

PRESS RELEASE

Vitamin D unlocks racial differences in blood pressure

New study identifies vitamin D as one of the likely explanations behind differences in blood pressure between Blacks and Whites

New York / Heidelberg, 26 April 2011

Lower vitamin D levels may explain part of the disparity in hypertension that exists between Black and White people in the US. High blood pressure is more common in Blacks than in Whites and persons with darker skin generally produce less vitamin D. This is particularly true at higher latitudes where UV radiation is less intense and the climates are colder leading to less skin exposure. Dr. Kevin Fiscella, from the University of Rochester School of Medicine in the US, and colleagues identify vitamin D status as one piece of the complex puzzle of race and blood pressure. Their work¹ appears online in the *Journal of General Internal Medicine*², published by Springer.

Emerging data suggest that low vitamin D levels may contribute to elevated blood pressure. At a population level, seemingly modest Black-White differences in blood pressure represent thousands of excess Black deaths annually from heart disease and stroke. Interventions that reduce this gap could therefore have a significant impact on disparities.

The authors analyzed data from the National Health and Nutrition Examination Survey 2001-2006 for 1984 Black and 5156 White participants aged 20 years or over. They specifically compared the average systolic blood pressure and blood levels of vitamin D of Black and White subjects.

The researchers found that, overall, Blacks had significantly lower levels of vitamin D in their blood than Whites and blood levels of vitamin D were linked to systolic blood pressure. Differences in vitamin D levels between Blacks and Whites accounted for a quarter of the difference in blood pressure readings between the two groups. When the researchers excluded participants on blood pressure medication, the effect of vitamin D explained 40 percent of the difference in blood pressure.

"Our study adds to the growing body of evidence showing that low levels of vitamin D among Blacks contribute to cardiovascular disparities. We also know that blood pressure is highest among Blacks living in the US, where UV exposure is low. Taken together, these findings point towards vitamin D deficiency as a potential contributor to higher rates of vascular dysfunction - here hypertension - among Blacks living in the US. Further work is required to determine whether vitamin D supplementation could reduce these racial disparities."

Reference

1. Fiscella K et al (2011). Racial disparity in blood pressure: is vitamin D a factor? *Journal of General Internal Medicine*. DOI 10.1007/s11606-011-1707-8 <http://www.springerlink.com/content/46370637jp8p6t47/>
2. The *Journal of General Internal Medicine* is the official journal of the Society of General Internal Medicine.

The full-text article is available to journalists on request.

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<http://www.springer.com/journal/11606>

Journal of General Internal Medicine

Editor-in-Chief: Asch, S.; Bates, C.; Jackson, J.

ISSN: 0884-8734 (print version)

ISSN: 1525-1497 (electronic version)

Journal no. 11606