



# Dietary patterns for healthy aging - a focus on frailty and depressive symptoms

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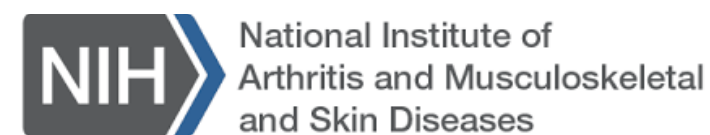


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## Disclosures

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# Frailty: a barrier to healthy aging

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- *“A state of increased vulnerability”*
  - *Physical, cognitive, wellness/disease state*
  - *Prevents healthy aging*
- Falls, hospitalization, disability, and death
- Prevalence 12-24% of older adults
- Adequate protein is the sole dietary recommendation



# Select dietary patterns and frailty

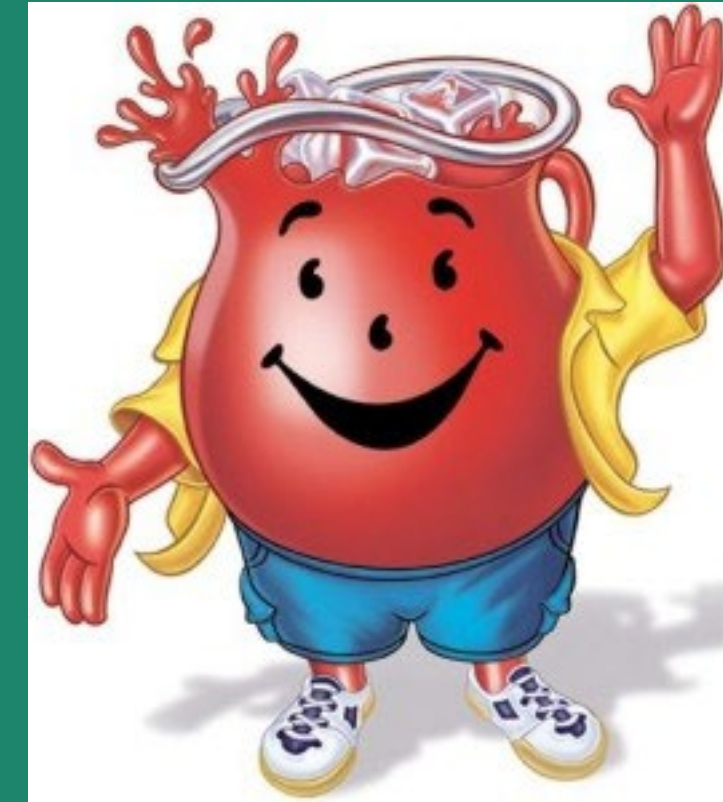
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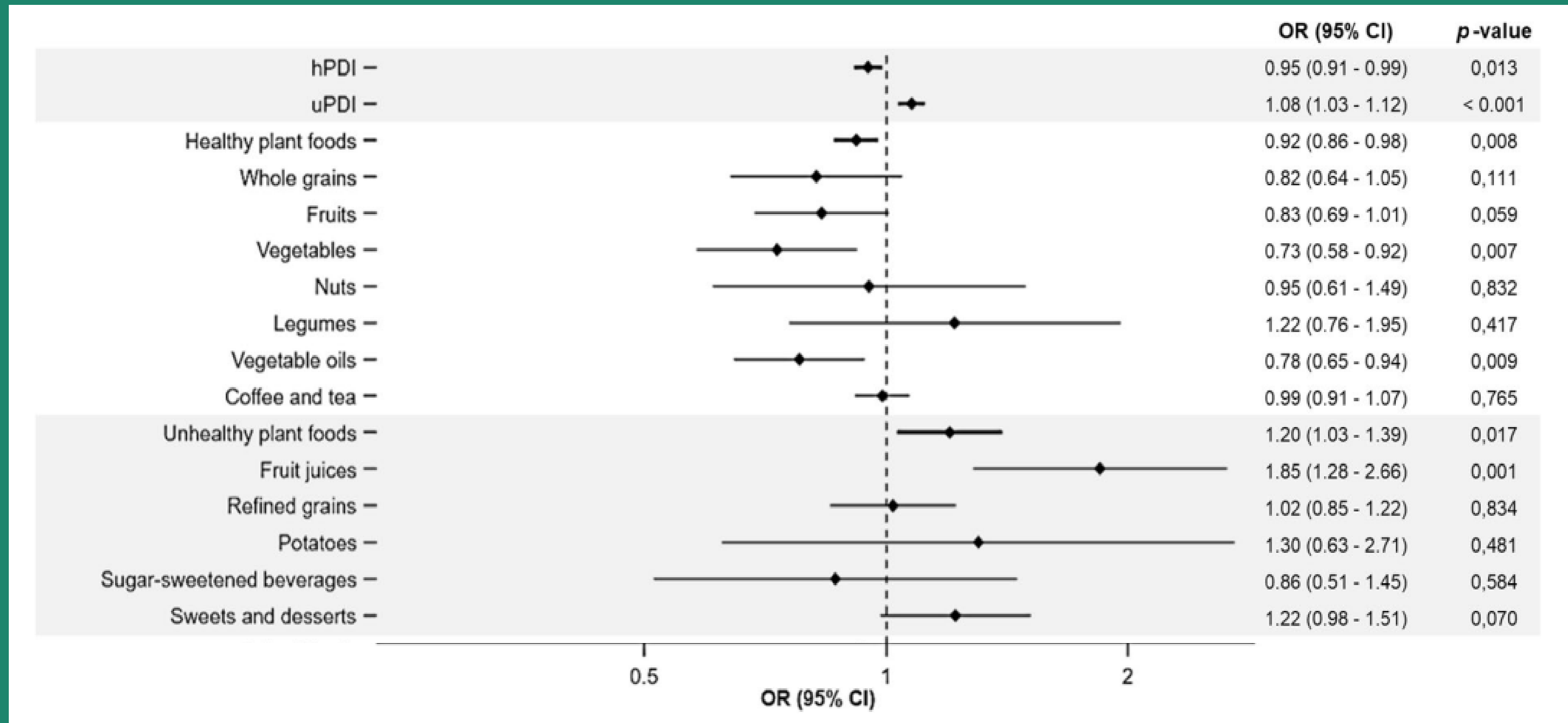
1. Plant-based Diet
2. Mediterranean Diet
3. Inflammatory Diet



