Low vitamin D levels explains most ESRD risk in African-Americans

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Low levels of vitamin D may account for nearly 60 percent of the elevated risk of end-stage renal disease (ESRD) in African Americans, according to a report in the December *Journal of the American Society of Nephrology* (JASN). "Our study adds to previous evidence linking vitamin D deficiency to the progression of kidney disease and the need for dialysis," comments Michal L. Melamed, MD, of Albert Einstein College of Medicine (Bronx, NY). "It also explains a fair amount of the increased risk of ESRD in African Americans." Vitamin D is obtained from sun exposure, food and food supplements.

Melamed and colleagues analyzed a nationwide sample of 13,000 Americans, including measurements of the vitamin D metabolite 25(OH)D. Medicare data were used to identify participants who eventually required dialysis therapy for ESRD. "We found that the participants with the lowest 25(OH)D levels were 2.6 times as likely to end up on dialysis compared to those with higher levels," says Melamed.

The researchers then tested whether 25(OH)D levels could contribute to the higher risk of ESRD in African Americans, compared to whites. "African Americans have lower 25(OH)D levels and a higher risk of ESRD," Melamed explains. "We found that 25(OH)D deficiency was responsible for about 58 percent of the excess risk for ESRD experienced by African Americans."

Vitamin D deficiency is a very common problem in the United States. In recent years, studies have linked low vitamin D to many different health

problems, including diabetes, high blood pressure, cancers, and heart disease. The new results add to previous evidence that low 25(OH)D levels are an important risk factor for ESRD. "This is another good reason to make sure that people get enough vitamin D," Melamed adds.

Although it can't prove any cause-and-effect relationship, the study also suggests that vitamin D deficiency is a key contributor to the high risk of ESRD in African Americans. More research is needed to confirm these findings, and to determine whether treatment to raise low vitamin D levels can help to preserve kidney function. "We are currently in the process of enrolling for a clinical trial of vitamin D repletion in patients with chronic kidney disease to further test these hypotheses," says Melamed.

Source: American Society of Nephrology (news : web)