

Obesity and NAFLD

Definitions:

When someone is overweight or obese, too much fat can be stored in the liver. This can lead to a disease called Nonalcoholic Fatty Liver Disease, or NAFLD. In some children and adults, the extra fat in the liver becomes a more severe problem, causing inflammation and scar tissue. When this happens, it is called Nonalcoholic Steatohepatitis, or NASH. Over time, NASH can lead to severe scarring, called cirrhosis. Cirrhosis can lead to liver failure and loss of liver function.

Prevalence:

NAFLD is today the most common cause of elevated liver enzymes in children.

Prevalence of NAFLD is estimated to be 9% in children.

Prevalence of NASH is estimated to be 3% in children.

Further significant scar tissue (fibrosis) is estimated to be seen in 9% of children with NASH.

Disease Progression and the importance of liver biopsy:

Obesity, central adiposity, and insulin resistance are strongly associated with pediatric NAFLD and inflammation with progression to NASH.

Long term natural history data of pediatric NAFLD/NASH are not available. Blood liver tests such as alanine aminotransferase (ALT) and aspartate aminotransferase (AST) for example, are not reliable measures of progression in NAFLD.

Thus a liver biopsy becomes a critical requirement for accurate diagnosis and evaluation of progression in patients with NAFLD/NASH

Treatment options:

Slow and sustained weight reduction through a balanced diet and increased physical activity is the main stay of treatment for NAFLD/NASH.

Pharmaceutical Options (To be discussed with your health care provider):

Vitamin E has been recently suggested as a treatment option for adults with NASH though this is not an FDA approved indication for children yet.

Metformin as a treatment for individuals who also have insulin resistance may also be an option.

Surgical Options:

Some programs offer bariatric or weight loss surgery in adolescents which may improve NAFLD / NASH.