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OPTIMAL CUT POINTS FOR ANTHROPOMETRIC INDEXES OF OBESITY TO IDENTIFY HIGH RISK OF CORONARY HEART DISEASE IN LATIN AMERICAN POPULATION. *V M Herrera, M Oróstegui, X Aguilera, C Ferreccio, E Silva, E Clavell, R Pichardo, A Gonzalez, J P Casas, L E Bautista, on behalf of LASO investigators (University of Wisconsin, Madison, WI 53726)

We assessed the accuracy of body mass index (BMI), waist circumference (WC) and waist-to-hip ratio (WHR) to identify people at high risk of coronary heart disease (CHD). We pooled individual data from surveys in random samples of adults from Chile, Colombia, Dominican Republic and Venezuela (1998–2003). High risk was defined as a 10-year CHD risk \geq 20% based on the Framingham equation. Accuracy of anthropometric indexes was estimated by the area under the receiver-operator curves (AUC) and cut points that maximized the correct classification of CHD risk were selected as optimal. A total of 7879 subjects 30–74 years old were studied (mean age: 47.6 years; 33.4% men). AUCs for BMI, WC and WHR were 0.546, 0.674 and 0.743 ($p < 0.001$), respectively. BMI optimal cut point was 27.0 kg/m² with sensitivity and specificity of 54% (95% confidence interval: 51%, 57%) and 56% (95% CI: 55%, 57%). WC optimal cut points were 95 cm for men and 90 cm for women, with corresponding sensitivities of 61% (95% CI: 57%, 65%) and 72% (95% CI: 66%, 77%), and specificities of 60% (95% CI: 57%, 63%) and 58% (95% CI: 56%, 60%). WHR optimal cut points were 0.94 for men and 0.88 for women, with sensitivities of 63% (95% CI: 57%, 68%) and 64% (95% CI: 58%, 71%), and specificities of 60% (95% CI: 57%, 63%) and 69% (95% CI: 67%, 71%), respectively. Our results suggest that current cut points for total and central obesity (30 kg/m for BMI and 102/88 cm for WC in men/women) may be not sensible enough to identify individuals at high risk of CHD and that WHR is likely the best indicator of CHD risk in this population.

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ADVANCED AGE AND FOOT DISORDERS: THE POPULATION-BASED FRAMINGHAM FOOT STUDY. *M T Hannan, C E McLennan, K E Broe, H Hillstrom (Hebrew SeniorLife, Boston, MA and Hosp for Special Surgery, NYC)

Foot problems are thought to be common yet are often overlooked by clinicians. It is not clear what foot disorders are common in older persons as little population-based data exists. Our goal was to describe the prevalence of foot disorders in a cross-sectional study of men and women by age. One trained examiner used a validated foot exam with specific criteria to assess 25 foot disorders and symptoms. Prevalence was examined for men and women separately and by age (44–54y, 55–64y, 65–74y, 75–99y). The cohort included 2231 ambulatory, cognitively intact members of the population-based Framingham Study seen in 2002–2006. Mean age was 66y (range 44–99y), 57% female, mean weight of 173 lbs (79–376). Most prevalent foot disorders: hallux valgus (39%), pes planus (31%), hammer toes (24%), corns (19%), fatpad atrophy (29%), ankle edema (10%), overlapping toes (11%), Morton's neuroma (10%). Other foot disorders occurred in <10%: Tailor's bunions (4%), plantar fasciitis (6%), hallux rigidus (6%). Similar prevalence by sex was seen for some disorders (overlapping toes, plantar fasciitis, Morton's neuroma). Women had double the prevalence compared to men for many pain-related disorders. Prevalence for all foot disorders increased with age (eg, H.valgus, prevalence across ages: 21%, 32%, 30%, 51%) except plantar fasciitis (most common in 44–54y). Prevalence of foot pain was highest in those 75–100y. This study provides population-based data on the prevalence of foot disorders in adults, showing that structural problems and foot pain are common, especially in women. Most foot disorders increase with age. Greater understanding of foot disorders may lead to better public health interventions in the community.

