

Science News

... from universities, journals, and other research organizations

[Save](#)
[Email](#)
[Print](#)
[Share](#)

Long-Term Calcium and Vitamin D Supplement Use May Be Linked to Increased Risk of Kidney Stones

ScienceDaily (June 26, 2012) — Calcium and vitamin D supplements are associated with high calcium levels in the blood and urine, which could increase the risk of kidney stones, a new study finds.

See Also:

Health & Medicine

- Osteoporosis
- Women's Health
- Vitamin
- Dietary Supplement
- Kidney Disease
- Vitamin D

Reference

- Rickets
- B vitamins
- Dietary mineral
- Nutrition and pregnancy

The results will be presented Tuesday at The Endocrine Society's 94th Annual Meeting in Houston.

"The use of calcium and vitamin D supplementation may not be as benign as previously thought," said principal investigator J. Christopher Gallagher, M.D., professor and director of the Bone Metabolism Unit at Creighton University Medical Center in Omaha, NE. "Pending further information, people should not exceed the guidelines suggested by the Institute of Medicine, which are 800 international units of vitamin D, and 800-1,200 milligrams per day of calcium."

Taking vitamin supplements has become a widespread practice throughout many parts of the world. In the United States alone, it is estimated that nearly two-thirds of women take vitamin supplements, with calcium and vitamin D among the most commonly used. Despite their popularity, the precise health effects of long-term calcium and vitamin D supplementation remain unclear.

Previous research has indicated that high levels of calcium in the urine, or hypercalciuria, may increase the risk of kidney stones. Elevated calcium in the blood, or hypercalcemia, is associated with many complications, including bone and kidney problems.

Gallagher and study lead author Vinod Yalamanchili, M.D., research fellow in Creighton University's Bone Metabolism Unit, studied 163 healthy, postmenopausal women between the ages of 57 and 85 years. All participants were randomly assigned to receive a vitamin D supplement of 400, 800, 1600, 2400, 3200, 4000, or 4800 international units a day, or placebo. Then, their calcium intake was increased from an initial intake of 691 to 1,200-1,400 milligrams per day. Investigators measured blood and urinary calcium levels at the beginning of the study, and then every three months for one year.

They found that approximately 48 participants, or 33 percent, developed high urinary levels of calcium at some time in the study. These participants had 88 episodes of high urinary calcium. Hypercalciuria has been linked to an increased risk of kidney stones identified in previous studies. No incidents of kidney stones were reported during this one-year study, which was funded by The National Institute on Aging.

Additionally, about 10 percent of study subjects developed high blood levels of calcium. This translates into 25 episodes among 16 participants. In both cases, the increases were unrelated to the dosage of vitamin D.

"Because of the unpredictable response, it is not clear whether it is the extra calcium, the vitamin D or both together that cause these problems," Gallagher said. "However, it is possible that long-term use of supplements causes hypercalciuria and hypercalcemia, and this can contribute to kidney stones. For these reasons, it is important to monitor blood and urine calcium levels in people who take these supplements on a long-term basis. This is rarely done in clinical practice."

Ads by Google

5 Stages of Osteoporosis — Understand What Causes Osteoporosis & Start Managing The Symptoms Today
hodgewellness.com

Vitamin d response — HPP may be misdiagnosed. Learn about symptoms and diagnosis.
?Hypophosphatasia.com

Lose Belly Fat Naturally — 3 sneaky hormones that are making you fat & how to stop them now.
www.?Real?Dose?.com/?Weight-Loss

Natural Osteoporosis Cure — Reverse osteoporosis naturally. No drugs. No side effects.
www?.elixirindustry?.com

Heart attacks happen. — Assess your risk with this simple heart test.
www?.simplehearttest?.com

Related Stories

Monitored Vitamin D Therapy Safe for Patients With High Blood Calcium Levels (June 26, 2012) — Patients with a gland disorder that causes excessive calcium in their blood who also have vitamin D deficiency can safely receive vitamin D treatment without it raising their calcium levels, a new ... > [read more](#)

Low-Dose Vitamin D May Not Prevent Fractures in Healthy Women - What About Higher Doses? (June 16, 2012) — Vitamin D and calcium are dietary requirements, but it's unclear how much is best for us. New draft findings conclude that for healthy, postmenopausal women, daily supplementation with low ... > [read more](#)

