

Higher Diet Quality is Associated with a Lower Prevalence of MASLD and Adverse Health Outcomes: Insights from NHANES 2005 – 2020

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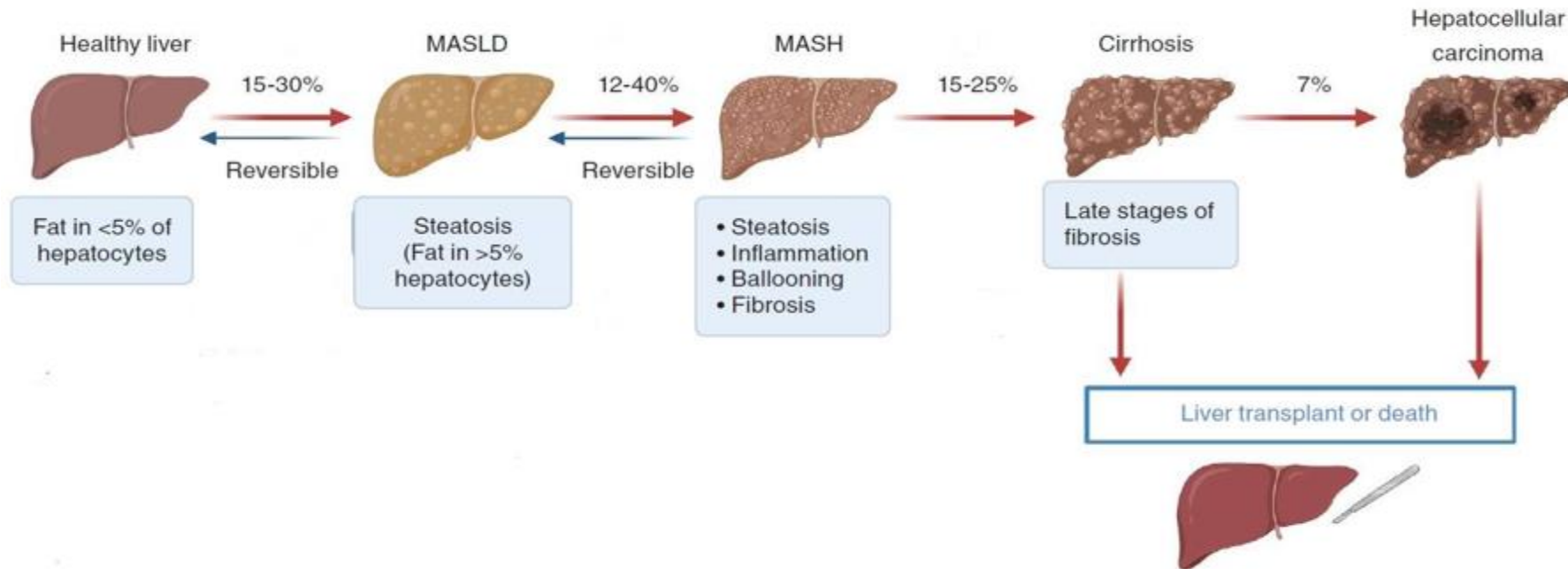
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METABOLIC DYSFUNCTION - ASSOCIATED STEATOTIC LIVER DISEASE (MASLD)

- Affects over **30%** of the global population.
- Steatosis affecting **>5% of the hepatocytes + one or more cardiometabolic risk factors**.



LIFESTYLE MODIFICATION IN MASLD

Lifestyle Recommendations

Weight loss of 3%–5% improves steatosis, and >10% for MASH and fibrosis.

Caloric restriction or behavioral modification.

↓ Fat diet
↓ Carbohydrate diet
Mediterranean diet

Physical Activity



Diet Quality Tools

Mediterranean Diet Score (MedDietScore)



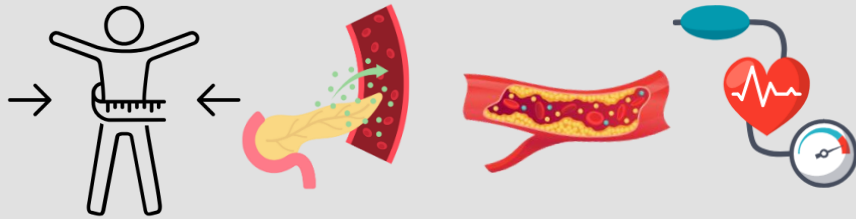
Healthy Eating Index-2020 (HEI)

Dietary Approach to Stop Hypertension (DASH)

RESEARCH GAPS

What's Known

- Higher adherence to HEI-2020, Med diet and DASH is associated with improvement in metabolic risk factors.



