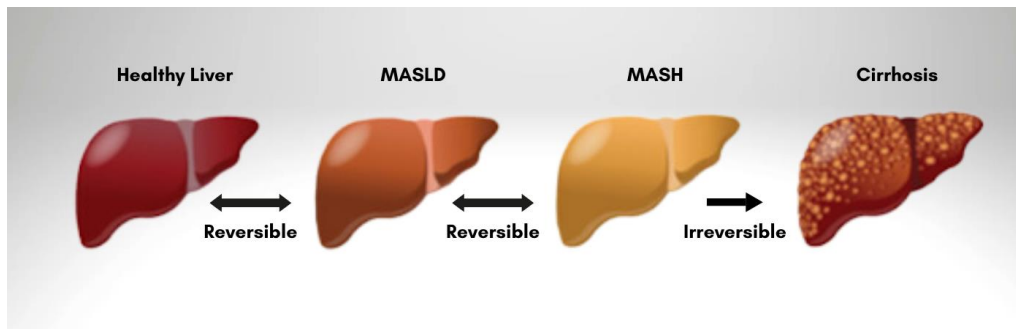


Fatty Liver Disease

Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD), formerly known as Non-Alcoholic Fatty Liver Disease, is the most common cause of chronic liver disease in the world. This affects 25-30% of the world's population, including over 50 million in our nation.

Cirrhosis related to this is now the most common indications for liver transplantation in women and those > 65 years old. It is on par with alcohol as the leading indication overall.



MASLD is defined by fat in the liver affecting at least 5% of the liver cells, after other causes of liver fat have been ruled out such as significant alcohol use, viral infections and certain medications.

MASLD can be divided into sub-types that range from simple fat in the liver to more advanced disease known as Metabolic Dysfunction Associated Steatohepatitis or MASH, where there is not only fat in the liver cells, but also liver cell damage and liver inflammation. This damage and inflammation can lead to scarring and eventual cirrhosis of the liver with liver failure.

MASLD is found at higher rates in patients with components of the Metabolic Syndrome, (sharing the principal risk factor-Insulin Resistance.) This is reflected in its new name. MASLD has been reported in over 76% of type 2 diabetics and over 90% of patients with severe obesity. Because of its shared features and risk factors with the Metabolic Syndrome, there is a higher rate of other metabolic comorbidities in patients with MASLD including cardiovascular disease (CVD), now one of the leading causes of death in these patients. MASLD patients with the Metabolic Syndrome have a higher overall mortality rate, increased cirrhosis and liver related deaths, and higher rates of liver cancer. Non-liver cancer deaths are in the top three causes of death in the MASLD population.

We encourage everyone to look for clues of Metabolic Syndrome such as high blood pressure, central obesity, high blood sugar, high triglycerides and low HDL. Patients who have these are at high risk of having steatotic/fatty liver and should be screened for this.



A Center for Metabolic, Liver & Obesity Medicine

MASLD has multiple metabolic and genetic factors contributing to its progression. However, the starting point is to evaluate how much sugar is being consumed. The fructose component of sugar is considered the leading driver of Metabolic Syndrome and MASLD. Our intake of fructose has increased dramatically over the last several decades, and never before in human history have we seen this level of fructose consumption.

Fructose in excess is a toxin to liver cell mitochondria, the powerhouse and driver of cell energy. Carbohydrates can also be converted to fructose by what is known as the Polyol Pathway, also causing harm.

At Trajectory Health Partners we teach patients how nutrition plays a critical role in attempting to reverse this potentially devastating disease. Physical inactivity, with loss of healthy functioning muscle is also playing a role in this disease. At THP we place an emphasis on appropriate protein and resistance training to build and maintain the muscle critical to good metabolic health.

**Our goal is to find this disease early by knowing who to screen, then aim for complete reversal of the fat in the liver, before it progresses to advanced disease.
To date, we have documented over 60 patients with remission of their fatty liver, as measured by liver scan.**

MASLD can be asymptomatic early in the disease. This leads to challenges in caring for these patients. One of the biggest challenges is in finding noninvasive ways, rather than liver biopsy, to screen for and stage this disease.

At Trajectory Health Partners we understand non-invasive testing (NITs). This includes blood work and on-site state-of-the-art liver scanning to directly measure fat in the liver and assess the degree of scarring by a method called elastography. Other imaging may also be required.

It is of utmost importance to identify patients with advanced fibrosis (scarring), due to their higher rate of liver-related mortality and their eligibility for newly approved drug therapy.

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