Study Adds Weight to Link Between Calcium Supplements and Heart Problems (Apr. 19, 2011) — New research adds to mounting evidence that calcium supplements increase the risk of cardiovascular events, particularly heart attacks, in older ... > [read more](#)

Calcium Supplements Linked to Increased Risk of Heart Attack, Study Finds (July 29, 2010) — Calcium supplements, commonly taken by older people for osteoporosis, are associated with an increased risk of a heart attack, a new study ... > [read more](#)

Calcium Supplements: Too Much of a Good Thing? (June 1, 2010) — Negative health effects linked to taking too much supplemental calcium are on the rise, according to a new commentary. The incidence of the so-called milk-alkali or calcium-alkali syndrome is growing ... > [read more](#)

Ads by Google

Osteoporosis Treatments — Learn How To Manage Osteoporosis & Increase Your Bone Density Today!
bonebuildclinic.com

Just In:
Half of Inhaled Soot Gets Stuck in Lungs

> [more breaking science news](#)

Social Networks

Recommend and share this story on **Facebook**, **Twitter**, and **Google +1**:

[Like](#)
[Send](#)
 You like Long-term calcium and vitamin D supplement

[Tweet](#) 25
 [Follow @sciencedai](#)

[+1](#) Recommend this on Google

Other bookmarking and sharing tools:

[B](#)
[G+](#)
[D](#)
[F](#)
[in](#)
[my](#)
[R](#)
[v](#)
[w](#)
[y](#)
[z](#)
[|](#)
[27](#)

Breaking News

... from NewsDaily.com

- ▶ "Blade Runner" still subject of scientists' debate
- ▶ Promoting health? It's all in the game
- ▶ Analysis: Healthcare sees emerging future in frugal innovation
- ▶ U.S. sues to return Tyrannosaurus skeleton to Mongolia
- ▶ Biotech improved in 2011; future uncertain: report
- ▶ UK government report backs open access science publishing
- ▶ Expectations low for Rio+20 U.N. development summit
- ▶ Top court rejects DNA lab test analyst questioning
- ▶ [more science news](#)



In Other News ...

- ▶ Egypt's Islamist president-elect seeks wide support

Share this story on **Facebook**, **Twitter**, and **Google**:



Other social bookmarking and sharing tools:



Story Source:

The above story is reprinted from materials provided by [Endocrine Society](#), via Newswise.

Note: Materials may be edited for content and length. For further information, please contact the source cited above.

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

- APA Endocrine Society (2012, June 26). Long-term calcium and vitamin D supplement use may be linked to increased risk of kidney stones.
- MLA *ScienceDaily*. Retrieved June 27, 2012, from <http://www.sciencedaily.com/releases/2012/06/120626131744.htm>

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

Disclaimer: This article is not intended to provide medical advice, diagnosis or treatment. Views expressed here do not necessarily reflect those of ScienceDaily or its staff.

Search ScienceDaily

Number of stories in archives: 120,190

Find with keyword(s):

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.

Type 2 Diabetes Treatment — Have Type 2 Diabetes? Not Anymore Learn Treatments From Experts Now!
[?Service?Mountain?.com/?Type-2-?Diabetes](#)

24/7 Diabetes Monitoring — Water-Resistant, Wireless Sensor Gives 24/7 Readings. Get Info Now!
[www?.dexcom?.com](#)

Arthritis Symptoms — Find Info On Arthritis Symptoms. Get Expert Advice From Top Experts?
[?Topicologist?.com](#)

Soy Foods & Diabetes — Soy Foods Can Positively Affect Diabetes - Read the Latest News!
[?Soy?Nutrition?.com](#)

- ▶ **U.S. seizes cargo ship suspected of carrying stowaways**
- ▶ **Pending home sales match two-year high**
- ▶ **Mexico's Pena Nieto holds big lead as election nears**
- ▶ **Durable goods orders rebound in May**
- ▶ **U.S. downs target missile in high-stakes test: Pentagon**
- ▶ **Analysis: Is the euro beyond salvation? Politics not economics to decide**
- ▶ **Britain's queen meets ex-IRA chief McGuinness**
- ▶ **more top news**

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 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:

*