- Med diet demonstrated hepatic and cardiovascular benefits in the Mediterranean population.



What's Needed

- Limited studies assess diet quality with advanced fibrosis and mortality in MASLD.



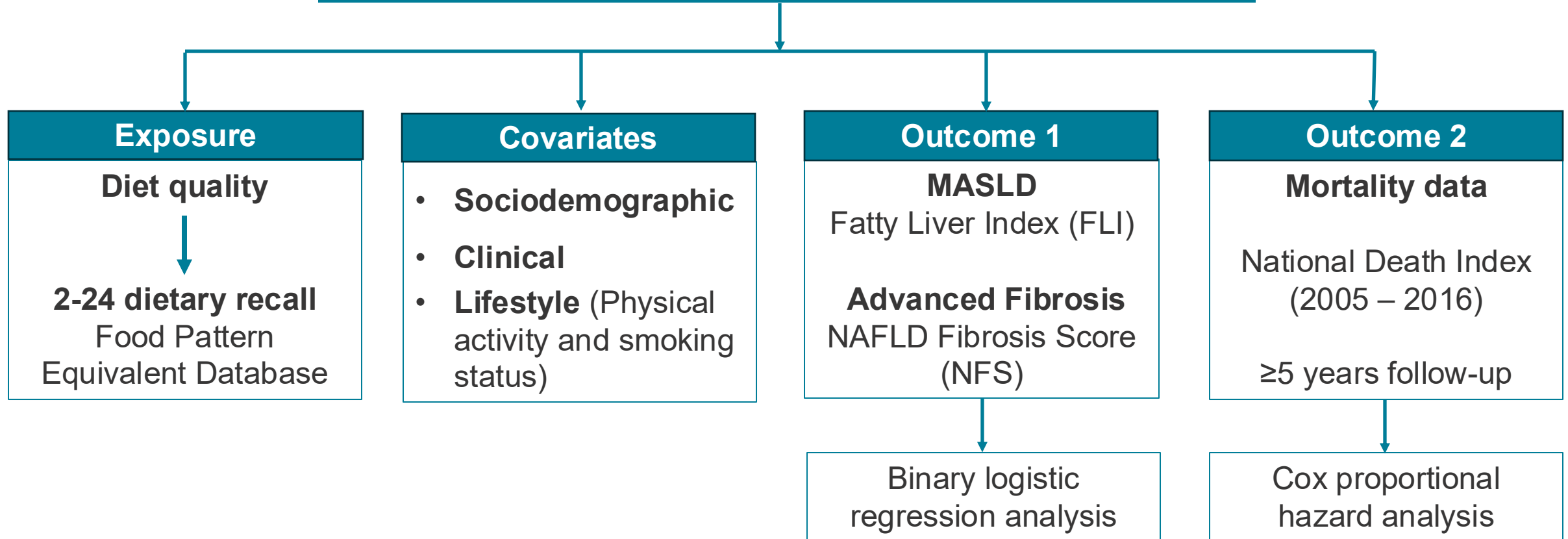
- The evidence on Med diet for MASLD in non-Mediterranean populations remains limited.

STUDY OBJECTIVES

- To assess the association of HEI-2020, MedDietScore and DASH with MASLD prevalence and advanced fibrosis in the NHANES national database (2005-2020) of the United States (U.S.).
- To assess the association of these diet quality tools with all-cause mortality in those with and without MASLD and advanced fibrosis.

