Biannual Dietary Counseling Improves Pediatric Outcomes

BY SHERRY BOSCHERT
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Giving families of infants and children individuated dietary counseling twice a year reduced the children’s intake of fat and improved their insulin sensitivity by age 9 in a long-term randomized study.

The ongoing Special Turku Coronary Risk Factor Intervention Project for Children, a Finnish study, randomized healthy 7-month-old infants in 1990 to an intervention (n = 540 infants) or a control group (522 infants). The control group received the basic health education provided at well-baby clinics.

A physician and a dietitian provided individualized dietary counseling to the intervention group. Twice a year, families recorded what the child consumed for 4 consecutive days (including a weekend) within 3 weeks of the follow-up visit. The dietitian reviewed the list and suggested any changes needed to pursue a healthy diet low in saturated fat and cholesterol.

Children recommended to eat white bread aged 3 and older get 55%-60% of energy from carbohydrates, 10%-15% from protein, and 30% from fat (with 10% or less

as saturated fat), reported Dr. Tuuli Kaitosaa of the University of Turku (Finland) and associates.

When the children reached age 7, the investigators took detailed laboratory measurements of a subset of 200 children seen consecutively for follow-up visits; of these, 167 also had blood samples taken at their 9-year follow-up visit. The 9-year-olds (78 in the intervention group and 89 in the control group) make up the current study population.

The children in the intervention group consumed significantly less fat and less saturated fat than those in the control group. Scores on the homeostasis model assessment of insulin resistance (HOMA-IR) index at age 9 were lower in the intervention children, indicating better insulin sensitivity compared with controls (Diabetes Care 2006;29:781-5).

Multivariate analyses indicated that our finding of decreased HOMA-IR in intervention children is to a large extent due to their lower saturated fat intake,” Dr. Kaitosaa and associates said. Other factors found to have problems in 11 women eating such exercise habits, also may partly explain the intervention’s effect in lowering HOMA-IR scores, he added.

Consumption of Insoluble Fiber Boosts Insulin Sensitivity in Obese Patients

BY SHERRY BOSCHERT
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Need another reason to help convince overweight and obese patients to have a healthy diet? A small, randomized, controlled study concluded that eating insoluble dietary fiber found in cereal, fruits, and vegetables improved insulin sensitivity, Dr. Martin O. Weikert reported.

Eating a diet high in insoluble fiber might be a safe, effective, and low-cost way to reduce insulin resistance in patients at risk of developing type 2 diabetes, said Dr. Weikert and his associates (Diabetes Care 2006;29:775-80).

Eating cereal fiber has been associated with a reduced risk of developing cardiovascular disease and type 2 diabetes in epidemiologic studies, but the underlying mechanism was not clear, said Dr. Weikert of the German Institute of Human Nutrition Potsdam-Rehbruecke, Nuthetal, Germany.

Seventeen overweight or obese women with normal glucose metabolism and no medication that could affect the HOMA-IR index at age 9 were lower in the intervention children, indicating better insulin sensitivity compared with controls.

A sub-analysis that excluded the four women who probably did not ingest the test meals found a highly significant improvement in insulin sensitivity among obese patients after 3 days of fiber-fortified bread, equivalent to an 13% improvement in insulin sensitivity.