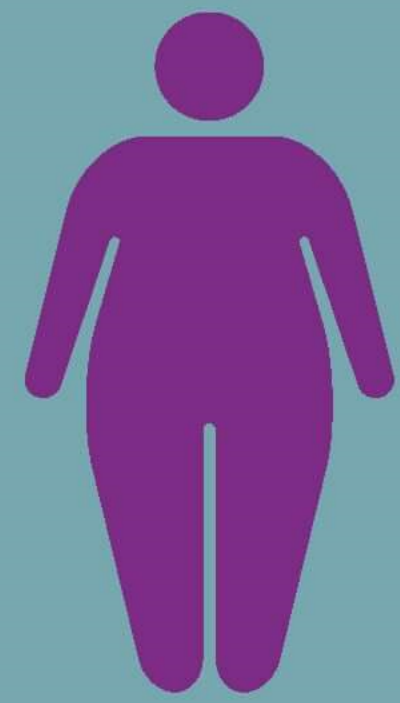


Does obesity put your brain at risk?

Obesity



Neurodegenerative diseases

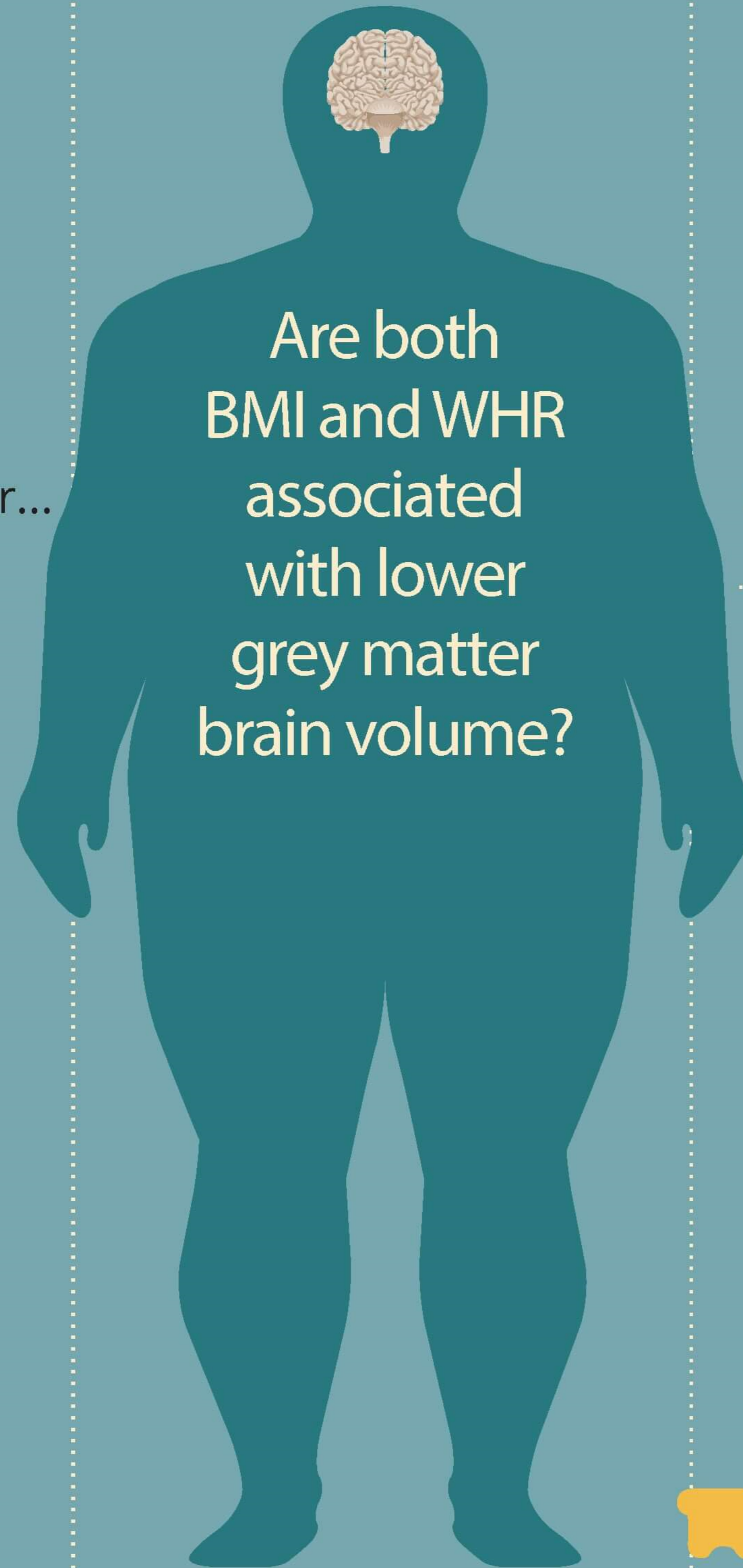


association unclear



Study question

Are both BMI and WHR associated with lower grey matter brain volume?