# All plant-based diets are not equal



# Plant-based foods and frailty

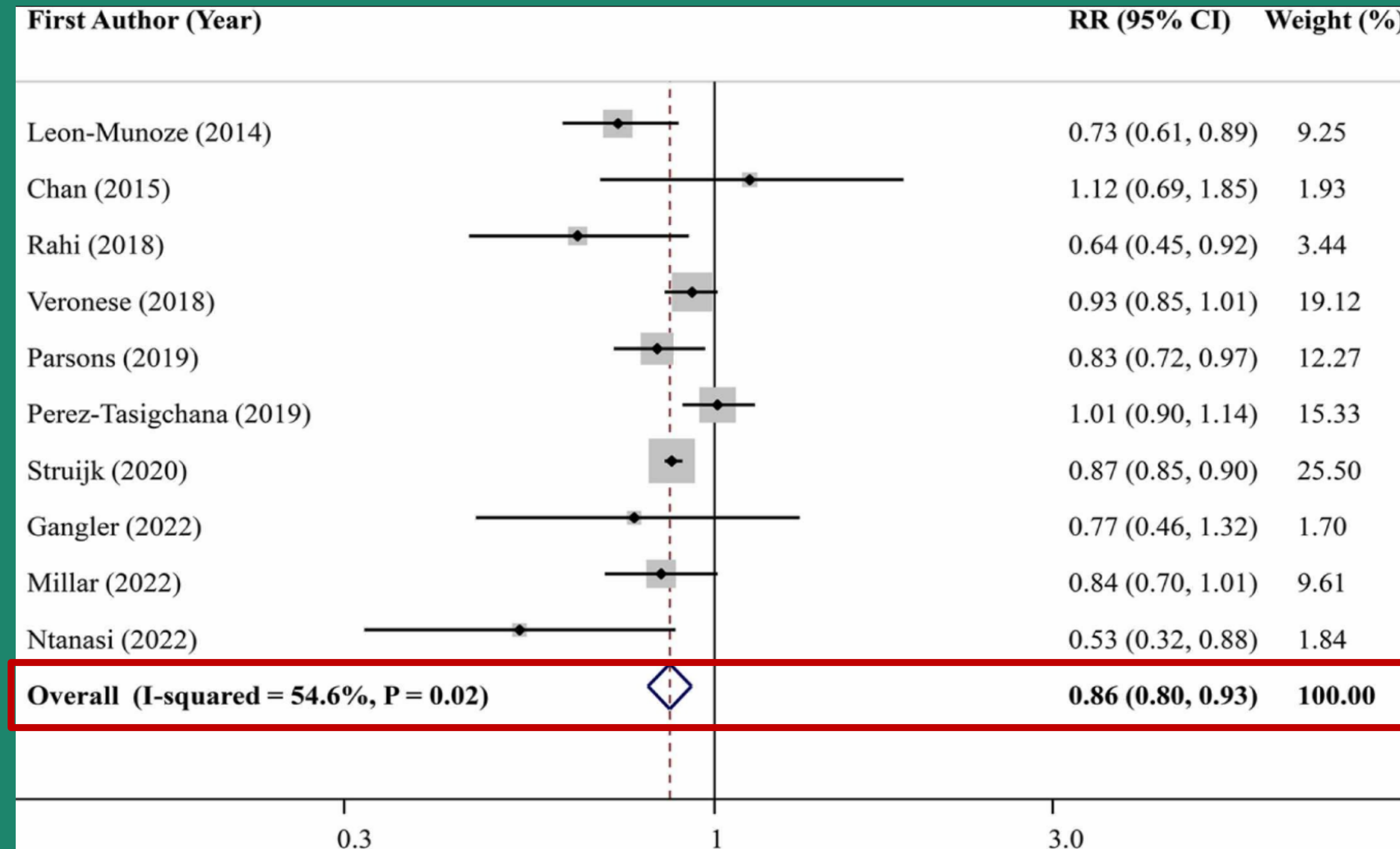


