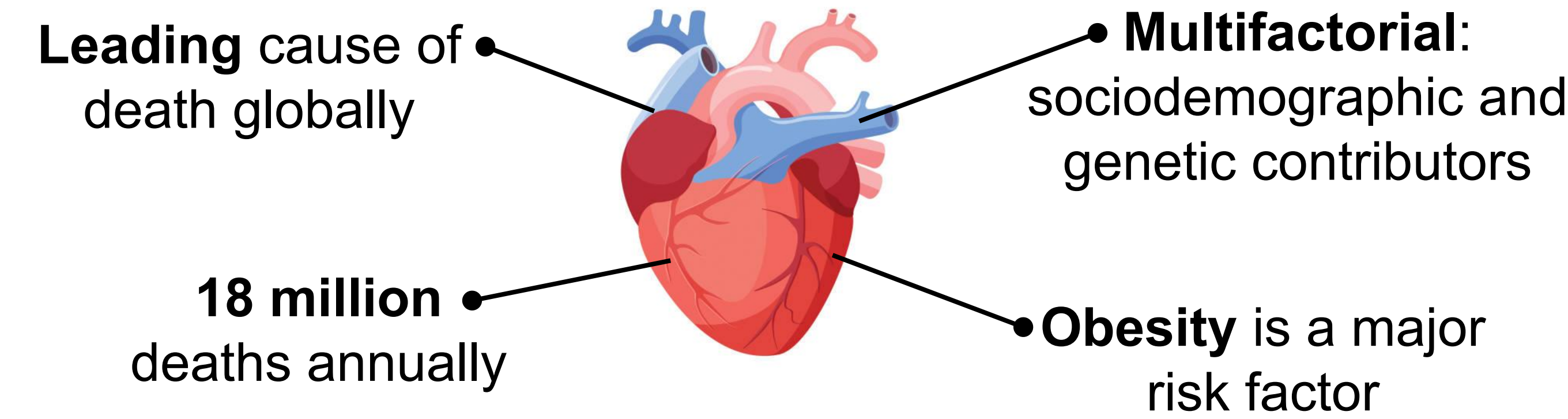


Association of Alternate Anthropometric Measures on All-Cause and Cardiovascular Disease-Related Mortality in U.S. Adults, 2007-2018

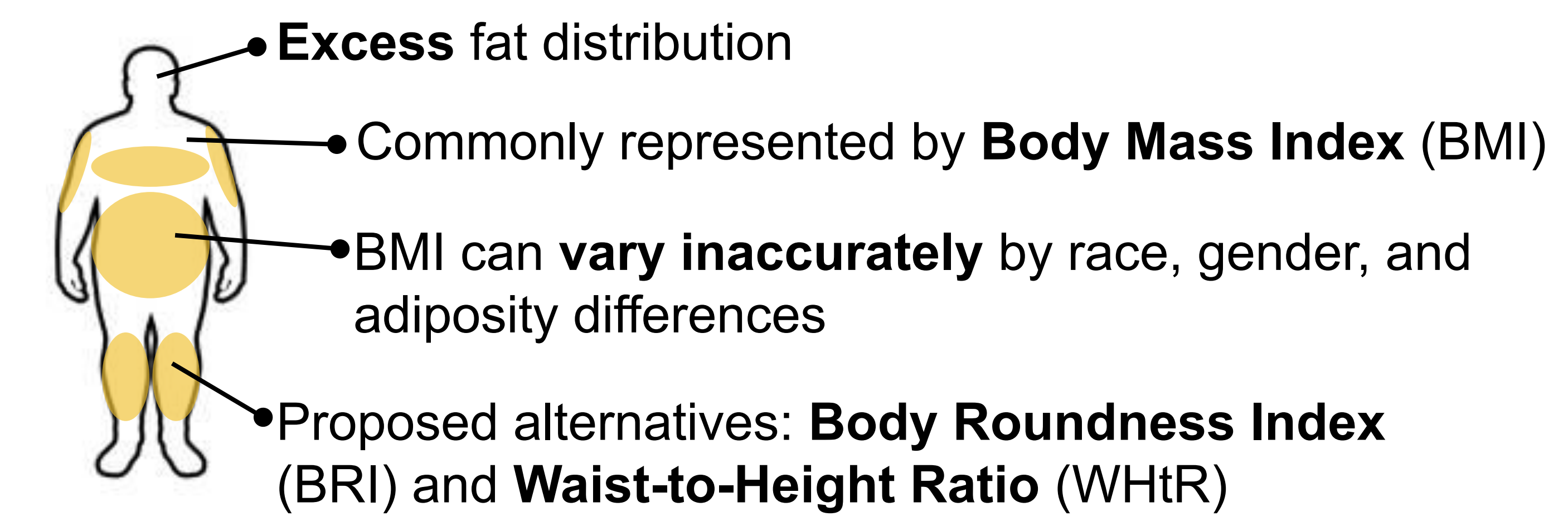
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Introduction

