

HANDING DOWN DIABETES

A MULTI-GENERATIONAL CYCLE

Deborah Cramer

This month's Research Watch examines the growing body of research linking a mother's weight before, during, and after pregnancy to the rising rates of type 2 diabetes.

Studies show that maternal obesity reinforces childhood obesity, and both contribute to the epidemic of type 2 diabetes in North America.

TYPES OF DIABETES

Diabetes is a complicated disease. There are three main types of diabetes. Type 1 occurs when the pancreas fails to produce insulin. In type 2 diabetes the pancreas produces insulin, but either the body becomes resistant to it or the amount produced is inadequate to control blood glucose. Gestational diabetes mellitus (GDM) is similar to type 2 diabetes, but occurs only in pregnant women.

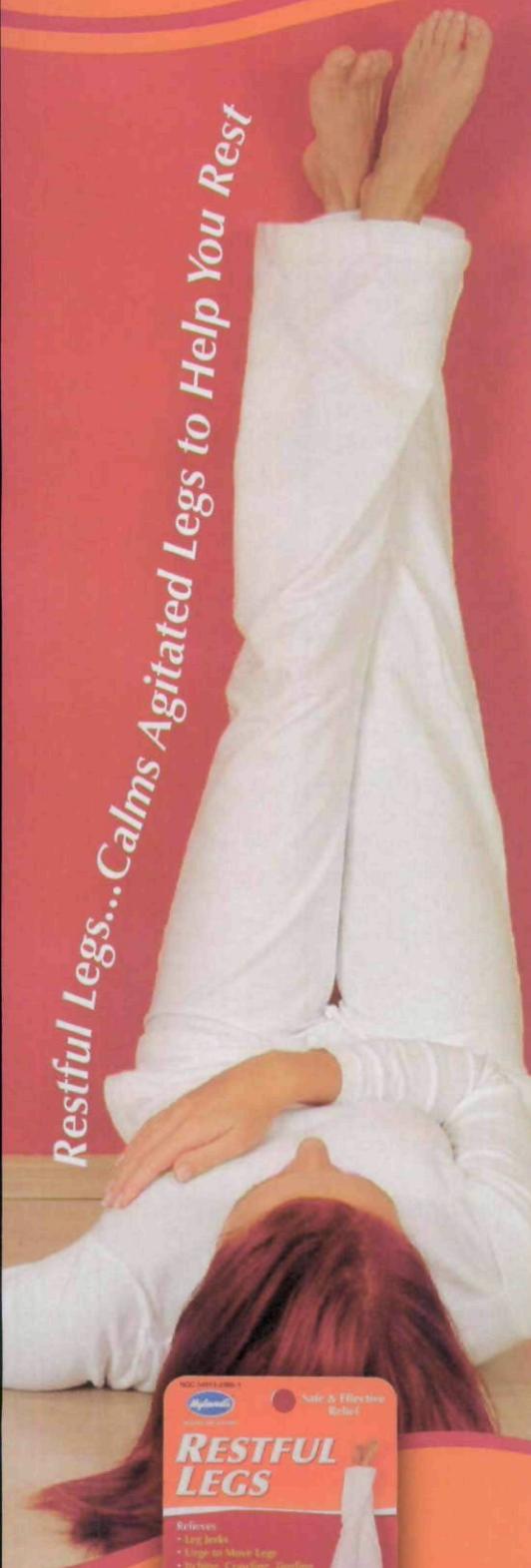
Type 1 diabetes is an autoimmune disorder. Though currently unpreventable (and possibly triggered by a virus), it can be controlled with proper medical care. Type 2 diabetes accounts for 90 percent of all diabetes and is approaching epidemic levels. Yet it is largely preventable.

In less than a decade, the Canadian diabetic population has increased by about 60 percent to 1.3 million people. In the US doctors diagnosed 3 million new American diabetics in just the last two years, swelling the total to 24 million people. Additionally, 57 million people have sufficiently elevated blood glucose levels to be considered prediabetic. >



HOMEOPATHIC
SINCE 1903

Restful Legs... Calms Agitated Legs to Help You Rest



Safe. Effective. Natural.

restfullegs.com 800.363.8933

RESEARCH WATCH

“IN LESS THAN A DECADE, THE CANADIAN DIABETIC POPULATION HAS INCREASED BY ABOUT 60 PERCENT TO 1.3 MILLION PEOPLE.”

Even more troubling is the rising number of children with type 2 diabetes or prediabetic conditions. The overwhelming majority of these cases are caused by poor diet and lack of exercise. Clearly, the responsibility to avoid childhood type 2 diabetes rests with parents and caregivers.

FEMALE OBESITY AND THE TYPE 2 DIABETES EPIDEMIC

Obesity is involved in most cases of type 2 diabetes for both men and women. However, female obesity before, during, and after pregnancy also increases the risk of diabetes for children.

Overweight women tend to have larger (heavier) babies, who often become overweight children. Historically, larger babies were considered healthy babies. Now, however, the Western lifestyle that provides abundant food and inadequate exercise has resulted in too many overweight babies. Researchers are warning that children of overweight mothers are likely to become overweight children and in turn, obese adults.

Obesity not only triggers diabetes in the individual, it also causes critical metabolic changes in utero that increase a child's lifetime risk of developing diabetes. Even babies born at or below normal weights are at risk for insulin resistance if they experience rapid weight gains in early infancy.

GESTATIONAL DIABETES, MOTHERS, AND CHILDREN

Maternal obesity is only part of the story. Obese women increase their

risk of developing gestational diabetes mellitus. Though usually a temporary condition for mother, GDM can have lasting consequences for baby and for subsequent generations.

Incidences of GDM have increased in conjunction with type 2 diabetes. Children born to mothers with GDM are exposed to high blood glucose levels during critical periods of fetal development. A 2006 study reported that daughters born to diabetic mothers were twice as likely to develop GDM during pregnancy as daughters born to diabetic fathers.

A host of studies worldwide has demonstrated that children whose mothers had GDM during pregnancy were at higher risk of having impaired glucose tolerance and of being overweight. Australian researchers postulate that even mild GDM can program the fetus to develop type 2 diabetes, “predispos[ing] daughters to develop GDM during their own pregnancies, which will then establish conditions for transmission of the same defect to a third generation.”

Diabetes isn't much of a legacy to leave our children. By reducing their likelihood of developing GDM, losing weight through good nutrition and daily exercise, mothers can reduce the risk for their children and for later generations. Increased lifespan and good health seem like much better gifts for both mother and child. **a**

Deborah Cramer is a long-time researcher and science writer.

Copyright of *Alive: Canadian Journal of Health & Nutrition* is the property of Alive Publishing and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.