

Non-alcoholic Fatty Liver Disease (NAFLD)

In evaluating the overweight child with mildly elevated ALT and AST, providers face the question of how much diagnostic work-up to perform to assess for other etiologies of elevated transaminases versus NAFLD.

NAFLD is characterized by fatty infiltration of the liver, with or without transaminase elevations in the absence of alcohol consumption. Although common in overweight or obese individuals, it can also be seen in non-obese people, and individuals with Wilson's disease, autoimmune hepatitis, alpha-1-antitrypsin deficiency, chronic hepatitis C, hyperlipidemia, and diabetes. Therefore, these conditions must be ruled out prior to diagnosis of NAFLD.

We recommend considering the following tests in the evaluation of a child with possible NAFLD:

- Liver function panel, GGT
- Ceruloplasmin for Wilson's disease
- Alpha-1-antitrypsin phenotype
- ANA
- ASMA (anti-smooth muscle antibody)
- Anti-LKM (liver-kidney-microsomal antibody)
- Anti-HCV
- HBsAg, Anti-HBcAb
- Lipid profile, fasting
- Glucose, HbA1c, insulin level, TSH and free T4 as clinically indicated

Management

1. Encourage healthy lifestyle changes and weight loss.

- Consider referral to an obesity management clinic such as the OHSU Healthy Life Styles Clinic, **503-494-2000**
- Have your patient and family meet with a dietitian for diet counseling
- Recommend heart rate-increasing physical exercise, 30 minutes/day minimum

2. Monitor ALT and AST every 3-6 months

3. Counsel your patient and caregiver on liver health:

- Avoidance of alcohol, hepatotoxic drugs and herbs
- Staying up-to-date on hepatitis A and hepatitis B immunizations.

4. Treat hypercholesterolemia, insulin resistance, and diabetes, if present.

5. Consider referral to the Pediatric Liver Clinic at Doernbecher Children's Hospital, if you do not feel comfortable and/or if patient has the following:

- Persistently has (>2x normal), or rising transaminases
- Hypoalbuminemia
- Jaundice
- Bleeding, easy bruising
- Splenomegaly

