**Don’t Booze Out Your Liver**

**ALCOHOL** has long been associated with serious liver diseases such as hepatitis or swelling of the liver. The relationship between drinking and alcoholic hepatitis is complex. Only a small percentage (10-20%) of heavy drinkers develop alcoholic hepatitis, yet the disease can occur in people who drink only moderately or binge just once.

Though damage from alcoholic hepatitis often can be reversed in people who stop drinking, the disease is likely to progress to cirrhosis and liver failure in people who continue to drink. For them, alcoholic hepatitis may be fatal.

**What Happens When You Drink?**

When you take a drink, about 20% of the alcohol is absorbed in your stomach; the remaining 80% is absorbed in your small intestine. How quickly the alcohol is absorbed depends upon the concentration of the alcohol in the drink (vodka, for example, will be absorbed faster than beer, because vodka has a higher alcohol concentration) and whether you’ve just eaten a big meal (a full stomach will slow down alcohol absorption).

After the alcohol is absorbed, it enters your bloodstream and is carried throughout your body. As the alcohol acts upon the body, the body is simultaneously working to remove it. The kidneys and lungs remove about 10% of the alcohol in the urine and the breath. The liver takes care of rest of the alcohol.

Liver cells contain enzymes that process the alcohol into water and carbon dioxide. These are then passed out in the urine and from the lungs. The liver cells can process only a certain amount of alcohol (less than one peg) per hour. So, if you drink alcohol faster than your liver can deal with, the level of alcohol in your bloodstream rises.

**Alcohol and Liver**

The liver is particularly vulnerable to the effects of alcohol because it is the organ where alcohol and other toxins are broken down into less harmful substances, to be removed from the body. Drinking over a long period of time can lead to alcoholic hepatitis, or inflammation of the liver. Many people with alcoholic hepatitis develop cirrhosis. In this condition, healthy liver tissue is replaced by scar tissue, which eventually renders the liver unable to function, ultimately leading to death, unless some heroic measures, like liver transplant, are not taken immediately.

Chronic consumption of alcohol can cause a spectrum of liver abnormalities, ranging from simple fatty liver (excessive deposition of fat in the liver) to alcoholic hepatitis (swelling of the liver), cirrhosis and liver cancer. Alcoholic liver disease is still the most common cause of liver cirrhosis. There are three primary types of alcohol-induced liver disease.

**Fatty liver (accumulation of fat in the liver):**

Fatty liver is excessive accumulation of fat inside the liver cells. Fatty liver is the most common alcohol-induced liver disorder. The liver is enlarged, causing upper abdominal discomfort on the right side.

**Alcoholic hepatitis (swelling of the liver):**

Alcoholic hepatitis or swelling of the liver is accompanied by the destruction of individual liver cells and scarring. Symptoms may include fever, jaundice, an increased white blood cell count, an enlarged, tender liver, and spider-like veins in the skin.
Alcoholic cirrhosis (destruction of liver tissue—hard and functionally useless liver): Alcoholic cirrhosis is the destruction of normal liver tissue, leaving non-functioning scar tissue. Symptoms may include those of alcoholic hepatitis, in addition to blood in vomiting, enlarged spleen, protuded abdomen (due to fluid accumulation in abdomen), kidney failure, confusion, coma or liver cancer.

Diagnosing Alcohol-induced Liver Disease

In addition to a complete medical history and physical examination, diagnostic procedures for alcohol-induced liver disease may include the following:

**Laboratory tests** – Your doctor knows these better, consult him immediately.

**Liver function tests** – A series of special blood tests that can determine if the liver is functioning properly.

**Liver biopsy** – A procedure in which tissue samples from the liver are removed (with a needle or during surgery), from the body, for examination under a microscope.

**Treatment**

Researchers are learning more about how and why alcoholic hepatitis occurs, but less is known about how to treat alcoholic hepatitis effectively. Anyone with alcoholic hepatitis must abstain from alcohol. When damage is so severe that the liver is unable to function, a liver transplant may be an option.

