a report from Johns Hopkins Bloomberg School of Public Health investigates data from 1391 moms and their children, in the Boston Birth Cohort between 1998 and 2013 and followed for several years. It shows that 1 in 10 of the moms took excessive amount of folic acid, and 6 in 100 of the moms took excessive amount of vitamin B12. Those new moms with four times higher than adequate amount of folic acid doubled the risk of autism in their babies. In those new mums with both folic acid and B12 overdoses, the risk of autism in their babies increased 17.6 times.

..quando viene assunto nelle ultime fasi della gravidanza, l'Acido Folico può causare livelli di metilazione del DNA incredibilmente ridotte nel cervello.

.. sorprendentemente, la metilazione del DNA del cervello raggiunge i livelli più bassi, quando l'acido folico viene assunto durante l'intera gravidanza

..il supplemento di **acido folico nelle prime 2 settimane di gravidanza può essere sufficiente per la neuroprotezione**...

l'integrazione **negli stadi avanzati o durante la gravidanza potrebbe causare cambiamenti indesiderati nella metilazione del DNA**

..le nuove mamme con una quantità quattro volte maggiore di acido folico **raddoppiarono il rischio di autismi nei loro bambini!**

.. nelle mamme con **overdose di acido folico e B12, il rischio di autismi nei loro bambini è aumentato di 17,6 volte.**