

Acute Coronary Syndromes

OBESITY IN YOUNG ADULT MEN AND RISK OF TYPE II DIABETES, CARDIOVASCULAR MORBIDITY, OR DEATH BEFORE 55 YEARS OF AGE: A DANISH 33-YEAR FOLLOW-UP STUDY

Moderated Poster Contributions

Poster Sessions, Expo North

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Session Title: Body Size and MI Risk: Is Bigger Better?

Abstract Category: 1. Acute Coronary Syndromes: Clinical

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Background: The association between body mass index in young adulthood and the long-term combined cardiovascular risks remain unclear. We examined the association between body mass index in young men and the risk of type 2 diabetes, cardiovascular morbidity, and death before 55 years of age.

Methods: We conducted a cohort study of 6,502 males born in 1955 and eligible for conscription in Northern Denmark. Diagnoses on all non-fatal outcomes were obtained from the Danish National Registry of Patients, which was initiated in 1977. Thus, we chose to begin follow-up at the 22nd birthday of each subject and continue until death, emigration, or 55 years of age, whichever came first. Using regression analyses, we calculated risks, risk differences and hazard ratios associating body mass index with individual and combined outcomes, adjusting for cognitive test score and years of education.

Results: Half of all obese young men were either diagnosed with type 2 diabetes, myocardial infarction, stroke, venous thromboembolism, or hypertension or died before reaching 55 years of age. Comparing obese men (body mass index: ≥ 30 kg/m²) with normal weight men (body mass index: 18.5 to <25.0 kg/m²), the risk difference for any outcome was 28% (95% confidence interval: 19% to 38%) and the hazard ratio was 3.0 (95% confidence interval: 2.3 to 4.0). Compared with normal weight, obesity was associated with an event rate that was increased more than 7-fold for type 2 diabetes, 4-fold for venous thromboembolism, and 2-fold for myocardial infarction, hypertension and death. Results for stroke as an individual outcome were imprecise due to few events.

Conclusions: Obesity in young adulthood is a strong risk factor for type 2 diabetes, cardiovascular morbidity and premature death. The results emphasize the importance of primary prevention of young adulthood obesity.