Cardiovascular Disease (CVD)

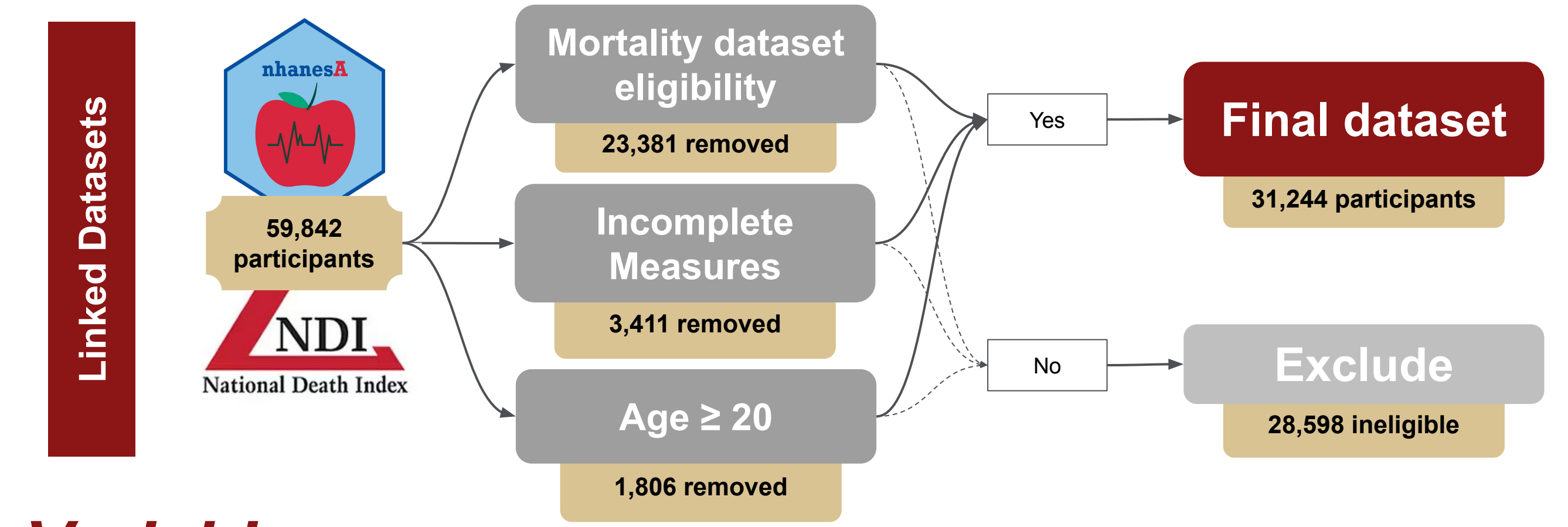


Obesity

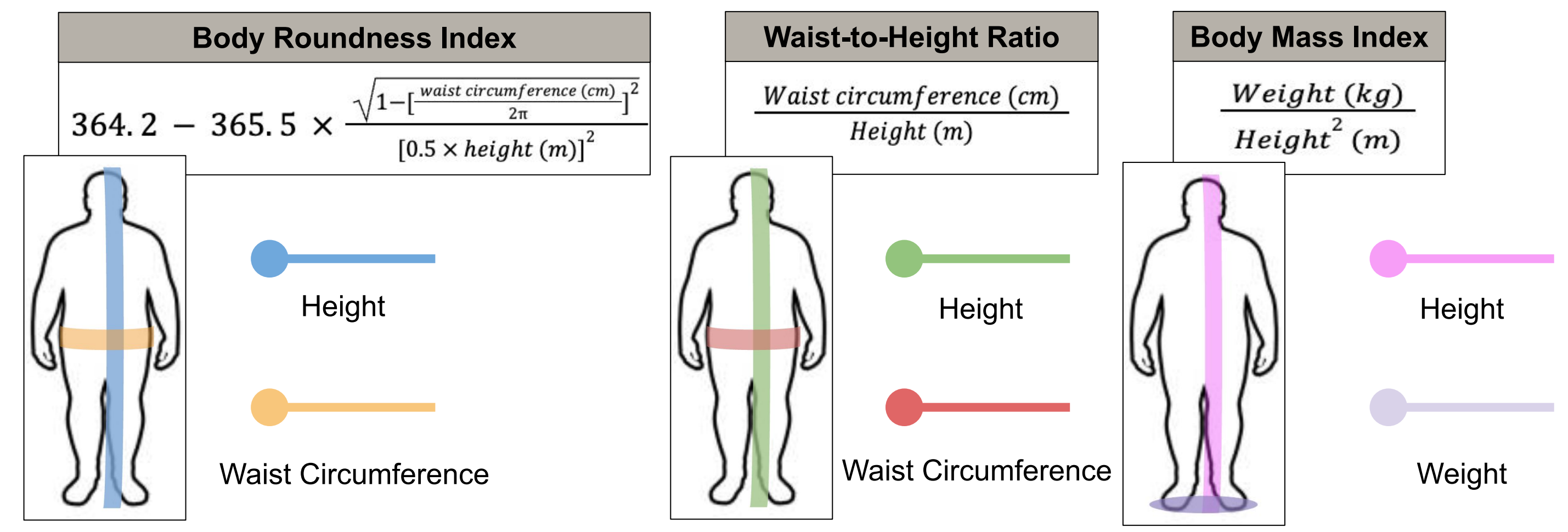


Methods

Eligibility Flowchart



Variables

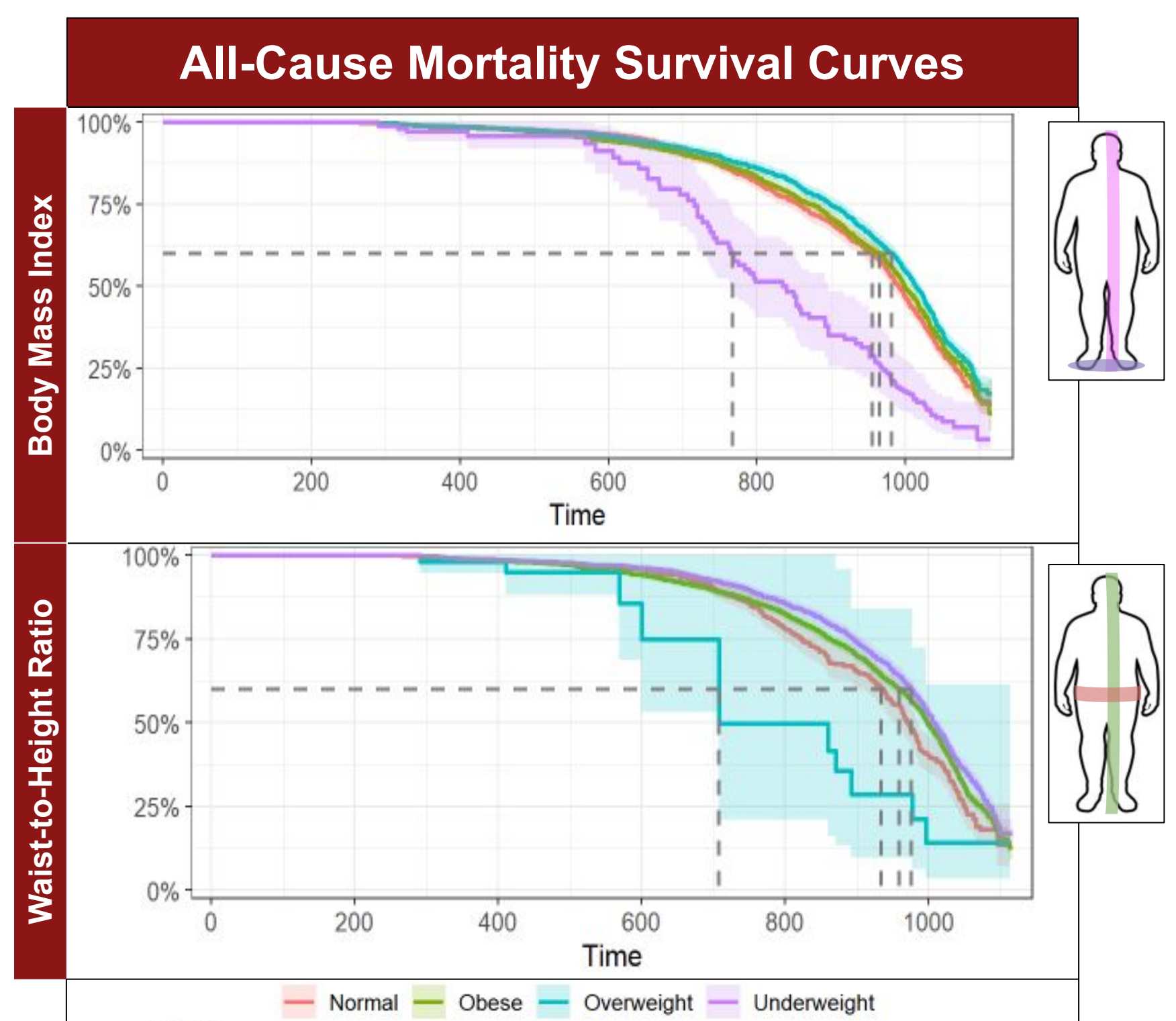


Covariates: Sex, Age, Race, Nativity, Educational Level, Poverty-to-Income Ratio

Outcomes All-cause and CVD-related mortality

Results

- Among 31,244 eligible adults,**
- 16,012 (51.5%) female
 - Mean (SD) age - 47.2 (16.8)
 - Population weights:
 - 66.1% Non-Hispanic White
 - 14.6% Hispanic
 - 11.2% Non-Hispanic Black
 - 8.1% Other race



	BRI	WHtR	BMI
All-Cause Mortality	1.06 (1.03 - 1.09)	3.39 (1.79 - 6.40)	1.01 (0.99 - 1.02)
CVD-Related Mortality	1.12 (1.06 - 1.17)	12.84 (3.50 - 47.1)	1.03 (1.01 - 1.05)

Waist-to-Height Ratio is associated with greater risk of all cause and CVD mortality than Body Mass index

