Obese children should be screened for non-alcoholic fatty liver disease—new NASPGHAN guidelines

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A screening test for non-alcoholic fatty liver disease (NAFLD)—a serious condition that may have lifelong health consequences—is recommended for all obese children aged nine to eleven years, according to clinical practice guidelines developed by the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) and published in the *Journal of Pediatric Gastroenterology and Nutrition* (*JPGN*).

The new guidelines, endorsed by the American Academy of Pediatrics, also outline recommendations for diagnosis, treatment, and follow-up care of children and adolescents with NAFLD. The recommendations were developed by a multidisciplinary Expert Committee on NAFLD, commissioned by the NASPGHAN. Dr. Miriam B. Vos of Emory University and Children's Healthcare of Atlanta is lead author of the new report, which is available on the *JPGN* website.

Recommendations for Screening, Treatment and Follow-up of NAFLD in Children

Nonalcoholic fatty liver disease refers to a range of conditions in which fatty deposits occur in the liver. It can progress to a more severe form, called nonalcoholic steatohepatitis (NASH), with inflammation and/or scarring of the liver. "NAFLD has rapidly evolved into the most common liver disease seen in the pediatric population and is a

management challenge for the general pediatric practitioners, subspecialists, and health systems," Dr. Vos and coauthors write.

Studies suggest that NAFLD may be present in 0.7 percent of two- to four-year-olds, and up to 38 percent of obese children and adolescents. The disease is commonly associated with other obesity-related conditions: diabetes and sleep apnea. While the long-term health impact of NAFLD remains unclear, affected children may be at increased risk for end-stage liver disease, type 2 diabetes, strokes, heart attacks, and liver cancer later in life. In adults, NAFLD has recently become the most common reason for liver transplant.

The Expert Committee performed a comprehensive research review to make evidence-based recommendations for management of pediatric NAFLD. Key recommendations include:

- **Screening.** The guidelines recommend screening for NAFLD in all obese children between age nine and eleven, and in children with certain risk factors. Screening can be performed using a simple liver enzyme test (alanine aminotransferase, or ALT).
- **Diagnosis.** Diagnosis of NAFLD requires further tests to determine whether fat deposits (steatosis) are present and to assess other possible causes. Testing may include obtaining a sample of liver tissue (biopsy) to check for more advanced disease (NASH or liver scarring).
- **Treatment.** Lifestyle changes—improving diet and increasing physical activity—are the first steps in treatment for NAFLD. Weight loss may reduce fatty deposits in the liver. No current medications or supplements are of proven benefit for NAFLD. Weight loss surgery (bariatric surgery) may be considered for some adolescents with severe obesity and related health problems.
- **Long-term care.** Recommendations for ongoing care include

assessment of other obesity-related diseases and management of cardiovascular risk factors; avoidance of potential liver toxins, including binge drinking; and being alert for possible psychosocial issues in children living with NAFLD.

The Expert Committee highlights important areas for further research, emphasizing the need for high-quality pediatric studies of strategies for prevention, screening, diagnosis, and treatment. Dr. Vos and colleagues hope their recommendations will provide useful guidance for all professionals involved in assessing and managing NAFLD—providing an evidence-based approach that remains flexible and adjustable for individual patients and circumstances.

More information: Miriam B. Vos et al. NASPGHAN Clinical Practice Guideline for the Diagnosis and Treatment of Nonalcoholic Fatty Liver Disease in Children, *Journal of Pediatric Gastroenterology and Nutrition* (2016). DOI: 10.1097/MPG.0000000000001482

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