

# Fatty Liver Is Underdiagnosed in Obese Children

BY MELINDA TANZOLA  
Contributing Writer

ATLANTA — Obese children are at risk for developing nonalcoholic fatty liver disease and nonalcoholic steatohepatitis, which can lead to fibrosis and cirrhosis, speakers said at a meeting sponsored by the American Association for the Study of Liver Diseases.

A significant number of children are probably affected by nonalcoholic fatty liver disease (NAFLD), according to Dr. Jeffrey B. Schwimmer, a pediatrician at the University of California, San Diego. Various studies have indicated that between 10% and 77% of obese children in China, Italy, Japan, and the United States have NAFLD. An estimated 5%-10% of those children have advanced fibrosis at the time of diagnosis. Demographic factors influence prevalence: boys and Hispanic children are more likely to have NAFLD than are girls and black children.

The first detectable sign of NAFLD is often an elevated serum alanine aminotransferase level. However, diagnosis can be challenging, because children often are asymptomatic, but may have NAFLD and even nonalcoholic steatohepatitis (NASH), despite having normal alanine aminotransferase levels. No single blood test can indicate NAFLD; biopsy is the definitive diagnostic tool for both NAFLD and NASH.

Dr. Philip Rosenthal, professor of pediatrics at the University of California, San

Francisco, emphasized the importance of a histologic examination for determining the extent of disease and for distinguishing between simple steatosis and steatohepatitis. Steatohepatitis and fibrosis are commonly observed in children with NASH who are undergoing biopsy, and cirrhosis with rapid progression has been observed.

Dr. Rosenthal also recommended that clinicians look for signs of portal hypertension, including gastrointestinal bleeding and ascites.

Treatments for pediatric NASH have not been evaluated in controlled trials with long follow-up periods. Current treatments primarily aim to reduce steatosis and associated disorders. Prevention and treatment of metabolic syndrome through diet and exercise, insulin-sensitizing agents, and lipid-lowering drugs are central treatment strategies. Metformin may be beneficial in these patients, as it appears to improve NASH in nondiabetic pediatric patients.

Treatment of Nonalcoholic Fatty Liver Disease (TONIC), a randomized, phase III trial sponsored by the National Institute of Diabetes and Digestive and Kidney Diseases, will be evaluating metformin and vitamin E in children with NAFLD/NASH.

Reducing body weight also remains a primary goal in treating pediatric NAFLD, according to Dr. Paul B. Pencharz, professor of pediatrics at the University of Toronto in Ontario.

"With rare exception," he noted,

"NAFLD is associated with excess body fat. In combination with diet, exercise increases loss of weight and excess body fat. As body weight decreases, glucose tolerance improves and, hence, NAFLD would be expected to be improved as well."

Dr. Pencharz emphasized family involvement as the primary factor for changing behaviors, because "If the family won't buy in, you cannot change the lifestyle."

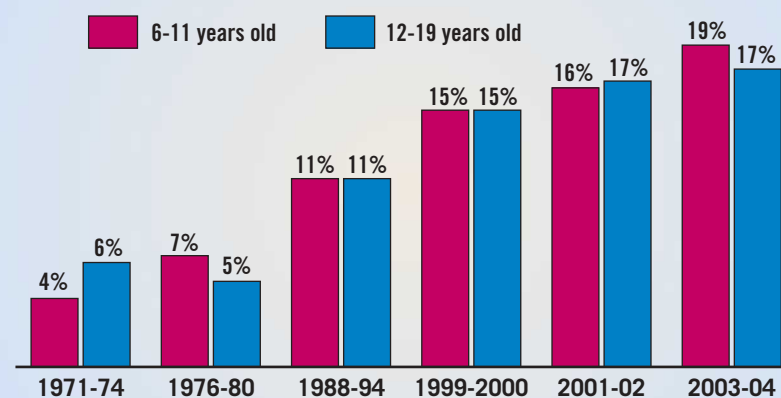
In addition to diet and exercise, indirect approaches to weight control may be

useful. Two drugs are available for children, although they have only been evaluated in adolescents. They are orlistat, the pancreatic lipase inhibitor; and sibutramine, which alters appetite control by inhibiting uptake of 5-hydroxytryptamine (serotonin) and norepinephrine.

