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Annals of Internal Medicine

“Cardiometabolic Abnormalities Among Normal-Weight Persons From Five Racial/Ethnic Groups in the United States: A Cross-sectional Analysis of Two Cohort Studies”

Gujral UP, Vittinghoff E, Mongraw-Chaffin M, Vaidya D, Kandula NR, Allison M, Carr J, Liu K, Narayan KM, Kanaya AM.

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Clinical Question: Is there are difference in the prevalence of cardiometabolic abnormalities among normal weight persons in five different racial/ethnic groups across the US?

Background: As the flow of information is getting more coherent through the use of the internet and EHR's and populations are becoming more diverse, there is a growing interest in the possibility that previous research, mostly done on white men, may not be as accurate in populations of other racial and ethnic backgrounds.

Methods: The study was a cross-sectional analysis of two community-based cohorts consisting of 2622 whites, 803 Chinese Americans, 1893 African Americans, 1496 Hispanics from the Multi-Ethnic Study of Atherosclerosis (MESA), and 803 South Asians from the Mediators of Atherosclerosis in South Asians Living in America (MASLA). They looked for the prevalence of two or more cardiometabolic abnormalities in normal weight people including: high fasting glucose, low HDL's, high triglyceride levels, and hypertension.

Results: Among the participants there were 846 whites, 323 Chinese Americans, 334 African Americans, 252 Hispanics, and 195 South Asians, the prevalence of MAN differed. Whites had a prevalence of 21%. Chinese Americans had a prevalence of MAN of 32.2%. African Americans MAN was found in 31.1%. Hispanics showed a prevalence of 38.5%. And in South Asians, the prevalence of MAN was 43.6%. Interestingly, adjustments for demographics, behavior, and ectopic body fat measures did not explain the differences. Thus, the corresponding BMI for whites with 25% is 22.9 in African Americans, 21.5 in Hispanics, 20.9 in Chinese Americans, and 19.6 in South Asians.

Conclusion: Although this is a cross-sectional study, there is definite suggestion that there is a higher prevalence of MAN in minority racial/ethnic groups in the USA. These cannot be explained by demographics, behavioral traits, or ectopic fat measures. As such, the risk of adverse events related to BMI as a cardiometabolic screen may be underestimated in these groups.

Further group specific studies need to be done to help further illuminate appropriate screening for this diverse, multi-ethnic population.

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