# Mediterranean Diet

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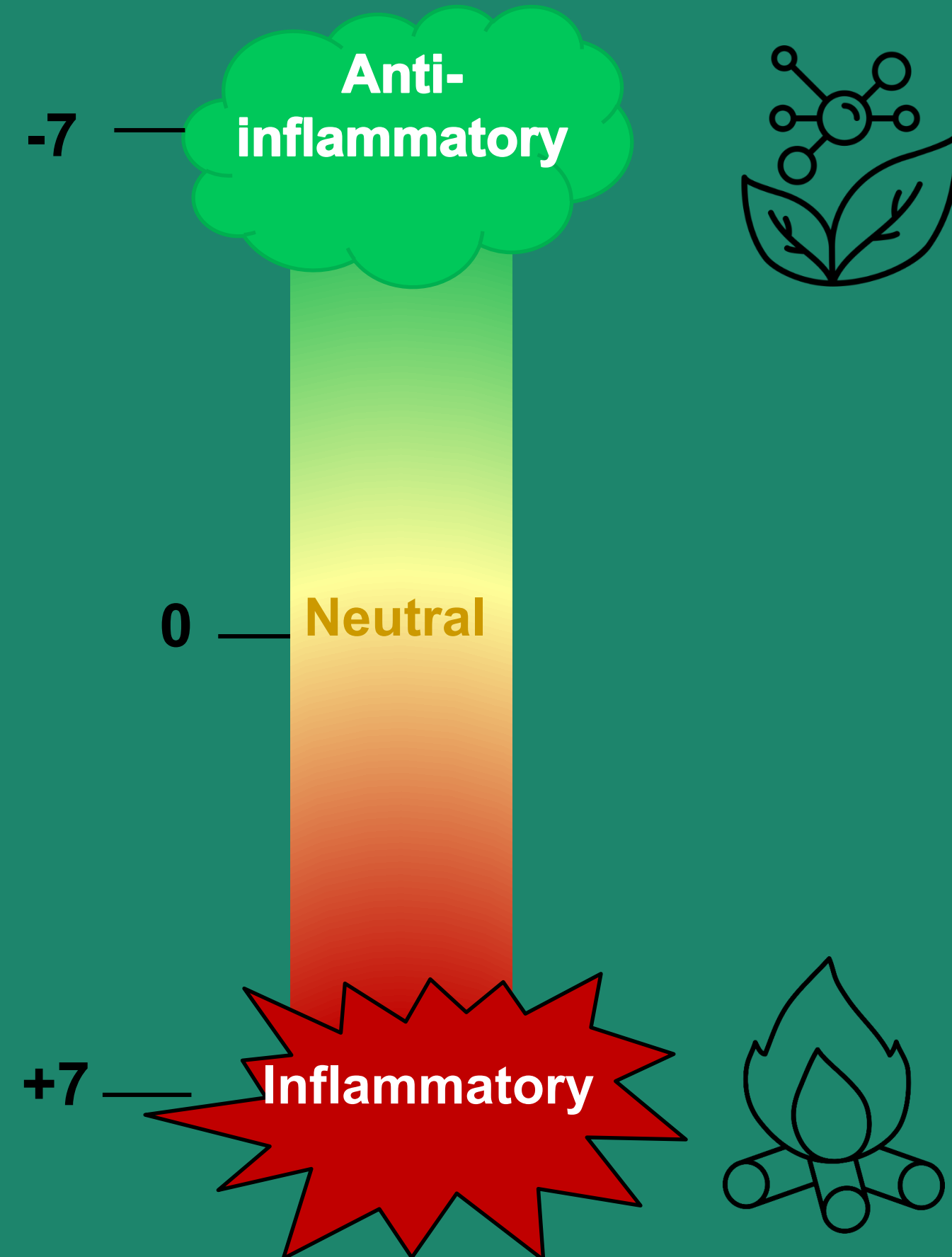