Gastric reduction also is beginning to be evaluated in adolescents. This surgical approach may be beneficial in certain patients; compliance is crucial, particularly in the few months after surgery. ■

## DATA WATCH

### Prevalence of Overweight Among Children for Selected Periods



Note: Based on National Health and Nutrition Examination Surveys.  
Source: Centers for Disease Control and Prevention

YEN-LING LIU/ELSEVIER GLOBAL MEDICAL NEWS

## Overweight, Obese Teens Are Not Being Screened for Comorbidities

BY DIANA MAHONEY  
New England Bureau

BOSTON — Overweight and obese adolescents are not being sufficiently screened for weight-related comorbid conditions, and the failure to do so can have enduring health implications, Dr. Margaret Stager said at the annual meeting of the Society for Adolescent Medicine.

Despite the implementation of a screening protocol in the pediatric department of an urban medical center, approximately one-third of patients seen during a 2.5-year period who were identified as being overweight (body mass index between the 85th and 94th percentile) or obese (95th percentile or higher) did not have the recommended laboratory screening tests ordered, reported Dr. Stager of the MetroHealth Medical Center in Cleveland. The recommended laboratory studies for this population according to the protocol include a full lipid profile, liver function tests, and insulin and glucose levels.

A chart review of 362 overweight and obese adolescent patients seen in the adolescent medicine division of the medical center between October 2002 and May 2005 showed that 113 patients did not have the recommended screening tests ordered, Dr. Stager reported in a poster presentation. Eighty-one of the patients had tests ordered but not completed, and 168 patients completed the lab testing.

The study population—69% of whom were female—was 46% African American, 36% white, and 18% Hispanic. The mean body mass index was 33 kg/m<sup>2</sup>. Twenty-four percent of the patients met criteria for overweight status, and 76% met the criteria for obesity.

There were no significant differences in either racial background or age with respect to overweight or obese status, but males were more likely to be obese than overweight, Dr. Stager pointed out.

Among the patients who underwent the recommended fasting laboratory tests, abnormal test results were found in both

the overweight and obese groups, but no significant differences between the two groups were seen in mean values for total cholesterol, low-density lipoprotein, alanine aminotransferase, aspartate aminotransferase, glucose, and insulin levels.

"There were significantly more abnormal test results in the obese vs. the overweight group for high-density lipoproteins and triglycerides," Dr. Stager said. The mean HDL levels were 49 mg/dL for the overweight group and 42 mg/dL for the obese group, and the respective mean triglyceride levels were 71 mg/dL and 97 mg/dL. Additionally, in each group, "there were two patients with impaired glucose tolerance," she noted.

The findings suggest "a missed opportunity" for identifying patients at risk for comorbid conditions related to being overweight or obese such as cardiovascular disease or diabetes and providing supportive interventions to help minimize the health damage, said Dr. Stager. ■

## Breakfast-Obesity Link Is Stronger Than Thought

BY CHRISTINE KILGORE  
Contributing Writer

WASHINGTON — Patients who regularly skip breakfast have as high a risk of obesity as patients who have a family history of type 2 diabetes, a cross-sectional study of adolescents has shown.

Regularly skipping breakfast has been linked to obesity before, but Alison Okada Wollitzer, Ph.D., who reported the study at the annual scientific sessions of the American Diabetes Association, said she and her colleagues at the Sansum Diabetes Research Institute in Santa Barbara, Calif., wondered about the importance of the link and the reasons for it.

They studied 2,700 high school students in Santa Barbara and found that skipping breakfast doubles the risk of obesity—just as a family history of diabetes does.

Those with both risk factors—breakfast-skipping and a family history—had double the risk of obesity as did adolescents with only one of the risk factors, Dr. Wollitzer reported in a poster presentation at the meeting.

Adolescents at two public high

schools who did not have a known diagnosis of diabetes (1,060 males and 1,640 females) participated in a brief physical exam and lifestyle questionnaire, which asked if breakfast was eaten on school days. Only those answering yes or no were included in the analysis.

Obesity was defined as having a body mass index at or above the 95th percentile; diabetes in any first-degree relative constituted a positive family history. About 34% of the students were white and 57% were Hispanic.

Of those who skipped breakfast but had no family history of diabetes, 16% were obese, compared with almost 18% of those who ate breakfast but had a positive family history.

Only 8% of the adolescents with neither risk factor were obese. Of those who skipped breakfast and had a positive family history, 32% were obese, Dr. Wollitzer reported.

Students who ate breakfast regularly were less likely to eat junk food at lunch, more likely to eat fruits and vegetables, and more likely to exercise regularly, she reported. ■