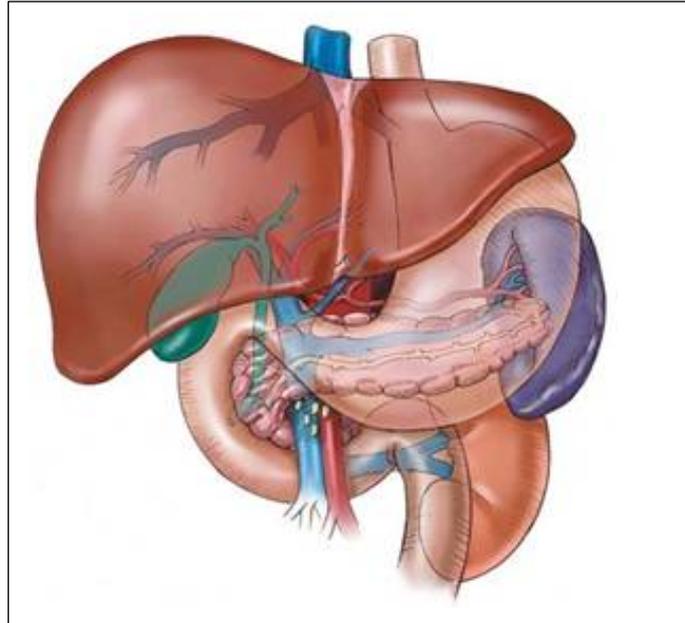


*Good advice by Dr. Harold*

## Looking after your Liver

*(Update on the previous article on "How can you look after your liver")*

When you think of planning a health agenda you focus mainly on your heart, without realising the necessity to focus on your liver health, as taken for granted.



The macronutrients like Carbs, Proteins, micronutrients including vitamins, minerals, others and chemicals, are conveyed through the **portal vein** from the gastrointestinal tract and spleen, to the liver

The main function of the liver is to process food nutrients and remove toxins. Liver seems to be a good filter to prevent toxic chemicals and other detrimental molecules entering the general body. This process is referred to by some as *detoxification*.

The portal vein is about three to four inches in length and is usually formed by the merging of the mesenteric and splenic veins. This vein supplies approximately 75 per cent of blood to the liver.

In cirrhosis the portal vein and its branches become distended with high pressure within. This condition is referred to as '**portal hypertension**'.

**Clinical feature in advance alcoholic hardening of the liver (cirrhosis), includes distension of the abdomen due to fluid accumulation referred to as '*ascites*'; swelling of legs and the visibility of varicose veins in the abdominal wall subcutaneously (under the skin).**

The veins surrounding and within the wall of the oesophagus (gullet) are also branches of the portal vein, and in advanced portal hypertension these vessels can rupture and cause vomiting of blood (haemoptysis).

## **Dietary fats**

*What happens to the dietary fats and cholesterol you eat? Fats are broken down into fatty acids, mixes with bile acids including cholesterol, are taken into a different stream (lymphatics) and not enter the portal vein directing blood to the liver.*

To look after your heart health, exercise and a balanced low-fat diet is among other things recommended. On the contrary, for your liver health, the focus is on your diet and lifestyles.

## **Sugar**

Too much of eating foods with added sugar can harm your liver. Especially eating many fruits, soft drinks and beverages and sweet foods with added corn syrup, where the fructose content is high, can build up a fatty liver. There are mainly two types of fatty livers, one caused due to eating sugars and the other consuming excess alcohol. They are referred to as non-alcoholic (NAFL) and alcoholic types (AFL) of livers, respectfully.

Virtually every cell in the body can break down glucose for energy, but fructose is broken down only in the liver cells. Eating too much and too frequently, breakfast cereals, pastries, sodas, fruit drinks, other sweet foods (Bombay sweets) and other beverages containing added corn syrup as sweeteners, has potentially dangerous consequences on the liver, by storing the sugars as fat.

The liver seems to go through a series of complex transformations to convert fructose from above mentioned foods, to create fats, this mechanism is called *lipogenesis*. Lipogenesis is very common among the adults in most developed countries, especially among the obese and having diabetes.

If the condition is detected early non-alcoholic fatty liver is reversible. If no remedial action is taken will cause further damage to the liver cells, a condition called *non-alcoholic steatohepatitis* and cirrhosis.

Consuming excess alcohol daily seems to affect the liver and produce a fatty liver (AFLD). The liver seems to directly process the toxins in alcohol. In binge drinking - drinking four to five servings of alcohol in about two hours, leads to rapid intoxication, since the liver can only process one serving of alcohol in an hour. Drinking heavily daily can lead to liver damage, including fatty liver disease and cirrhosis.

