

Muscle Strength and Cardiovascular Health in MASLD: A Prospective Study

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Table of Contents

Comparison of NAFLD- MASLD diagnostic criteria

Cardiometabolic risk factors of the patients included in the study

Table S1. The comparison of NAFLD and MASLD diagnostic criteria (1-3)

Parameter	NAFLD Diagnostic Criteria	MASLD Diagnostic Criteria (2023)
Updated Terminology	NAFLD (Non-Alcoholic Fatty Liver Diseases) and NASH (Non-Alcoholic Steatohepatitis)	MASLD (Metabolic Dysfunction-Associated Steatotic Liver Disease) and MASH (Metabolic-Associated Steatohepatitis)
Hepatic Steatosis	>5% hepatic fat accumulation, confirmed by imaging OR biopsy	>5% hepatic fat accumulation, confirmed by imaging AND biopsy
Dual Etiology	Alcohol related or other liver diseases must be excluded	Associated alcohol related or other liver diseases may be present

Metabolic Risk Factors	Not required; however, obesity, diabetes, and metabolic factors are frequently observed	<p>Required: At least one cardiometabolic risk factor BMI: ≥ 25 kg/m² or Waist Circumference: > 94 cm for men, > 80 cm for women</p> <p>Fasting Blood Glucose: ≥ 100 mg/dL, or Post-load Glucose (after two-hour glucose tolerance test): ≥ 140 mg/dL, or HbA1c: $\geq 5.7\%$ (39 mmol/mol), or a diagnosis of Type 2 diabetes, or current diabetes treatment</p> <p>Blood Pressure: $\geq 130/85$ mmHg or current antihypertensive treatment</p> <p>Plasma Triglycerides: ≥ 150 mg/dL or under lipid-lowering treatment</p> <p>Plasma HDL-Cholesterol: ≤ 40 mg/dL for men and ≤ 50 mg/dL for women, or under lipid-lowering treatment</p>
Alcohol Intake	<20 g/day for females, <30 g/day for males	Same limits apply, but with a distinct category (MetALD) for higher alcohol intake, beyond MASLD criteria

Table S2. Cardiometabolic risk factors in patients diagnosed with NAFLD included in the study

Patient id	BMI	Blood Glucose	Blood Pressure	Triglyceride	HDL
1.	✓	✓	✓	X	X
2.	✓	X	✓	X	X
3.	✓	✓	X	✓	X
4.	✓	✓	✓	X	X
5.	✓	✓	X	X	X
6.	✓	X	X	X	X
7.	✓	✓	✓	✓	X
8.	✓	X	X	✓	X
9.	✓	✓	X	X	✓
10.	✓	✓	✓	X	X
11.	✓	✓	✓	X	X
12.	✓	✓	X	X	✓
13.	✓	✓	✓	✓	✓
14.	✓	✓	X	✓	X
15.	✓	✓	X	✓	✓
16.	✓	X	X	✓	X
17.	✓	✓	X	X	X
18.	✓	X	✓	X	✓

19.	✓	X	X	✓	X
20.	✓	X	X	X	X
21.	X	✓	X	X	X
22.	✓	✓	X	X	X
23.	✓	✓	✓	✓	X
24.	✓	✓	X	X	✓
25.	✓	✓	X	✓	X
26.	✓	✓	X	X	X
27.	✓	✓	✓	✓	X
28.	✓	✓	X	✓	X
29.	✓	X	✓	X	X
30.	✓	✓	X	✓	X
31.	X	X	X	✓	X
32.	✓	✓	X	✓	X

Note: A checkmark indicates the presence of a cardiometabolic factor, while an X indicates its absence.

References

1. Chen L, Tao X, Zeng M, Mi Y, Xu L. Clinical and histological features under different nomenclatures of fatty liver disease: NAFLD, MAFLD, MASLD and MetALD. *Journal of Hepatology*. 2024;80(2):e64-e6.

2. Ramírez-Mejía MM, Méndez-Sánchez N. What Is in a Name: from NAFLD to MAFLD and MASLD—Unraveling the Complexities and Implications. *Current Hepatology Reports*. 2023;22(4):221-7.
3. Loomba R, Wong VWS. Implications of the new nomenclature of steatotic liver disease and definition of metabolic dysfunction-associated steatotic liver disease. *Alimentary pharmacology & therapeutics*. 2024;59(2):150-6.