

NEWS in Brief



SMALLER THIGHS MIGHT BE A DISADVANTAGE TO HEALTH

Though counter-intuitive, a prospective cohort study appears to indicate that up to a point, bigger thighs might mean a smaller risk of heart disease or premature death. This was reported by Danish researchers from the Copenhagen University Hospital in the *British Medical Journal*. Men and women who had a thigh circumference of less than 60cm had a significantly increased risk for heart disease and death.

It was thought that lower muscle mass in the lower limbs might provoke insulin resistance and adverse lipid and glucose metabolism. However, the study did not measure thigh tissue composition, and this hypothesis (regarding muscle mass) could not be tested.

The researchers turned to 1,380 women and 1,436 men who were participating in the Danish 'Monitoring Trends in and Determinants of Cardiovascular Disease' (MONICA) study. They were followed up for 10 years for cardiovascular disease (CVD) and coronary heart disease (CHD), and 12.5 years for death. After 10 years, 140

women and 263 men and developed CVD; and 34 women and 103 men had CHD disease. After 12.5 years, 155 women and 257 men had died. It was found that small thigh circumference – especially when <55 cm – was associated with an increased total mortality, and increased risk of CVD and CHS, in both men and women.

The researchers used regression models that controlled for body fat, height, BMI, and waist circumference. The association with CVD and CHD became weaker as more confounders were added, which the researchers thought was due to lack of statistical power in a small study size.

Above certain thresholds, there was no apparent further benefit of having larger thighs. The thresholds were as follows: (1) 62 cm for men and women for total mortality; (2) 56 cm for CVD and CHD for men, (3) 68 cm for CVD in women; and (4) 60 cm for CHD for women. Below the thresholds, the risk was greatly increased. Above the thresholds, there was no protective effect related to increasing thigh size.

The researchers concluded that measuring thigh circumference might

help general practitioners in the early identification of individuals at an increased risk of premature morbidity and mortality.

An accompanying editorial (from Princess Alexandra Hospital, Brisbane) said that it would seem logical that having bigger thighs would be a reflection of greater adiposity, and that this would increase the risk of heart disease. It said that more research was needed to test this hypothesis. The editorial also added that randomised trials are needed to test whether interventions that increase thigh muscle mass through increased physical activity would decrease cardiovascular risk. It also wondered whether measuring thigh circumference would add anything to our clinical management, aside from the medical history of risk factors, examination of the cardiovascular system, and measuring serum lipid levels. **SMA**

Sources: (1) Heitmann BL, et al. Thigh circumference and risk of heart disease and premature death: Prospective cohort study. *BMJ* 2009; DOI: 10.1136/bmj.b3292. (2) Scott IA. Thigh circumference and risk of heart disease and premature death. Editorial. *BMJ* 2009; DOI: 10.1136/bmj.b3292.