
OBJECTIVE: To evaluate the association of vitamin D levels and lower urinary tract symptoms (LUTS) among US men.

MATERIAL AND METHODS: Data were analyzed for 2387 men (≥20 years) who participated in the 2005-2006 cycle of the National Health and Nutrition Examination Survey, a cross-sectional survey of the US noninstitutionalized population. LUTS included nocturia, incomplete emptying, hesitancy, and urinary incontinence (UI). Plasma 25-hydroxyvitamin D was categorized as ≥30 ng/mL (normal), 20-30 ng/mL (insufficiency), and <20 ng/mL (deficiency). Other factors included age, race/ethnicity, education, body mass index, self-reported health status, chronic diseases, and prior diagnosis of benign prostatic enlargement and/or prostate cancer (men ≥40 years of age). Prevalence and prevalence odds ratios (POR) were estimated from a multivariable logistic regression analysis using appropriate sampling weights.

RESULTS: A majority (89%, n = 1241) had vitamin D levels <30 ng/mL, of whom 55% (n = 684) had vitamin D levels <20 ng/mL. Vitamin D levels ranged from 2-56 ng/mL (median 19 ng/mL, mean ± SD 19.9 ± 8.0). Among the 1388 (58%) men with LUTS data and vitamin D levels, 48% (n = 666) had at least 1 LUTS. In
multivariable analyses adjusting for age and race norms, vitamin D deficiency was associated with the presence of moderate-severe UI (POR 1.8, 95% CI 1.1, 3.0) and at least 1 LUTS (POR 1.4, 95% CI 1.0, 2.0).

CONCLUSION: Vitamin D insufficiency and deficiency are highly prevalent among adult men in the US, and vitamin D deficiency is associated with moderate-severe UI and the presence of at least 1 LUTS.

DOI
10.1016/j.urology.2011.07.1415
Alternate Journal
Urology
PubMed ID
22014969