METHODS

NHANES national database of U.S adults
Cross-sectional analysis (n = 20,502; 2005 – 2020)
Longitudinal analysis (n = 13,161; 2005 – 2016)



RESULTS

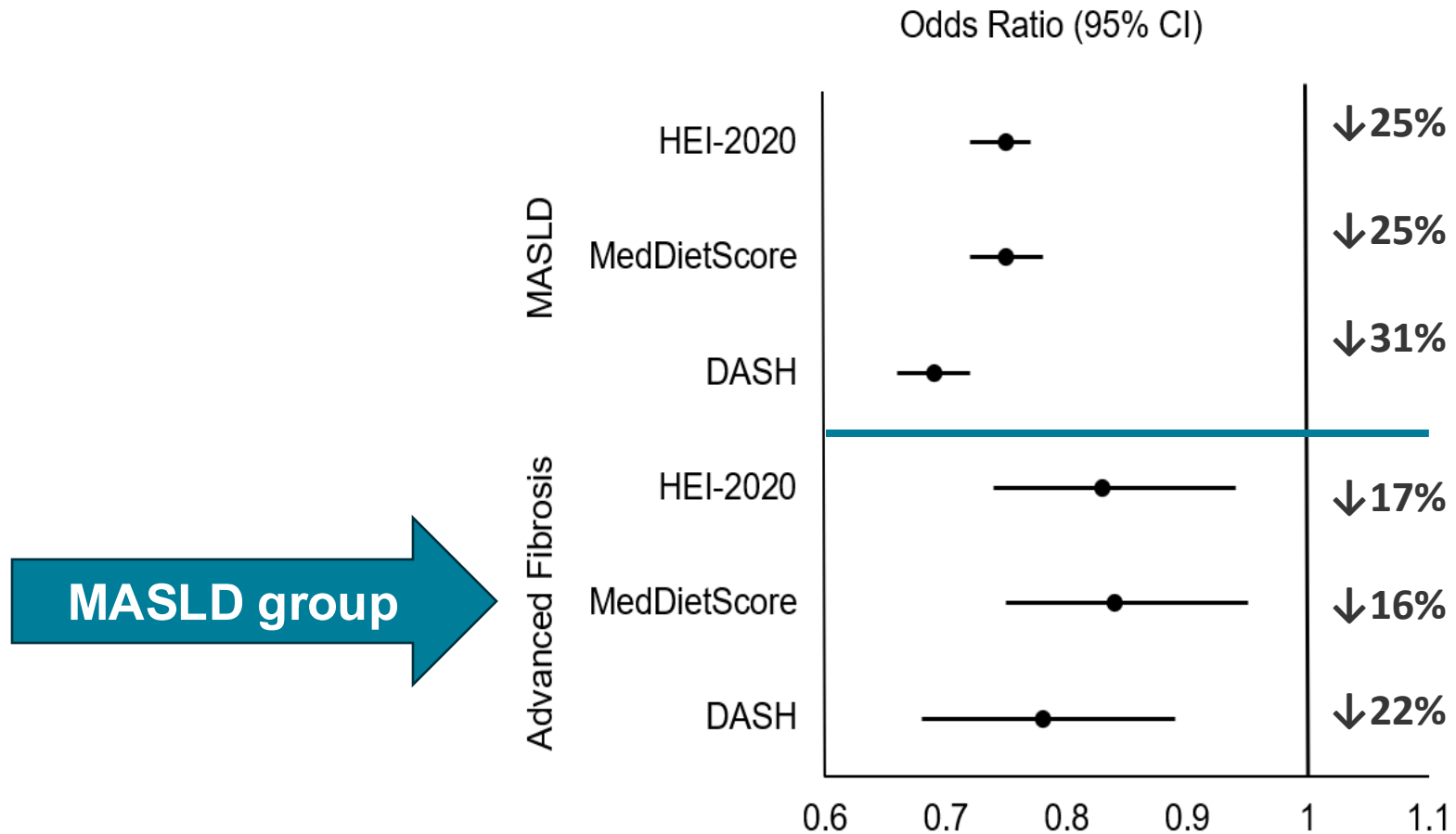
- The weighted MASLD prevalence in NHANES 2005 – 2020 was **48%**.
- The prevalence of advanced fibrosis was **9%** in the MASLD group.

