



What is MASH?

Metabolic dysfunction - associated steatohepatitis (MASH) may be considered the more progressive form of MASLD. MASH occurs when fat within the liver begins to increase and ultimately cause excessive inflammation, destruction and injury to the native liver cells. This injury may lead to significant liver scarring commonly referred to as fibrosis. Fibrosis over time can worsen resulting in cirrhosis.



Are there different stages of MASH?

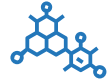
When MASH causes fibrosis or scarring. The scarring is measured on a scale of 0-4.

- STAGE 0 - No scarring or Fibrosis
- STAGE 1 - Mild/Early scarring
- STAGE 2 - Intermediate scarring
- STAGE 3 - Advanced scarring
- STAGE 4 - Cirrhosis or maxima



How is MASH treated?

Weight loss and healthy lifestyle remain the cornerstone of management for MASLD. Optimal control of underlying risk factors are also crucial. Although vitamin E and some diabetic drugs (pioglitazones) have shown promise in reducing inflammation and some scarring, they are not FDA approved therapies. Resmetirom has recently been approved for the treatment of patients with MASH with moderate to advanced fibrosis. Pinnacle participates in multiple trials looking further at potential treatment options on the horizon.



What is Cirrhosis?

Cirrhosis is the most advanced stage of fibrosis (Stage 4). At this stage, the liver has reached the ultimate level of hardening and is now at risk to lose function, fail and/or increase the risk of liver cancer development.

Some but not all people who develop cirrhosis may require liver transplantation or replacement of the sick liver with a donated organ from a cadaver or living person.



What are the risk factors for MASLD?

- Obesity
 - Type 2 diabetes or Insulin resistance
 - High blood pressure
 - High cholesterol
 - Age >50
 - Hispanic or South Asian ethnicity
 - Family history of 1st degree relative with MASH cirrhosis
 - Inactive lifestyle
- *More than one of the above significantly increases risk*

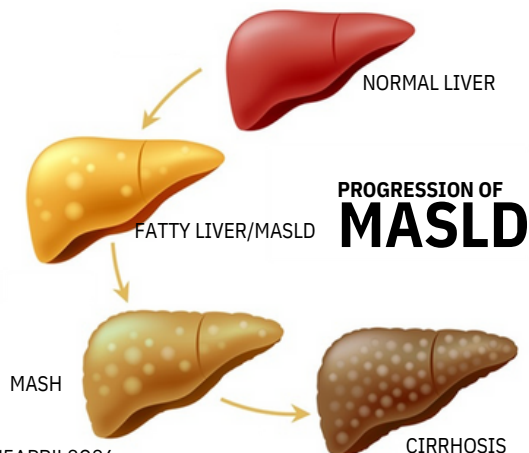


How is MASLD diagnosed?

Fatty liver disease can be diagnosed non-invasively with a simple radiographic picture of the liver. Abdominal ultrasound, CT Scan or MRI are all capable of showing fat when it is present at varying degrees within the liver.

The gold standard of diagnosis remains a biopsy to diagnose liver disease. A liver biopsy is typically an outpatient procedure where a small sample of liver tissue is collected.

A liver biopsy is NOT necessary for the initial diagnosis of fatty liver. Liver biopsy is often used as a confirmation or disease tracking tool.





What is MASLD?

Metabolic dysfunction-associated steatotic liver disease (MASLD) is a condition that develops as a result of fat accumulation in the liver not due to alcohol. An excess of fat cells within the liver can be toxic and may lead to serious irreversible damage.

MASLD affects close to 30% of people worldwide. The more serious form of fatty liver, metabolic dysfunction - associated steatohepatitis (MASH) affects nearly 12% of people around the world.



What are the symptoms?

Symptoms are often vague or non-existent. Some people may complain of right upper quadrant abdominal pain or fullness. Other non-specific symptoms include fatigue and nausea due to an expanded liver volume.

Most people do not have any symptoms at all. The diagnosis is often made incidentally or due to abnormal liver associated blood test values.



Brownsville
717 N. Expressway 77/83
Brownsville, TX 78520
Phone: (956) 468-3360
Fax: (956) 468-3365

Edinburg
2502 W. Trenton Rd.
Edinburg, Texas 78539
Phone: (956) 284-6353
Fax: (956) 394-1173

**Programa su estudio de
hígado HOY!**



www.pinnacleresearch.com

**FATTY
LIVER**

**Your Guide to
Understanding
MASLD and MASH**

