

[News](#)   [Articles](#)   [Videos](#)   [Images](#)   [Books](#)  

[Health & Medicine](#)   [Mind & Brain](#)   [Plants & Animals](#)   [Earth & Climate](#)   [Space & Time](#)   [Matter & Energy](#)   [Computers & Math](#)   [Fossils & Ruins](#)

**Science News**

[Share](#)   [Blog](#)   [Cite](#)   [Print](#)   [Email](#)   [Bookmark](#)

**Vitamin D Deficiency Likely Among Some Kidney Disease Patients Starting Dialysis**

*ScienceDaily (Feb. 25, 2010)* — Vitamin D deficiency is almost universal among kidney disease patients who have low blood protein levels and who start dialysis during the winter, according to a study appearing in an upcoming issue of the *Clinical Journal of the American Society Nephrology* (CJASN). The research identifies a group of patients who are at extremely high risk of being deficient in vitamin D and provides some clues as to why the deficiency occurs in these individuals.

**See Also:**

**Health & Medicine**

- [Vitamin](#)
- [Dietary Supplement](#)
- [Kidney Disease](#)
- [Cholesterol](#)
- [Blood Clots](#)
- [Today's Healthcare](#)

**Reference**

- [Dialysis](#)
- [Micronutrient](#)
- [Vitamin D](#)
- [Vitamin K](#)

Vitamin D deficiency is common in patients with end-stage renal disease (ESRD) on dialysis, but it's not clear which patients are at increased risk. Ishir Bhan, MD, MPH (Massachusetts General Hospital), and his colleagues sought to determine whether routinely measured clinical and demographic characteristics could identify dialysis patients who have a high risk of vitamin D deficiency. The researchers analyzed data from 908 patients in the Accelerated Mortality on Renal Replacement (ArMORR) cohort, a nationally representative group of U.S. dialysis patients. Data from 60% of the patients were used

to find potential predictors of vitamin D deficiency, while data from the other 40% of patients were used to validate the predictors.

The investigators found that 79% of the study population was vitamin D deficient. Black race, female sex, winter season, and low blood levels of the protein albumin ( $\leq 3.1$  g/dL) were the strongest predictors of vitamin D deficiency. In the validation set, the presence of low blood albumin levels and winter season increased the likelihood of vitamin D deficiency in black females (from 90% to 100%), black males (from 85% to 100%), white females (from 82% to 94%), and white males (from 66% to 92%).

"This research identifies risk factors for nutritional vitamin D deficiency in the dialysis population and may provide clues to its biology in this population," said Dr. Bhan. One interpretation of the finding that low blood albumin levels were associated with deficiency is that at-risk patients leak large amounts of protein in their urine. The investigators suspect that vitamin D binding protein, which transports the vitamin through the blood, may also be lost through the urine. Its loss could lead to the loss of vitamin D as well. In addition, while previous studies have suggested that patients on dialysis have an impaired ability to generate vitamin D from sun exposure, these findings emphasize that skin-based production of the vitamin is likely to be important in patients with ESRD.

Study co-authors include Sherri-Ann Burnett-Bowie, MD, MPH, Jun Ye, PhD, Ravi Thadhani, MD MPH (Massachusetts General Hospital), and Marcello Tonelli, MD (University of Alberta, Edmonton, Canada).

Dr. Thadhani has received research support from Abbott Laboratories.

Email or share this story: [More](#)

**Ads by Google**

**Vitamin D3 5000 IU**  
Discount Price - only pennies a day  
New Guidelines - 5000 IU/day  
[www.1-VitaminD.com](#)

**Symptoms Of Low Vitamin D**  
Get health questions answered now on the improved Ask.com. Try it!  
[www.ask.com](#)

**Vitamin Deficiency Info**  
Find Info on Causes, Symptoms, Treatments & More - Faster w/Bing™  
[www.Bing.com](#)

**Find Dialysis Centers**  
Get Directions to Nearby Dialysis Centers. Browse by City & State.  
[DaVita.com/Find-Dialysis](#)

**Related Stories**

**Low Vitamin D Levels Explains Most End-Stage Renal Disease Risk In African-Americans** (Nov. 9, 2009) — Low levels of vitamin D may account for nearly 60 percent of the elevated risk of end-stage renal disease in African-Americans, according to a new ... > [read more](#)

