

# Two More Complications from Obesity and Type 2 Diabetes: Liver Cirrhosis and Liver Cancer

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Until recently, hepatocellular carcinoma, a primary malignancy of the liver, was a very rare cancer in North America and most developed countries. However, the recent escalation in the number of overweight, obese and type 2 diabetic individuals in our society has contributed to a corresponding rise in cases of liver cirrhosis and related hepatocellular carcinoma cases.

Being overweight, obese and/or developing type 2 diabetes promotes the deposition of fat into liver cells, primarily due to high circulating insulin levels. As liver cells fill up with fat (triglycerides) it leads to fatty liver degeneration, which later involves inflammation. This condition is known as NASH (non-alcoholic steatohepatitis). [As NASH progresses](#), liver tissue often degenerates into cirrhosis (an irreversible liver condition), whereby liver cells are no longer able to function normally.

## Cirrhosis From a Fatty Diet and Obesity

With cirrhosis, a host of signs and symptoms occur due to malfunctioning of liver cells, some of which include failure of the liver, swelling of the legs (edema), accumulation of fluid in the abdomen (ascites), bleeding from veins in the esophagus (varices) and mental confusion (hepatic encephalopathy). Cirrhosis also increases the chances that hepatocellular carcinoma will develop. Thus, hepatocellular carcinoma is on the increase in our society, directly as a result of overweight, obese and type 2 diabetes problems.

It should be noted that heavy chronic alcohol consumption can also cause fatty liver problems with associated liver inflammation (steatohepatitis), which resembles NASH upon blood lab investigation, imaging and biopsy findings.

## How Common Is NASH?

Non-alcoholic fatty liver disease is currently the most common liver disease in the U.S. and worldwide, affecting an estimated 10-24 percent of the global population. In the U.S., the Centers for Disease Control and Prevention reports that currently, approximately one-half of the U.S. adult population is overweight (BMI >25) and one quarter of the U.S. adult population is obese (BMI >30). That means upwards of 29 million Americans have non-alcoholic fatty liver disease, 6.4 million of whom have non-alcoholic steatohepatitis (NASH). Even more alarming than these statistics is the fact that non-alcoholic fatty liver disease is occurring among children in the U.S.

## Blood Tests Are the First Clue

How do you know if a patient's overweight problem, obesity status, or type 2 diabetes condition is causing fatty liver changes? The first evidence is a slight rise in [serum liver enzymes](#), especially ALT and AST. Thus, it is a good idea to ask these patients to get a copy of their most recent bloodwork and bring it to your office for review. This also applies to children if they are overweight.

## The Solution Is Simple

The solution is simply to get the patient to start eating a low saturated fat / cholesterol / trans fat diet, which should also exclude deep-fried and pan-fried foods. A lower glycemic diet is also helpful, as is the inclusion of regular endurance exercise, all of which pave the way to weight loss, improved blood sugar regulation and lower circulating insulin levels, even in type 2 diabetics. Applying these simple lifestyle modifications often reduces ALT and AST into the normal range within 3-6 months as body fat declines.

In many cases, the family doctor does not emphasize sufficiently the importance of lifestyle changes to help the patient decrease their risk of premature morbidity and mortality associated with NASH. As we know, being diagnosed with hepatocellular carcinoma or even cirrhosis, for that matter, is no walk in the park. Hepatocellular carcinoma is a cancer that is highly preventable. It is a lifestyle-based cancer in our modern society, and thus, I strongly urge you to see overweight problems as a serious health concern in the patients who attend your office.

The truth is that the nutrition and lifestyle plan to overcome obesity, overweight and type 2 diabetes problems is not that difficult to follow and yields tremendous benefits from a health and longevity standpoint, as well as yielding psychosocial benefits to the patient's quality of life.

To see the exact lifestyle program I recommend to overweight and type 2 diabetic patients, feel free to contact me at [drjames@adeeva.com](mailto:drjames@adeeva.com). I am more than happy to e-mail you the exact menu plan I have successfully used with hundreds of patients to help them lose weight and improve their fitness level.

### Resources

- Lee D. "Body Fat, the Silent Killer." MedicineNet.com, March 8, 2007.
- Afzali A, Berry K, Ioannou GN. Excellent post-transplant survival for patients with non-alcoholic steatohepatitis in the United States. *Liver Transplant*, 2012;18;1:29-37.

SEPTEMBER 2013