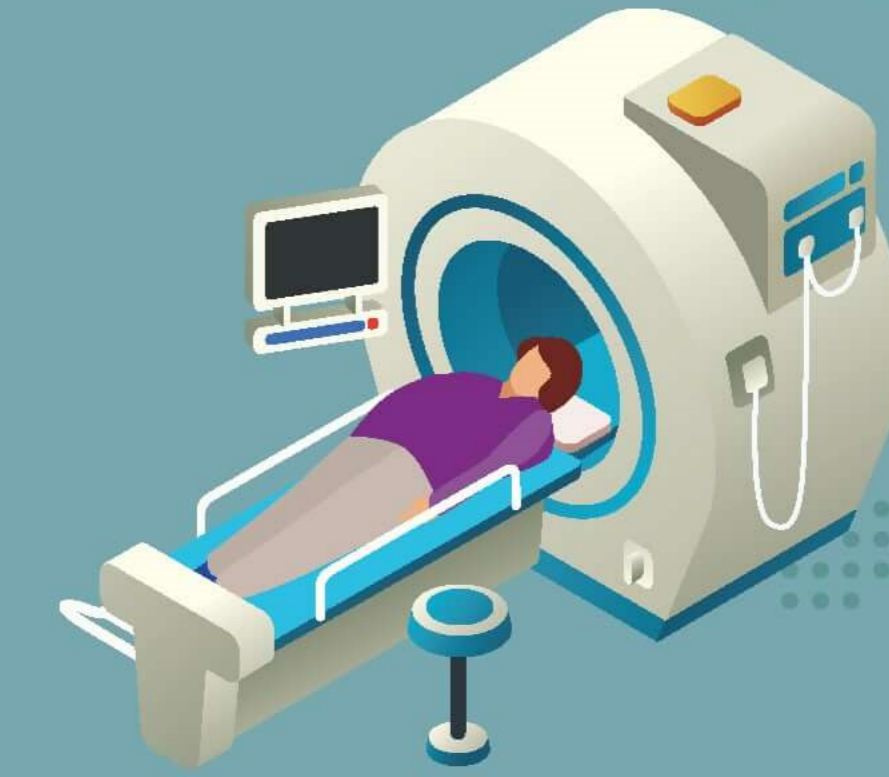
UK Biobank study

n=9652 Age: 55.4 ± 7.5 yrs

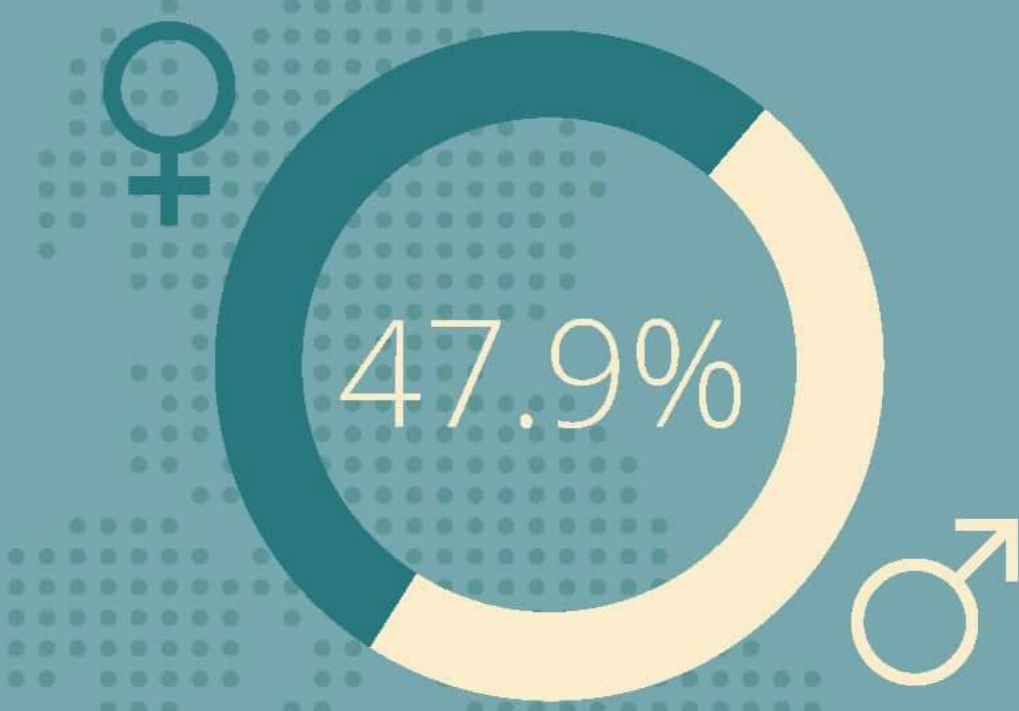


Obesity measured: Bioimpedance

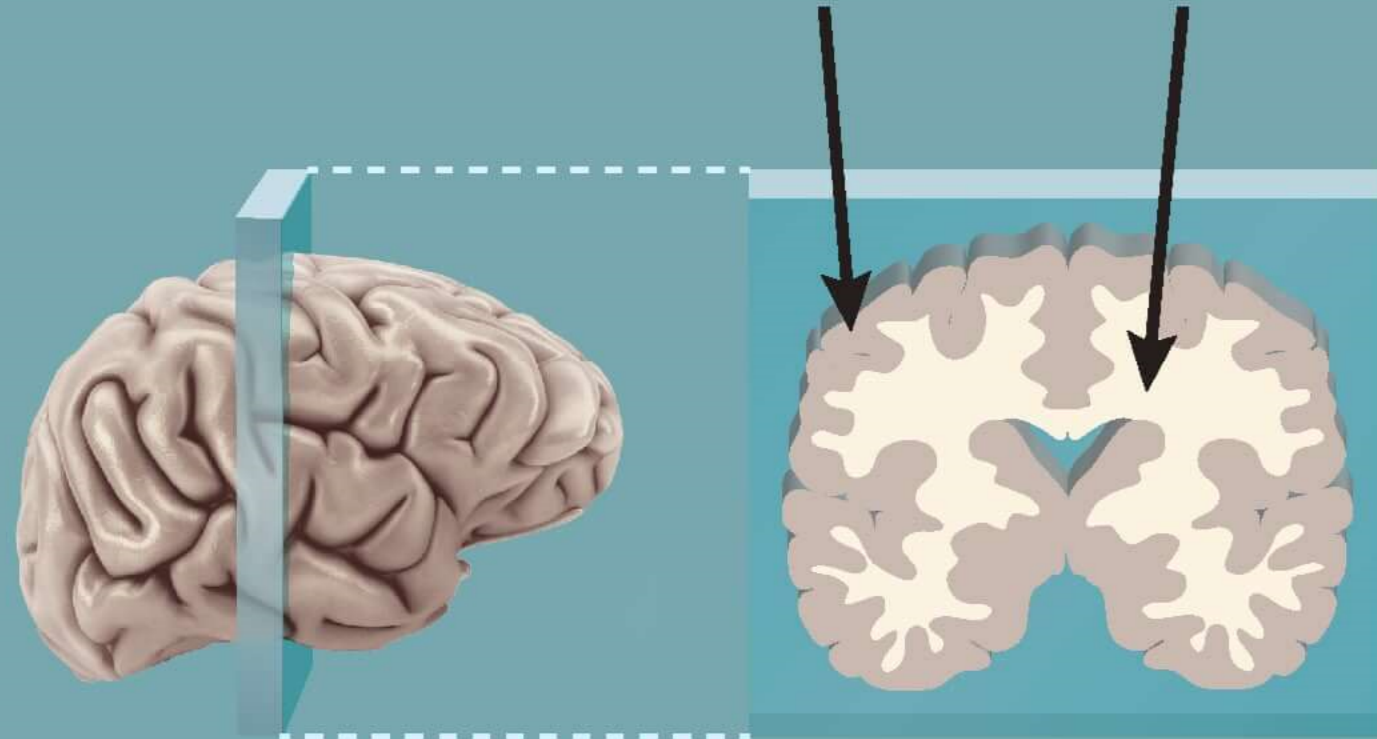
- BMI
- WHR
- Total fat



Grey matter volume measured:
Structural magnetic resonance imaging



Structural alterations of **GREY/WHITE** matter...

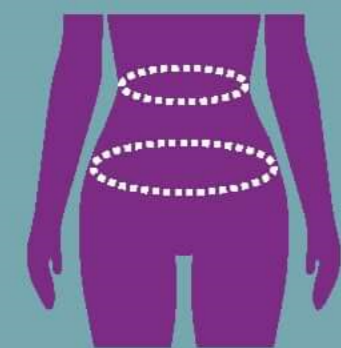


...linked to neurodegenerative diseases.

