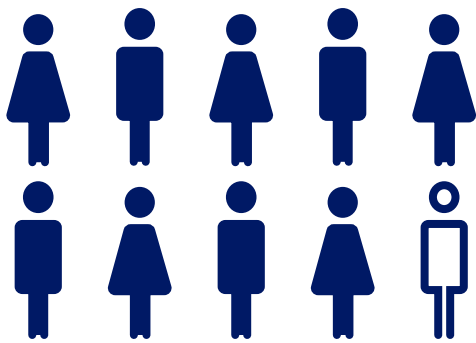


Metabolic dysfunction associated steatohepatitis (MASH)

# A 'silent disease' linked to obesity, diabetes, and cardiovascular risk

Patient portrayal



MASH is a **chronic, progressive**, at times **asymptomatic liver condition** affecting millions – yet **9 out of 10\*** cases are **never diagnosed**<sup>1-3</sup>



More than 1 in 3 people with obesity already have MASH<sup>4</sup>



The prevalence of MASH is high in people with cardiometabolic conditions and risk factors, such as overweight and obesity<sup>4,5</sup>



MASH is linked to reduced quality of life, including higher rates of depression, anxiety, and stress<sup>6</sup>



More than 1 in 3 people with obesity experience asymptomatic MASH, as well as a **2.5X** higher risk of CVD<sup>3,7</sup>

As **cardiometabolic factors drive both MASH and CVD**, prioritising interventions with **proven cardiovascular benefits offer potential dual-benefit management**<sup>3,5,7</sup>



**IF IDENTIFIED EARLY, MASH PROGRESSION CAN BE STOPPED AND POTENTIALLY REVERSED<sup>8</sup>**

Rethink Obesity<sup>®</sup>

  
novo nordisk<sup>®</sup>

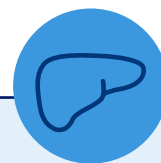
# Managing MASH requires a multi-pathway approach – targeting weight, fibrosis, and inflammation



**Global consensus**  
Guidelines from the **US, Europe, and Japan** recommend **weight loss** as a foundational approach to managing MASH<sup>9–13</sup>



**Histological improvement**  
The **AASLD** recommends a **weight loss of  $\geq 3\text{--}5\%$**  to improve steatosis and a  **$\geq 10\%$  weight loss** to improve most histological features of MASH<sup>14</sup>



**Liver stabilisation**  
The **AGA** states that  **$\geq 5\text{--}10\%$  weight loss** can **decrease hepatic steatosis** and help stabilise MASH<sup>15</sup>



## A healthy diet, exercise and weight reduction can help improve MASH parameters<sup>9</sup>



### Insulin sensitivity improves

Improved **glycaemic control** and **reduced insulin resistance**, supporting **long-term diabetes remission**<sup>16</sup>



### Liver biomarkers improve, including:

- A  **$\geq 17$  IU/L drop in ALT**<sup>9</sup>
- A **reduction in ELF**<sup>9</sup>
- **Reduction in liver stiffness (kPa)**<sup>9</sup>
- A comprehensive **improvement in tissue inflammation and fibrosis**<sup>9</sup>



### Cardiovascular risk reduces

**$\geq 10\%$  weight loss** can significantly reduce **CVD risk**, driven by improvements in **blood pressure, lipids, and glycaemic control**<sup>16,17</sup>



**SPEAK TO YOUR PATIENTS TO IMPROVE THE CHANCE OF DETECTING AND REVERSING MASH – SUPPORTING BETTER OUTCOMES.**

The material is intended for healthcare professionals' educational purposes only.

\*The referenced study cohort was based on a population study in Spain, France, Germany, Italy, and the United Kingdom in 2018.

**References:** 1. Singh S, et al. *Clin Gastroenterol Hepatol* 2015;13(4):643–654. 2. Schattenberg JM, et al. *Liver Int* 2021;41(6):1227–1242. 3. Machado M, et al. *B Hepatol* 2006;45(4):600–606. 4. Quek B, et al. *Lancet Gastroenterol Hepatol* 2023;8(1):20–30. 5. Sanyal AJ, et al. *Am Heart J Plus* 2024;41:100386. 6. Shea S, et al. *Front Endocrinol* 2024;15:1357664. 7. Tana C, et al. *Int J Environ Res Public Health* 2019;16(17):03104. 8. Caldwell SH, Argo CT. *Dig Dis Sci* 2015;60(4):810–812. 9. Rinella ME, et al. *Hepatol* 2023;77(5):1797–1835. 10. Marchesini G, et al. *J Hepatol* 2016;64:1388–1402. 11. Kanwal F, et al. *Gastroenterology* 2021;160:1–13. 12. Tokushige K, et al. *J Gastroenterol* 2021;56:951–963. 13. Samperi I, et al. *Front Endocrinol (Lausanne)* 2024;15:1357664. 14. American Association for the Study of Liver Diseases (AASLD). Available at: <https://www.aasld.org/liver-fellow-network/core-series/back-basics/steatotic-liver-disease-cutting-through-fat>. Accessed June 2025. 15. Younossi et al. *Gastroenterology* 2021;160:912–918. 16. Brown P, Sanyal AJ, Kowdley KV, et al. *Hepatology* 2023;77:659–689. 17. Brown JD, Buscemi J, Milsom V, et al. *TBM* 2016;6:339–346.