Eating excess sugar is as damaging to the liver as alcohol

Fatty liver in the early stages have no symptoms and is diagnosed on routine blood tests, abdominal ultrasounds and scans. With advanced liver damage, you could experience fatigue, weight loss and abdominal discomfort, and on palpation of your abdomen by your doctor may feel an enlarged liver.

### **Metabolic syndrome**

Metabolic syndrome a cluster of disorders like obesity, hypertension, increased lipids, including triglycerides in your blood, and diabetes seem to give rise to a fatty liver.

These are all avoidable factors to prevent having a fatty liver

### **Herbal supplements**

Most herbal supplements may be natural but most of them cause hepatitis and liver damage. Few cases have been reported after taking a health supplement called Lipokinetix taken to lose weight. Other herbal products that cause liver damage include kava, Jin Bu Huan, germander, chaparral, shark cartilage and mistletoe (ref: Medical Author: Tse-Ling Fong, MD, Medical Editor: Leslie Schoenfield, MD, PhD and Medical Reviewing Editor: Dennis Lee, MD).

You should always consult your doctor before venturing on any supplements, including herbal.

### **Are you obese?**

Obese adults are sure candidates for non-alcoholic fatty liver. The extra fat built up in the body including in your liver can cause non-alcoholic fatty liver disease. The liver swells and sometimes can be felt below the right costal margin. With time the inflammation causes scarring of the liver and end up as cirrhosis

Trans fats are a man-made fat listed as 'partially hydrogenated' on the label. Trans fats can damage your liver and cause obesity. Avoid margarine and the foods in the deep freezer at the supermarket. Trans-fats are added to all those foods to preserve shelf life.

Dieting, avoiding foods with trans-fat and exercise can reverse the process.

### **Vitamin supplements**

Avoid taking fat soluble vitamins like A, D, E, K as supplements. Being fat soluble they tend to get stored in the liver cells, and excess will cause damage. Your food will provide the daily requirements

It must be stressed that you need to be careful in taking vitamin A and E supplementary capsules, because both vitamins are fat soluble and hence can get stored in the liver cells in excess, may become toxic

An analysis published in the 2005 issue of "Annals of Internal Medicine" linked high doses of vitamin E to increased death rates.

You get enough vitamin E from food sources like spinach, sunflower seeds, almonds, peanut butter and fortified foods.

It is advisable not to take vitamin E supplements unless requested by your doctor for specific reasons.

Vitamin A also can be obtained from food sources like fresh fruits and vegetables that are red, orange and yellow.

Vitamin C being water soluble does not accumulate in the liver. Again, you could get enough vitamin C from food sources like bell peppers, oranges, tomatoes and strawberries, among others.

The liver uses all vitamins for its metabolic functions, and the natural ones from your diet should be enough. If you have been diagnosed with liver disease, you need to talk with your doctor whether you should take vitamin supplements.

### **Panadol (paracetamol)**

Liver can get damaged with the normal doses of paracetamol taken long term. In overdosing with the drug for chronic headaches and other conditions it may induce hepatotoxicity. Risk factors for paracetamol toxicity include fasting, regular excessive alcohol use and some drugs.

Always check with your doctor before you start on paracetamol commonly used as a pain-killer.

### **Non-steroid anti-inflammatory drugs (NSAIDs)**

These drugs given for joint pains, arthritis and backache can cause liver damage (hepatotoxicity) on long term usage.

### **Statins**

Very rarely statins can cause liver damage, and kidney failure. Check your liver function tests (liver enzymes) to confirm every six months. If your liver enzymes are elevated on your blood test, your doctor will decide whether you should stop the medication.

## Chilies

Are chillies you enjoy in your curries damaging your liver?

The answer is 'No'. New research shows that the daily consumption of capsaicin, the active compound of **chilli** peppers, was found to have beneficial effects on **liver** damage.

## Foods that protect your liver

Fish like cod, salmon, and sardines, veggies including broccoli, peas, and sweet potatoes, and fruits such as **bananas**, kiwi, and apricots are beneficial to maintain a healthy liver. Dairy foods, like milk and yogurt, are also high in potassium. Early studies suggest betaine helps protect **your liver** from fatty deposits. **Betaine** is a by-product of sugar beet processing. **Betaine** works by preventing the build-up of an amino acid called homocysteine. This amino acid can harm blood vessels and contribute to heart disease, stroke, liver damage, or circulation problems

## Drinking coffee

Drinking more **coffee** may undo **liver** damage from heavy alcohol drinking. Drinking two cups of coffee a day is associated with a significant reduction in the risk of cirrhosis.

Relax with two cups of coffee retiring to bed after a heavy binge

Whatever dietary regimes, drugs including herbal supplements, other chemical molecules you take- always think whether they could damage your liver. If in doubt, check with your doctor.

Look after your liver as much as you look after your heart.

Hope this article will help you to be more conscious of your health. Good luck

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