

FOLIC ACID SUPPLEMENTATION IN EARLY PREGNANCY, HOMOCYSTEINE CONCENTRATION, AND RISK OF GESTATIONAL DIABETES MELLITUS



WHY

There is conflicting evidence on the effect of folic acid supplementation in pregnancy on a woman/individual's risk of gestational diabetes (GDM)



OBJECTIVE

To evaluate the impact of early pregnancy folic acid supplementation on the risk of GDM, and the potential role of maternal homocysteine levels in GDM risk



STUDY DESIGN

Prospective cohort study



POPULATION & SETTING

Location(s): Ottawa & Kingston
Date(s): 2002 - 2008
N = 7552 women/individuals
at 12 to 20 weeks gestation

Compare

Without folic acid

Multivitamins with folic acid

Folic acid alone



RESULTS

- Compared with women **without folic acid supplementation**, those with **multivitamin supplementation containing folic acid** and **folic acid supplementation alone** had no change in risk of GDM
- Women/individuals with high homocysteine levels had no difference in risk of developing GDM compared to those with normal homocysteine levels



SUMMARY

We found **no significant association** between folic acid supplementation in pregnancy and GDM. Homocysteine level also had no impact on GDM risk



NEXT STEPS

Further studies to determine whether there are **causal links** between early pregnancy folic acid supplementation and homocysteine level and GDM are warranted