**Cessation of alcohol consumption:**

Cessation of alcohol consumption or a significant reduction in alcohol intake improves liver condition and survival of patients at any stage of the disease. Therefore, alcohol abstinence is the cornerstone of management for these patients. Treatments that aim to reduce the alcohol intake in alcohol-dependent patients include psychological and pharmacological approaches.

Due to fear of "Alcohol withdrawal Syndrome", chronic boozers should be admitted in the hospital while attempting reduction or cessation of alcohol consumption because "Alcohol withdrawal Syndrome" may some time be problematic and may even need emergency management.

**Psychological interventions:** This involves strategies to educate and inform patients about the nature of their problem and provide them with advice on how to change their behavior. Psychosocial treatments such as cognitive behavioral therapy and motivational enhancement therapy have been shown to reduce alcohol intake in alcohol-dependent patients. There are a number of social organizations that are committed to this cause. An expert psychologist can do it scientifically. Even other systems of medicine may be used to achieve this goal.

**Drug therapy:** Both Acamprosate and Naltrexone have been demonstrated to reduce the number of drinking days and increase abstinence rates in several randomized controlled trials. Acamprosate, unlike naltrexone, is well tolerated except in patients with cirrhosis and its benefit seems to persist for at least 1 year after treatment withdrawal. Disulfiram and Topiramate are also approved drugs. Long-term studies have shown no serious problems related to Topiramate. Recently Nalmefence, a drug normally used to reverse the effects of anesthesia, has also been used for this purpose. It is safe for the liver and significantly reduces cravings for alcohol and therefore relapses in alcoholics.

However, drug therapy should not be tried at home as these drugs may be potentially harmful. Consultation with the doctor is advised.

Of all the treatments available for patients with severe alcohol induced hepatitis, corticosteroids have been used most intensively, and are probably the most effective and cheap. Two potential adverse effects of medium-dose or high-dose steroids include poor wound healing and increased susceptibility to infection. Concern over these adverse effects, especially susceptibility to infections, and the continued uncertainty over their efficacy has contributed to the reluctance of many physicians to use steroids.

**Nutritional supplementation:** Nutritional therapy with extra nutrients and proteins has been shown to improve liver function and structure, although there is no
consistent reduction in deaths associated with alcohol-mediated liver damage with nutritional therapy. Although excess protein intake has a theoretical risk for the development of hepatic coma, protein feeding is well tolerated, and protein should not be routinely restricted in these patients.

Liver transplantation: Liver transplantation for patients with alcoholic liver damage remains controversial, principally due to concerns about the risk reappearance of drinking habit after transplantation, its effect on outcome and public opinion at a time of increasing donor shortage. These patients may also have complications of excessive alcohol abuse in other body parts and an associated lack of self-care that may turn this tedious job futile. Because of these factors many centers are reluctant to offer liver transplantation to patients with alcoholic liver damage.

Therefore, not surprisingly, most centers require patients with alcoholic liver damage to have been abstinent for a period of time before assessment. Abstinence primarily gives the liver a chance to recover spontaneously; however, abstinence also allows time for other alcohol-related morbidities to recover, thereby improving the patient’s fitness for surgery, importantly satisfying the surgeon that the patient will abstain from alcohol after liver transplant for the rest of his life.

Preventing Alcoholic Liver Disease

Do not drink alcohol at all. If this is not the case with you then limit your drinking within the recommended safe limits:

- **Men** — no more than 21 units per week (and no more than 4 units in any one day).
- **Women** — no more than 14 units per week (and no more than 3 units in any one day).
- **Pregnant women** — not at all.

In general, the more you drink above these limits, the more harmful alcohol is likely to be. Also, binge drinking (for example, 10 units twice a week) can be harmful even though the weekly total may not seem too high.

Dr Arvind Dubey is a medical practitioner. Address: 36 Napier Road Colony, Part-II, Thakurganj, Lucknow, UP; Email: drarvinddubey2004@yahoo.com