**Vitamin D Deficiency Common In Patients With IBD, Chronic Liver Disease** (Oct. 13, 2008) — Researchers have found patients with inflammatory bowel disease or chronic liver disease were at increased risk of developing Vitamin D deficiencies. Two separate studies highlight the importance of ... > [read more](#)

**Weekly And Biweekly Vitamin D2 Prevents Vitamin D Deficiency** (Oct. 28, 2009) — Researchers have found that 50,000 International Units of vitamin D2, given weekly for eight weeks, effectively treats vitamin D ... > [read more](#)

**'Let The Sunshine In' To Protect Your Heart This Winter** (Nov. 26, 2008) — The temperature might not be the only thing plummeting this winter. Many people also will experience a decrease in their vitamin D levels, which can play a role in heart disease, according to a new ... > [read more](#)

**Vitamin D Linked To Reduced Mortality Rate In Chronic Kidney Disease** (May 8, 2008) — For patients with moderate to severe chronic kidney disease, treatment with activated vitamin D may reduce the risk of death by approximately one-fourth, suggests a new ... > [read more](#)


**Ads by Google**

**Coping w/ Kidney Disease**  
How to Avoid Dialysis Dr. M Walser  
Professor Johns Hopkins University  
[www.calwoodnutritionals.com/](#)

**Natural Heal for Kidney**  
MD-developed herbal support for Proteinuria, Glomerulonephritis  
[www.goutwell.com](#)

**Just In:**  
[Computer Algorithm Able to 'Read' Memories](#)

**Science Video News**

**No More Dialysis**  
 A nephrologist has found that a specialized type of anti-rejection therapy using intravenous immunoglobulin can make kidney transplants possible for. ... > [full story](#)

- [Computer Scientist Invents Software To Arrange Matches For Kidney Transplants](#)
  - [Dermatologists Discover Sun Protection Under The Sea](#)
  - [Optical Scientists, Psychiatrists Develop Minimally Invasive Eye Test for Alzheimer's](#)
- [more science videos](#)



**Breaking News** ... from NewsDaily.com

Scientists find "mother" of all skin cells



"Personal" study shows gene maps can spot disease

SpaceX aborts rocket engine test

Scientists say UK risks losing innovation edge

Big Bang experiment may reveal dark universe: CERN

[more science news](#)

**In Other News ...**

- [NY AG picks former state top judge for Governor probe](#)
- [Bank reform talks fail, Dodd to go solo](#)
- [Billionaire Pinera takes power as quakes rattle Chile](#)
- [Biden appeals for Mideast peace talks without delay](#)
- [Iraq results trickle out, Maliki rivals cry](#)

Journal Reference:

**Search ScienceDaily**

Number of stories in archives: 82,635

**Clinical Measures Identify Vitamin D Deficiency in Dialysis.** *Clinical Journal of the American Society Nephrology*, February 25, 2010 DOI: [10.2215/CJN.06440909](https://doi.org/10.2215/CJN.06440909)

alert on coast after tremors  
Police clash with protesters as Greeks fight cuts  
[more top news](#)



Need to cite this story in your essay, paper, or report? Use one of the following formats:

- APA American Society of Nephrology (2010, February 25). Vitamin D deficiency likely among some kidney disease patients starting dialysis. *ScienceDaily*. Retrieved March 12, 2010, from <http://www.sciencedaily.com/releases/2010/02/100225172330.htm>
- MLA

*Note: If no author is given, the source is cited instead.*

Find with keyword(s):

Search

Enter a keyword or phrase to search ScienceDaily's archives for related news topics, the latest news stories, reference articles, science videos, images, and books.

Copyright Reuters 2008. See [Restrictions](#).

**Free Subscriptions** ... from ScienceDaily

Get the latest science news with our free email newsletters, updated daily and weekly. Or view hourly updated newsfeeds in your RSS reader:

- [Email Newsletters](#)
- [RSS Newsfeeds](#)

**Feedback** ... we want to hear from you!

Tell us what you think of the new ScienceDaily -- we welcome both positive and negative comments. Have any problems using the site? Questions?

Your Name:

Your Email:

Comments:

Click button to submit feedback:

Send It