Poor vitamin D status may contribute to high risk for insulin resistance, obesity, and cardiovascular disease in Asian Indians.

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Abstract
Asian Indians are highly prone to insulin resistance syndrome, obesity, diabetes, and coronary disease. At any given BMI, they tend to have more body fat and more central fat than other groups - yet their insulin resistance is disproportionately high relative to their body composition. They are also tend to have very poor vitamin D status, even in UV-drenched India, primarily owing to highly pigmented skin and a cultural tendency to avoid direct sun exposure. The resulting up-regulation of parathyroid hormone (PTH) arguably may play a role in their high risk for insulin resistance and associated pathologies. There is suggestive evidence that moderate elevations of PTH may promote insulin resistance, weight gain, hypertension, left ventricular hypertrophy, and the acute phase response, while increasing risk for ischemic arrhythmias and cardiovascular mortality. Controlled studies should assess the impact of optimal vitamin D supplementation, with or without added calcium, on risk factors associated with insulin resistance in Asian Indians, as well as in other highly pigmented urbanized ethnic groups that are at high risk for insulin resistance and obesity.

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