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Do Multivitamin Supplements Reduce the Risk for Diabetes-Associated Birth Defects?

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It is well established that children of diabetic mothers are at increased risk for birth defects, the most common of which are heart and central nervous system defects. The prevalence of birth defects is twofold to threefold higher in children of women with diabetes than in children of women without diabetes. Studies have shown that effective control of diabetes during the periconceptional period (refers to the period of time three months before pregnancy through the first three months of pregnancy) in women with diabetes reduces the risk for birth defects in their children. However, this level of control is not always possible. Since the risk for birth defects can be reduced by the consumption of multivitamin supplements, this study examined whether the risk for birth defects among children of women with diabetes could be reduced by the consumption of multivitamin supplements during the periconceptional period.

What are the findings of this study?

This study found that children of mothers with diabetes had a fourfold increase in risk for certain birth defects, and that this excess risk was limited to the children of mothers with diabetes who did *not* take multivitamins. Children of mothers who had diabetes and *took* multivitamins during the periconceptional period did not have this excess risk for such birth defects.

What are some of the specific birth defects that can be associated with Diabetes?

Birth defects associated with diabetes include those of the central nervous system, heart defects, eye defects, respiratory tract defects, cleft palate, anal atresia/stenosis, hypospadias, urinary tract defects, and positional defects of the foot.

What do the findings suggest?

Women with diabetes can reduce the risk for birth defects among their children by following good prenatal care practices, including controlling their diabetes and taking multivitamins before and early in pregnancy.

For more information, visit www.cdc.gov/ncbddd

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