Racial Disparity Findings: Obesity and Mortality

- Non-Hispanic Black Females
 - Highest proportion of obesity when measured with BMI (55.0%).
 - Highest proportion of high risk BRI (35.0%).
 - Highest proportion of high risk according to WHtR (56.8%).
- Non-Hispanic White males
 - Highest rate of all-cause mortality (8.1%).
 - Highest rate of CVD related mortality (2.4%).

Conclusions

Anthropometric Measures

- **WHtR** had the **strongest association** with all-cause and CVD-related mortality
- **BRI** and **BMI** both had **inferior associative ability**, with **BMI** as the **least accurate**

Racial Disparities

- **Non-Hispanic Black females** - highest proportion of **obesity** across all measures
- **Non-Hispanic White males** - highest rate of **mortality** for both all-cause and CVD-related.

These findings highlight the need for alternative body composition measures and associating with cardiovascular disease mortality risk.

Future Directions

- Exploring **predictive ability** of alternative anthropometric measures for **prevalence rates** in other CVD conditions.
- Investigating the **high obesity rate** in **Non-Hispanic Black females** through varying biological and sociodemographic explanatory variables.

Limitations

- Waist circumference (WC), a body shape index (ABSI), or Waist-to-Hip ratio (WHR) not included in survival analysis due to small sample size issues as most participants lacked a **hip circumference** measurement.
- Unable to obtain "Other" race disaggregation.

Abstract & References

