

# Birth Weight's Tie to Diabetes Risk May Change

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In most present-day middle-aged populations, the risk of developing type 2 diabetes is inversely related to birth weight, according to a report in JAMA.

In other words, adults at highest risk for type 2 diabetes had the lowest birth weights, independent of potentially confounding factors such as body size and

socioeconomic status in adulthood, wrote Peter H. Whincup, Ph.D., of the University of London, and his associates.

However, this association may not hold true for long. It likely reflects fetal undernutrition during the mid-20th century. The current epidemic of overweight and obesity may well reverse this association, with people who had very high birth weights eventually showing a greater propensity to develop dia-

betes later in life, the researchers said.

The association between low birth weight and later development of diabetes has been known since the early 1990s, but the strength and consistency of the link and its independence from confounding factors has been questioned.

Dr. Whincup and associates performed a meta-analysis of 30 studies published between 1950 and early 2008 involving 6,090 cases of diabetes among

152,084 subjects (JAMA 2008;300:2886-97). Twenty-three of the 30 showed an inverse association between birth weight and later diabetes risk, and the association was statistically significant in 9 of them. Two involved Native American populations with exceptionally high prevalences of obesity, gestational diabetes, and type 2 diabetes. In these, birth weight showed a positive, not an inverse, correlation with later diabetes risk. ■



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## Study on Genes Vs. Environment Recruiting Now

Researchers in North Carolina and New York are beginning to recruit the first volunteers as part of a huge federal study that will examine the relative effects of genes and environment on development.

The researchers plan to track 100,000 women through pregnancy and then follow their children through age 21 years as part of the National Children's Study. In addition to tracking their development, the researchers will collect biological and environmental samples from study participants. Researchers aim to use this information to help identify the environmental and genetic factors that contribute to conditions such as autism, cerebral palsy, learning disabilities, birth defects, diabetes, asthma, and obesity.

Women are being recruited and enrolled from areas of the country that are representative of the diversity of U.S. children in terms of race, ethnicity, socioeconomic status, and community size. The initial recruitment began in mid-January in the borough of Queens, N.Y., and in Duplin County, N.C. In April, five other centers will begin recruiting. Ultimately, the study is expected to recruit participants from 105 locations across the country.

The National Children's Study was authorized by Congress in the Children's Health Act of 2000 and has been developed by the National Institutes of Health, the Centers for Disease Control and Prevention, and the Environmental Protection Agency.

Researchers estimate that the first children to be part of the study will be born this summer. As a result, the study could yield data in the next few years on conditions such as prematurity and birth defects, according to the NIH.

"Findings from the study will ultimately benefit all Americans by providing researchers, health care providers, and public health officials with information from which to develop prevention strategies, health and safety guidelines, and possibly new treatments for disease," Dr. Peter Scheidt, director of the National Children's Study, said during a press briefing last month to announce the recruitment phase of the study.

—Mary Ellen Schneider