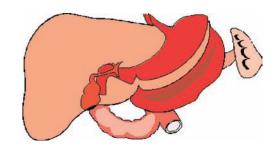
## **Nonalcoholic Fatty Liver Disease**

Nonalcoholic fatty liver disease (*NAFLD*) may be the most common liver abnormality in the United States. Slight to moderate enlargement of the liver due to diffuse accumulation of fat in the liver cells is called fatty liver. When the fatty infiltration is accompanied by inflammation and cell death the condition is called nonalcoholic steatohepatitis (*NASH*). While it is a common cause of mildly elevated liver enzymes, more serious liver impairments (such as *alcoholic*, *viral*, *autoimmune*, *metabolic* and *genetic liver disease*) must be excluded before the diagnosis of NAFLD is made.



Fatty liver is seen in alcoholism, diabetes mellitus, obesity, and prolonged parenteral (*I.V.*) nutrition. Less common is acute fatty liver of pregnancy. The underlying pathology of nonalcoholic fatty liver and NASH is insulin resistance, and the most frequent risk factor for insulin resistance is obesity.

The stages of NAFLD are:

- ▶ simple fatty liver (steatosis)
- ▶ inflammation (nonalcoholic steatohepatitis or NASH)
- destruction of liver tissue (necrosis)
- scarring of liver tissue (fibrosis)
- ▶ end stage fibrosis (cirrhosis)

The majority of biopsies done to evaluate hepatitis of unknown etiology show nonalcoholic fatty liver disease. Liver biopsy is necessary for the definitive diagnosis of NASH, necrosis (cell death), scarring or cirrhosis. The speed of progression and reason for progression from one stage to the next is uncertain. Most persons with steatosis do not progress, but it can be a serious impairment if progression does occur. Cirrhosis can predispose to primary liver cancer.

Steatosis is rated according to the level of liver enzyme elevation. (See Rx for Success 3 Liver Tests). NASH is rated according to liver enzymes as well, but no less than Table B. Individual consideration is given to higher stages of NAFLD. Cirrhosis is usually declined.

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