↑ Body mass index (BMI)



↑ Waist-hip-ratio (WHR)

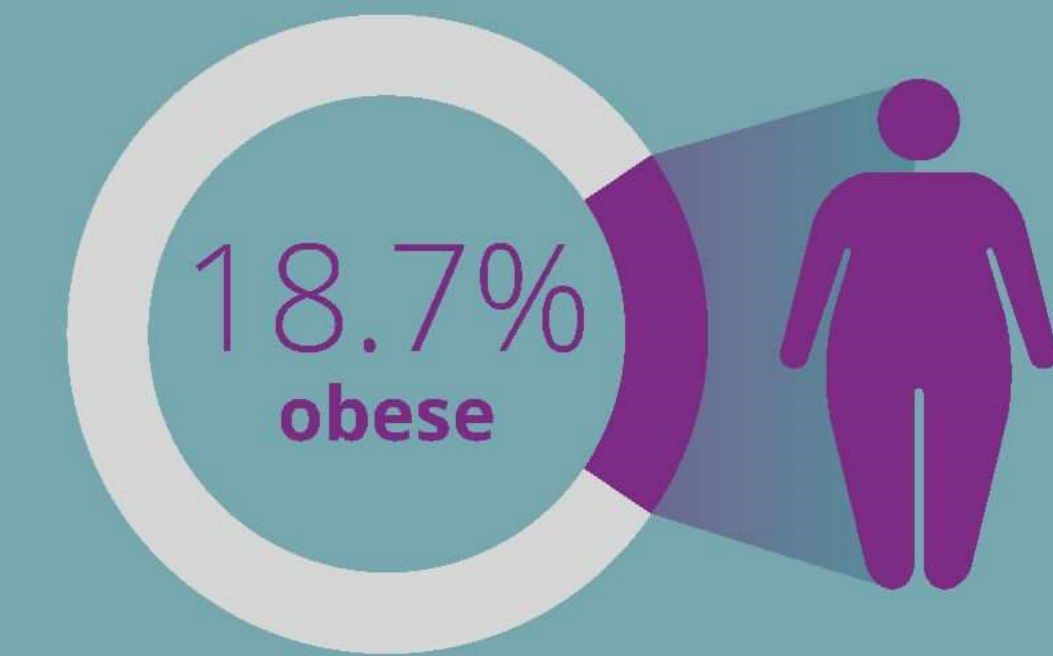
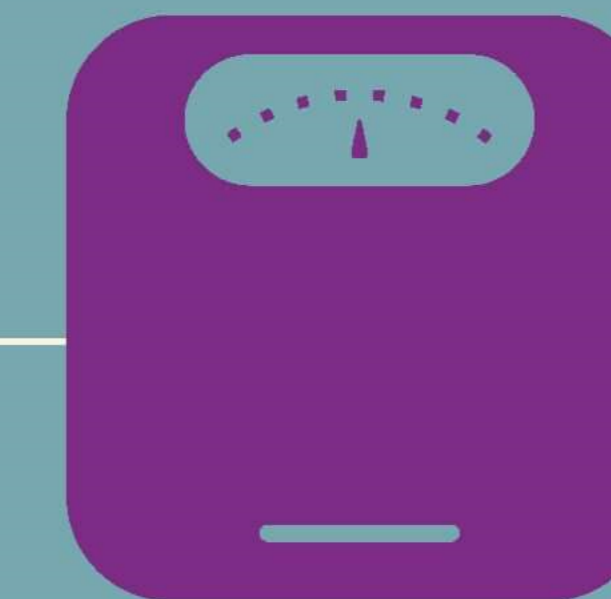
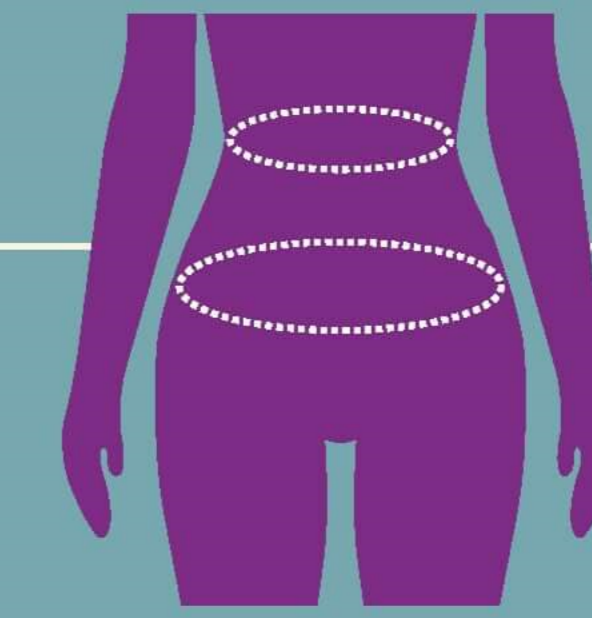
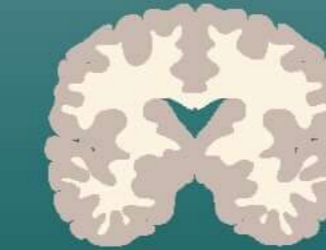


are separately associated with lower grey matter volume.

Obesity measures



lower grey matter volume



Obesity measures had additive effect only in obese participants (BMI ≥30 kg/m²).

Combination of high BMI and WHR puts people at greatest risk of grey matter atrophy.