### **OBESITY, MASLD & MASH**

There is a growing epidemic of Americans who are overweight or experience <u>obesity</u>. Obesity is a serious chronic condition that can affect multiple organs, especially the liver. If left untreated, obesity can lead to serious complications, such as <u>metabolic dysfunction-associated steatotic liver disease (MASLD)</u>, previously known as nonalcoholic fatty liver disease (NAFLD) and <u>metabolic dysfunction-associated steatohepatitis (MASH)</u>, previously known as nonalcoholic steatohepatitis (NASH), which is now a leading cause of liver transplants in the U.S.

### What is obesity?

Obesity is a complex disease involving having too much body fat. More than 2 in 5 adults have <u>obesity</u>, with a prevalence of 41.3% in women and 39.2% in men. Obesity has strong underlying genetic contributors that control how much we eat and how our body disposes of energy in the foods that we eat.

# Is liver disease linked to obesity?

Yes, obesity increases one's risk of MASLD and MASH. In fact, obesity is one of the leading causes of MASLD. MASLD is found in 75% of people who are overweight and in 90% of those with severe obesity.

# Populations most affected by obesity

Americans suffer from obesity at alarming rates. Nearly 1 in 2 non-Hispanic Black adults (49.6%) and nearly 1 in 2 Hispanic adults (44.8%) have obesity. Further research shows that more than half of non-Hispanic Black women (56.9%) and more than 2 in 5 Hispanic women (43.7%) are affected by obesity. Additionally, more than 2 in 5 non-Hispanic Black men (41.1%) and more than 2 in 5 Hispanic men (45.7%).

#### What is MASLD?

MASLD is a medical condition in which there is an excessive buildup of fat in the liver. It often has no symptoms in its early stages and while its causes are still being studied, research points to genetics, digestive disorders, and diet as leading contributors to its development. MASLD affects 80-100 million people in the U.S.

#### What is MASH?

MASH is a dangerously progressive form of MASLD in which patients have inflammation of the liver and liver damage, in addition to excess fat. Complications can include fluid buildup in the abdomen, risk of internal bleeding, enlarged spleen, kidney failure, brain disorders, liver cancer, and coma.

# Who is at risk for MASLD/MASH?

MASH tends to develop in people who are overweight or obese, have type 2 diabetes and other "metabolic risk factors" such as high cholesterol, high triglycerides and hypertension. MASH most often occurs among those between the ages of 40 and 60 but can occur in any age group including young children. It is more common in people with Hispanic heritage. Sedentary behavior is also a major risk factor.

## Why is MASH worrisome?

Any form of chronic liver disease (e.g., MASH, alcohol associated liver disease, viral hepatitis) can cause scar tissue (fibrosis) to gradually accumulate in the liver. When this happens, the scar tissue accumulates as a meshwork throughout the liver and not in just one spot that can be removed. When the scar tissue accumulates to the point that it interferes with the function of the liver and blood flow through the liver, this defines cirrhosis. With continued scar tissue accumulation, liver failure can gradually develop and liver transplantation may be the only option in the far advanced state.

# Symptoms of MASH

MASH may not cause symptoms for years. It, like MASLD, can be a "silent disease" of the liver. When symptoms occur, they can include feeling very tired and having pain in the upper right side of the abdomen, which is where the liver is located.

### Treatment of MASLD and MASH

The primary treatment of MASLD and its more aggressive form, MASH, centers on lifestyle modification with a focus on healthy eating habits, regular exercise and weight loss. The good news is that healthy eating and regular exercise are beneficial even in the absence of weight loss. Studies have shown that a Mediterranean diet is a good choice for healthy eating. A new medication was approved in early 2024 for people with MASH and substantial scar tissue already in the liver (but not to the point of cirrhosis) and several other medications are being evaluated in clinical trials to determine if they are also effective. But even with approved medications, the number one treatment recommendations will always be healthy eating and regular exercise.

To learn more about MASLD and MASH, scan the QR code below. For a complete list of all of our free resources, please visit: liverfoundation.org/resource-center.

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For questions about liver wellness and disease, or for emotional support to patients at the point of crisis and information on local resources including physician referrals, please contact our Helpline at 1-800-465-4837.



