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Titel des Beitrags: The correlation between waist circumference and ESC cardiovascular risk score: data from the German metabolic and cardiovascular risk project (GEMCAS).

Abstract: BACKGROUND: Identification of patients with high cardiovascular risk, an immanent task of primary care physicians, is laborious, cost intensive and thus difficult to perform. Waist circumference (WC), given its association with multiple risk factors, is an easy to use tool for initial assessment of cardiovascular risk, but its predictive validity in primary care has not been assessed. PATIENTS AND METHODS: In 2005 a nationwide sample of 35,869 unselected patients visiting a primary care physician was screened. The global cardiovascular risk using the SCORE Score of the European Society of Cardiology was assessed in 10,323 men (aged 35-65) and 18,852 women (45-65). Logistic regressions and Spearman correlations were used to evaluate the interdependence of WC and cardiovascular risk factors as well as the estimated cardiovascular risk. RESULTS: Of these unselected patients 21.9% had an increased WC (women>80-88, men>94-102 cm) and further 36.5% had a high WC (women>88, men>102 cm). The proportion of patients with a low HDL-cholesterol was higher in high WC compared to normal WC (prevalence rate ratio (PRR) 1.88 [95%CI 1.74-2.02] in men and 2.97 [2.75-3.21] in women). The same applied to elevated triglycerides (PRR 1.72 [1.62-1.84] and 2.57 [2.36-2.80], ...
respectively), impaired fasting glucose (PRR 2.30 [2.13-2.49] and 3.66 [3.29-4.06]), and elevated blood pressure (PRR 1.27 [1.23-1.30] and 1.57 [1.52-1.62]), respectively. The estimated risk to die from cardiovascular events within 10 years based on the SCORE scoring scheme increased with increasing WC (age adjusted rho 0.18 in women and 0.19 in men). A SCORE score of more than 5% was observed in 24.12% of men (age adjusted PRR 1.27, 95%CI 1.12; 1.44) and 3.19% of women (age adjusted PRR 1.77, 95%CI 1.26; 2.49) with a high WC as compared to 10.88% of men and 0.95% of women with a normal WC. Particularly, in the age groups 50-59 years (men, 11.1%) and 60-65 years (women, 10.2%) a high WC identified more frequently patients with a SCORE result necessitating action (>5% risk) than in lean men (3.52%, P< 0.0001) and women (4.32%, P< 0.0001).

CONCLUSIONS: Routine measurement of waist circumference in primary care attendees is a suitable screening tool to identify patients with high cardiovascular risk in which a further diagnostic workup is necessary. Current cut-off values reflect a higher risk threshold in men than in women. Future research should identify new thresholds based on cardiovascular risk burden.