# Meta-analysis of Mediterranean diet and frailty prevention



# Inflammatory Diet

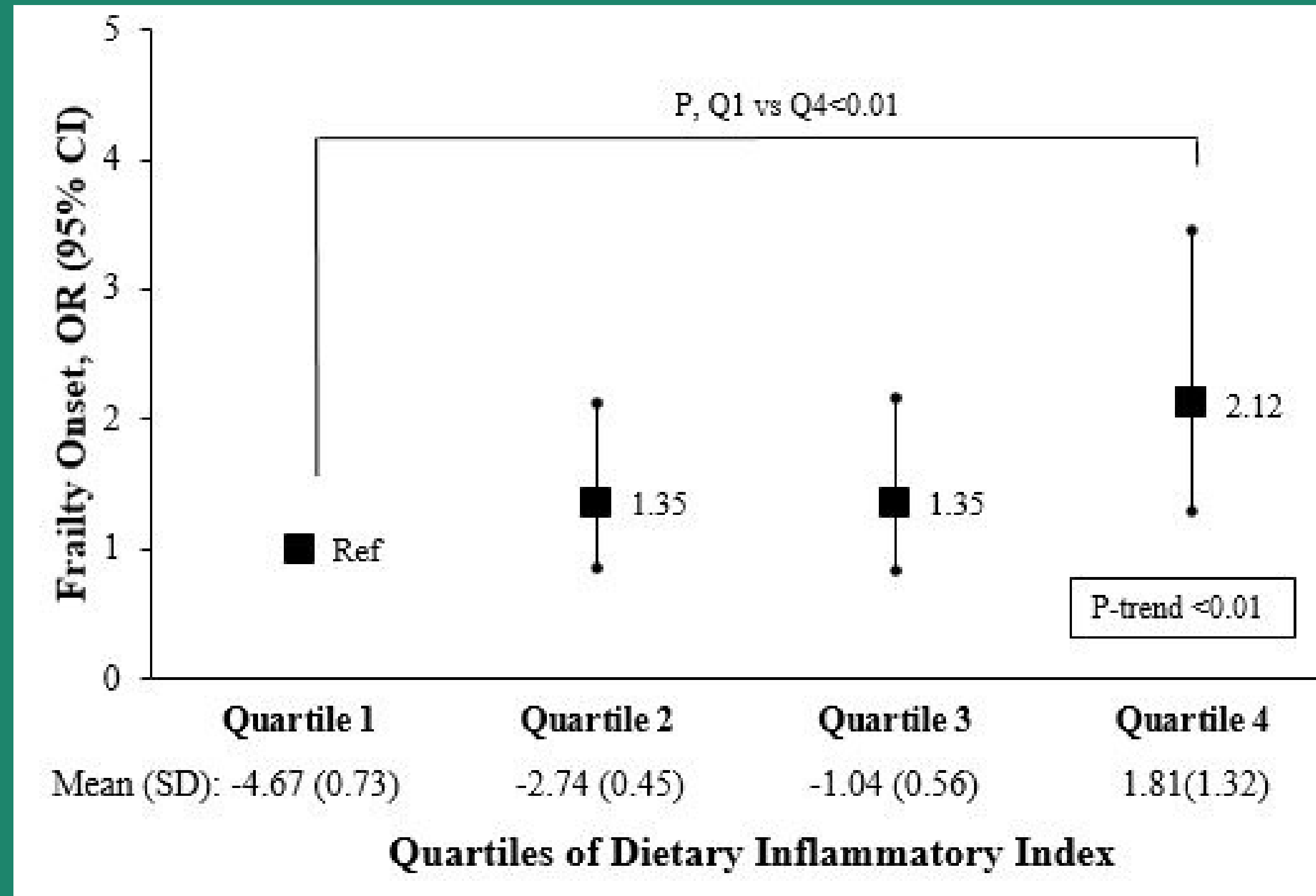
- Novel index: dietary inflammatory index (DII)
- Reflects the inflammatory potential of an individual's diet



# Association between DII and frailty

Author	Population	Study Design	OR (95%CI)
Kim et al. 2018	N=134 Age: 70-85 y	Cross-sectional	Per 1 unit higher DII (more pro-inflammatory diet): <b><u>1.64 (1.25-2.17)</u></b>
Resciniti et al. 2019	N=7,182 Age: ≥ 60 y	Cross-sectional	Per 1 unit higher DII (more pro-inflammatory diet): <b><u>1.12 (1.03-1.22)</u></b>
Shivappa et al. 2018	N=4,421 Age: 45-79 y	Longitudinal 8 y follow-up	Pro-inflammatory vs. anti-inflammatory quartile: <b><u>1.37 (1.01-1.89)</u></b>
Laclaustra et al. 2020	N=1,915 Age: ≥ 60 y	Longitudinal 2-4 y follow-up	Pro-inflammatory vs. anti-inflammatory tertile: <b><u>2.48 (1.42-4.44)</u></b>

# Categorical analysis of DII and frailty



# What about emotional disability?

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- Depression is a leading cause of disability
- DII is also associated with depressive symptoms
- Frailty and depressive symptoms often co-exist
- Relationship between diet, frailty, and depression and the time course of onset are unclear

