

Letters to the Editor

Obesity and Insulin-Like Growth Factor-I in African Americans and Whites

In Response: We reported a significant modifying effect of race/ethnicity on the relationship between body mass index (BMI) and plasma insulin-like growth factor-I (IGF-I) among male and female participants in the Multiethnic Cohort study (1). This association was inverse among Latinos, Whites, and Japanese, but was absent among Native Hawaiians and African Americans. Drs. Baird and Travlos expressed surprise at the discrepancy between our results and those of their study among Washington, D.C. residents, where the inverse association between BMI and IGF-I seemed equally strong among Whites and African Americans.

Explanation of this apparent discrepancy might clarify the relationship between BMI and plasma IGF-I, and indeed, the relationship between obesity, the IGF pathway, and cancer incidence. One possible reason for the discrepancy is the lack of overlap in the age distributions of the two study populations. Multiethnic Cohort participants were older than 55 years of age at blood draw, compared with the range of 35 to 49 years in the Washington, D.C. study. The relationship between BMI and plasma IGF-I may change with age and/or menopausal status. Differences in levels of circulating estrogen, especially in the premenopausal years, may be particularly important to consider in light of evidence that estrogens can inhibit hepatic IGF-I production (for review, see ref. 2). Our group showed that circulating estrone was statistically significantly higher in African Americans compared with Whites in a sample of postmenopausal women participating in the Multiethnic Cohort study (3). Circulating estrogen level may be a stronger confounder of the relationship between BMI and IGF-I among African Americans, and particularly among premenopausal

subjects. Smoking and fat from meat, in addition to BMI, were inversely associated with plasma IGF-I in the male Multiethnic Cohort subjects (4). It is possible that the abovementioned factors and others that have yet to be identified need to be taken into account in order to fully characterize the relationship between BMI and plasma IGF-I levels.

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