Demographic Characteristics

Variable	Overall (n=20,502)	MASLD (n=9,841)	Non-MASLD (n=10,661)
Age, years	48 (47 – 48)	50 (49 – 50)	45 (44 – 46)
Males, %	46	52	40
Overweight, %	33	22	42
Obese, %	40	77	7
Diabetes, %	13	21	5

ASSOCIATION OF DIET QUALITY WITH MASLD AND ADVANCED FIBROSIS

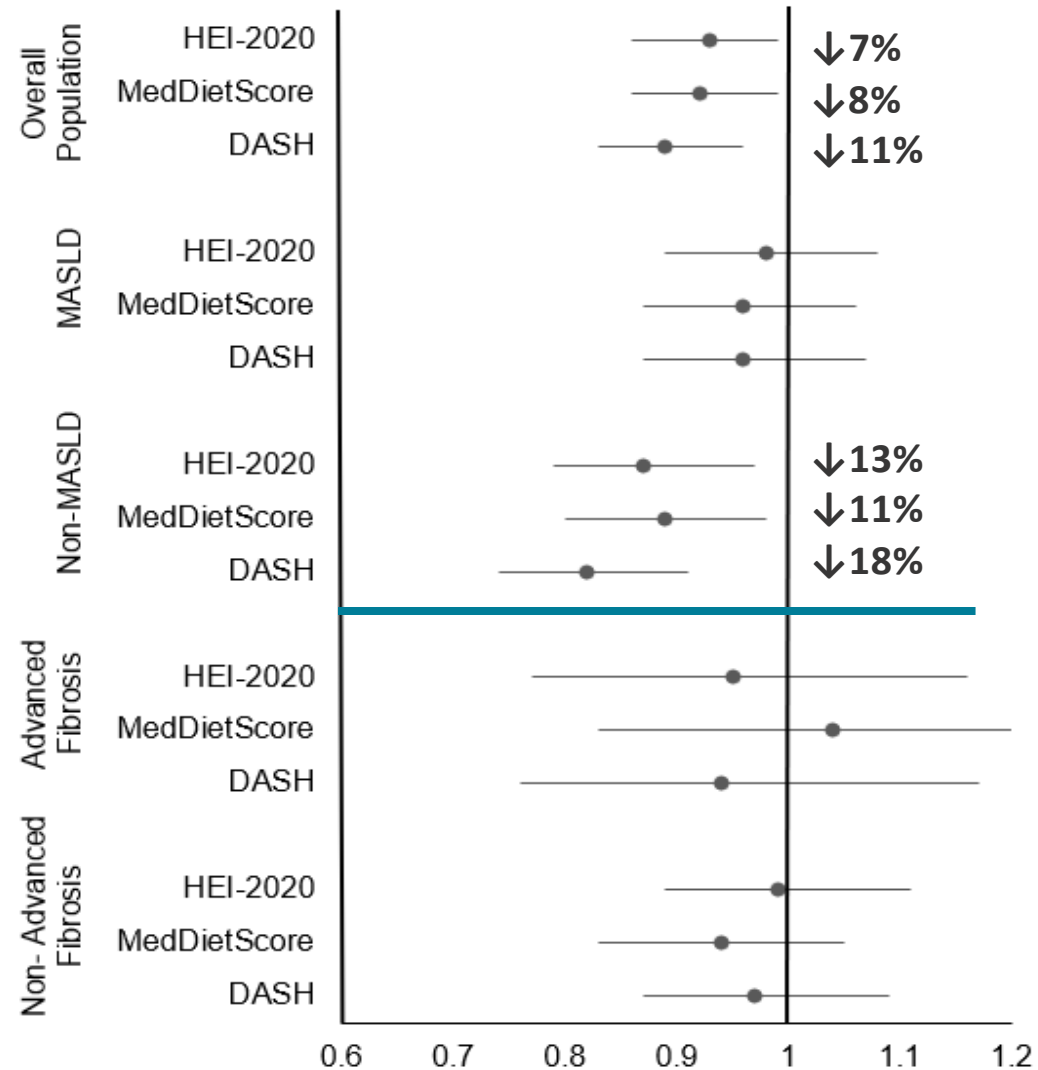
(STANDARDISED SCORES)



ASSOCIATION OF DIET QUALITY WITH ALL-CAUSE MORTALITY

(STANDARDISED SCORES)

Hazard Ratio (95% CI)



MASLD group

CONCLUSION

- Higher diet quality was associated with lower likelihood of MASLD and advanced fibrosis in U.S. adults.
- Diet quality was protective against all-cause mortality in overall and non-MASLD population but not in those with MASLD regardless of fibrosis status.
- These findings suggest that the timing of prevention strategies may be a key criterion when making dietary improvements to reduce mortality risk.

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Thank You and Question?



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