

# Fatty Liver Disease

## Metabolic Syndrome

- Increased weight  
Body Mass Index (BMI) greater than 30
- Abdominal obesity, waist circumference men greater than 40" women greater than 35"
- High triglycerides  
↑ 150
- Low HDL "good cholesterol" □ 40
- High blood pressure
- Fasting Blood Sugar  
↑ 100
- Contributing Factors
- Increased carbohydrate consumption
- Smoking
- Physical Inactivity

Most people think that the liver's main function is to rid the body of alcohol, but it is so much more complex. The liver is one of the body's largest organs, performing hundreds of functions every day. It removes harmful substances from the blood, makes bile to help digest fat, and stores energy.

Fatty liver disease or *nonalcoholic fatty liver disease* (NAFLD) results from fat being collected in individual liver cells called hepatocytes.

As the fat collects in the cells it ranges from benign fat to inflammation and scar tissue that does not allow the liver to function properly. This stage is called Nonalcoholic Steatohepatitis or NASH. When examined under a microscope, NASH looks very similar to liver changes caused by alcohol abuse, but occurs in patients with little or no alcohol use. Studies show that up to 20% of patients with NASH may progress to cirrhosis. Cirrhosis occurs when scar tissue replaces the normal tissue causing the liver to malfunction. The liver may actually fail and a liver transplant may be needed. Often patients with NAFLD /NASH have no symptoms until the disease has advanced to this point.

Fatty liver disease is associated with being overweight or obese. It is thought to be one of the components of the Metabolic Syndrome that also includes: high triglycerides, low HDL (good cholesterol), high blood pressure, diabetes, high blood sugar and enlarged waist circumference.

Why are we hearing more about it now? The medical community has been aware of fatty liver disease and NASH for a very long time. Unfortunately, because of the increasing obesity epidemic, especially in the United States, the problem of fatty liver and its effect on health is growing right along with our waistlines.

According to the CDC, during the past 20 years there has been a dramatic increase in obesity in the United States. The statistics show that 1/4 to 1/3 are obese and 66% are overweight. Perhaps more concerning is the fact that children in our country are facing the same health concerns caused by poor diet and low physical activity as adults. Childhood obesity is a top concern for many pediatricians and parents.

NAFLD is now the number one cause of liver disease in adolescents. Children in their teens have been diagnosed with cirrhosis of the liver. This may eventually lead to liver failure and the need for liver transplant.

Continued on next page

Calculating your Body Mass Index is easy go to the Centers for Disease Control & Prevention. [www.cdc.gov/nccdphp/dnpa/healthyweight/assessing/bmi/index.htm](http://www.cdc.gov/nccdphp/dnpa/healthyweight/assessing/bmi/index.htm)

If your child is overweight it is imperative that they see their physician to be evaluated for fatty liver disease and other diseases associated with the metabolic syndrome to form a plan of action. So where do you start? Begin with calculating your body mass index (BMI). Use your children's school health record that lists their height and weight and may even already have the BMI calculated. You can also buy a chart at a pharmacy, nutrition store or use the internet.

BMI Scale	
Underweight	under 18.5
Normal	18.5-24.9
Overweight	25-29.9
Obese	over 30

Using your height and weight find your BMI and see what category you fall in. If you are in a obese or borderline obese field, start your action plan now .

#### **Fatty Liver Disease Action Plan:**

- Talk to your family doctor about safe and effective weight control.
- Exercise is also a crucial part of the treatment program for fatty liver.
- Make an appointment with a nutritionist.
- Be educated! Look for reliable sources on the internet or in your community, ones that are linked to register dieticians, hospitals or government sponsored agencies..

***[www.liverfoundation.org](http://www.liverfoundation.org)***

***[www.cdc.gov](http://www.cdc.gov)***

***[www.cdc.gov/nchs/nhanes.htm](http://www.cdc.gov/nchs/nhanes.htm)***

***[www.americanheart.org](http://www.americanheart.org)***

***[win.niddk.nih.gov/statistics/index.htm](http://win.niddk.nih.gov/statistics/index.htm)***

***[www.aap.org/healthtopics/overweight.cfm](http://www.aap.org/healthtopics/overweight.cfm)***