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APOLIPOPROTEIN B AND NON-HIGH-DENSITY LIPOPROTEIN CHOLESTEROL AND RISK OF CORONARY HEART DISEASE IN CHINESE. *K-L Chien, H-C Hsu, F-C Sung, T-C Su, M-F Chen, Y-T Lee, F B Hu (Department of Nutrition, School of Public Health, Harvard University, Boston, USA; Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan)

Whether apolipoprotein B (Apo B) and non-high-density lipoprotein cholesterol (non-HDL-C) are superior to low-density lipoprotein cholesterol (LDL-C) for prediction of coronary heart disease (CHD) remains controversial. The aim of our study was to compare Apo B, non-HDL, LDL-C, and other lipid markers as predictors of CHD in a community-based prospective cohort study among 3,568 participants. Among participants were free of cardiovascular disease history at the time of recruitment, 122 individuals developed CHD during 15 years of follow-up. The multivariate relative risk of CHD in the highest quintile compared with the lowest quintile was 2.74 (95% confidence interval [CI], 1.45–5.19) for Apo B, 1.98 (95% CI, 1.00–3.92) for non-HDL-C, and 1.86 (95% CI, 1.00–3.49) for LDL-C (All tests for trend <0.05). In univariate analysis of individual lipid variables, Apo B had the highest receiver operator characteristic (ROC) curve area (0.63 95% CI: 0.58–0.68) and the highest likelihood ratio chi-square value (26.6) in predicting CHD. When Apo B and non-HDL-C were mutually adjusted, only Apo B was predictive; the relative risk was 2.80 (95% CI, 1.31–5.96; P for trend = 0.001), compared with 1.09 (95% CI, 0.49–2.40; P = 0.75) for non-HDL-C. Compared with the lowest risk profile, participants with the highest Apo B and total cholesterol (TC)/HDL-C values had more than 3-fold increased risk of developing CHD (RR = 3.21, 95% CI, 1.45–7.14). The data provide strong evidence that Apo B concentration was a better predictor of CHD than other lipid markers in Chinese participants.

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DO THE DETERMINANTS OF BONE MINERAL DENSITY DIFFER BY GENDER? THE FRAMINGHAM OSTEOPOROSIS STUDY. *K E Broe, M T Hannan, R R McLean, K Tucker, L A Cupples, D P Kiel (Institute for Aging Research, Hebrew Senior Life, Boston, MA 02131)

Osteoporosis affects both men and women yet it remains unclear whether determinants of bone mineral density (BMD) differ by sex since few studies have included both genders. We examined the cross-sectional relation between traditional risk factors and BMD by sex in the Framingham Osteoporosis Study. BMD (g/cm²) was measured at the hip (femoral neck) and lumbar spine (L2-L4) in 1341 men and 1630 women (mean age 60, range 29–86y) between 1996 and 2001. Risk factors were included if they correlated with BMD at p -value \leq 0.10. Multivariable linear regression models were run separately by gender. In men, age (yrs) and weight (lbs) were associated with both hip and spine BMD ($p < .0001$). Higher physical activity (PASE score) ($p = .005$) and calcium intake (mg/day) ($p = .03$) were also associated with higher hip BMD while nitrate use (y/n) ($p = .01$) was associated with higher spine BMD. These multivariable models accounted for 22% of the variance in hip BMD and 10% in spine BMD. In women, age and menopausal status (y/n) were strongly associated with lower hip and spine BMD while weight, height (inches), and estrogen use (y/n) were linked with higher hip and spine BMD (all $p < .001$). Additionally, education level (>12 yrs) ($p = .03$) was associated with higher hip BMD while diabetes (y/n) and alcohol use (ounces/wk) ($p < .001$) were linked to higher spine BMD. These models accounted for 38% of the variance in hip BMD and 30% in spine BMD. Age and weight were associated with BMD in both men and women yet differences exist in the other BMD risk factors for men and women that may aid in understanding the biologic differences in osteoporosis risk.