# Four different phenotypic outcomes



Without  
Depressive Sx or  
frailty



Depressive Sx,  
without frailty

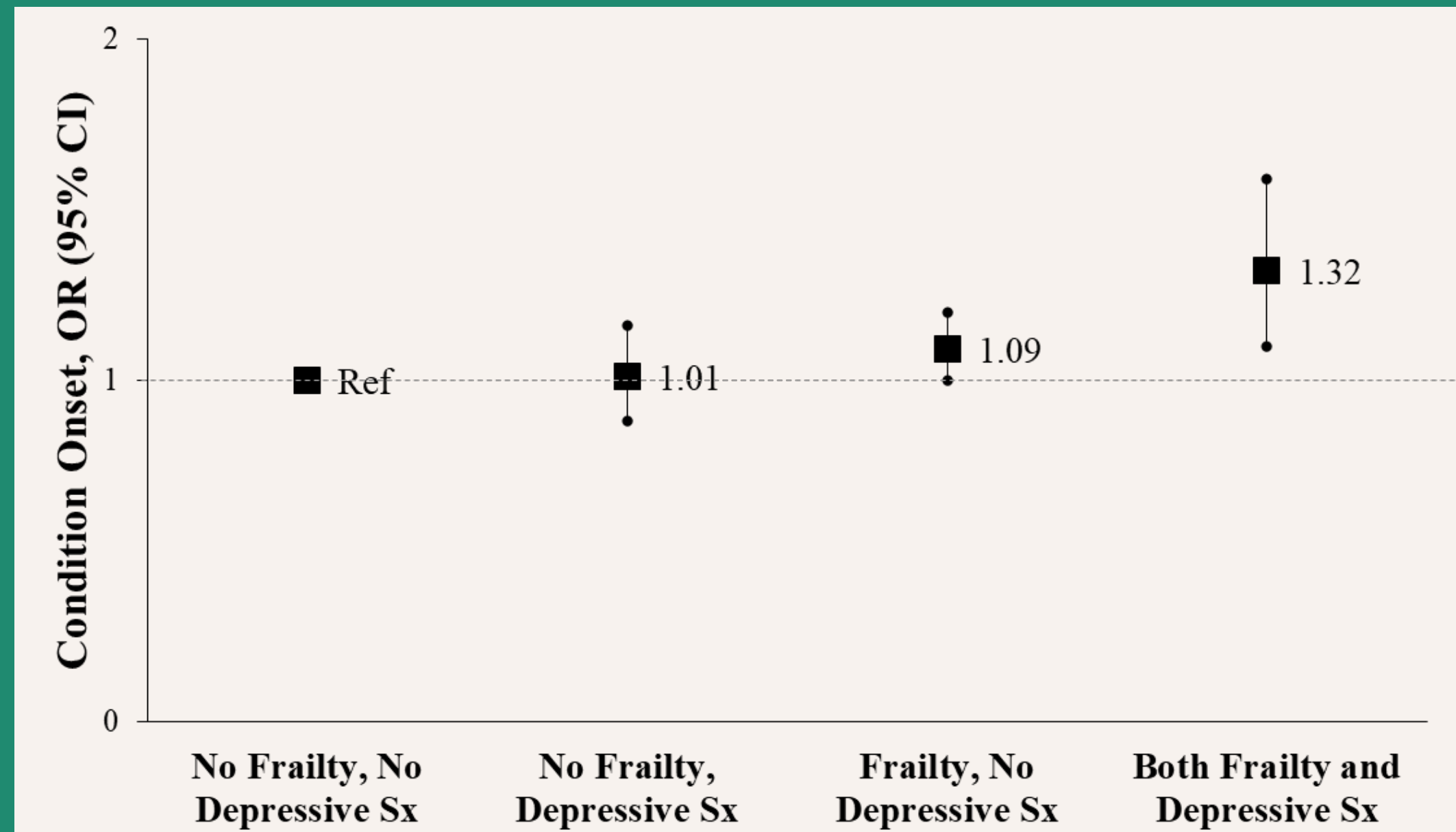


Without  
Depressive Sx,  
with frailty



Depressive Sx,  
frailty

# Dietary inflammation associated with both frailty and depressive symptoms onset



N=1,272



N=54



N=150



N=28

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**An anti-inflammatory diet has potential to target both prevention of frailty and depressive symptoms in older adults**

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# Takeaways and the future for diet, frailty, and depression research

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- Research supports dietary recommendations for frailty prevention beyond protein intake
- Translating to clinical interventions
- Challenges with outcomes
  - Frailty: may take a long time to precipitate
  - Depression: induced by life events and subject to the placebo effect
- Frailty and depression are dynamic conditions

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