

# Winter weather depriving city dwellers of vitamin D

February 13 2015, by Marcene Robinson

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Residents of snowy, northern U.S. cities are at risk of vitamin D deficiency and worse, may not even know it.

During Buffalo's winter months, nearly 50 percent of people have insufficient amounts of vitamin D and 25 percent may be considered deficient, says nutrition researcher Peter Horvath of the University at Buffalo School of Public Health and Health Professions.

Those most at risk: the elderly, pregnant and nursing women, and people of color, whose skin acts as a [natural sunscreen](#).

Unlike other vitamins, vitamin D is created by the body when the skin absorbs ultraviolet sunlight. But during winter months, people wear more clothes, are less likely to spend time outside and direct sunlight is hard to come by due to the Earth's tilt away from the sun.

Maintaining proper levels is crucial due to the vitamin's widespread effect on the body.

"Every cell in the body is responsive to vitamin D," says Horvath, associate professor in the Department of Exercise and Nutrition Sciences. "If you're deficient, you won't see the health effects for years and it could take months to get your levels back up."

Deficient levels of vitamin D may result in:

- Lower bone density.
- Weakened immune system.
- Increased risk for type 2 diabetes.
- Higher susceptibility to some cancers.
- Increased risk of death from cardiovascular disease.
- Cognitive impairment in older adults.
- The elderly, whose skin produces lower amounts of the vitamin, often suffer difficulty with functional fitness, such as opening cans or standing up, when vitamin D levels are low.

Insufficiency is of particular concern in pregnant women and nursing mothers because it affects children at a time when their bones are developing and can result in rickets—the softening of bones, says Horvath.

For those exposed to northern winters, he recommends vitamin D supplementation of between 1,000 and 2,000 international units a day. Foods that are a rich source of the vitamin are wild-raised salmon and oily fish, breakfast cereals, enriched milk and [cod liver oil](#).

Another source is irradiated mushrooms, a current focus of Horvath's research. The mushrooms "basically go through a little tanning bed" and produce a huge amount of the vitamin, he says.

In his studies, Horvath has found that these mushrooms also aid glucose regulation, improving weight loss, especially among women.

By keeping vitamin D levels high in the summer, he says people should be in good shape for the colder months.

Provided by University at Buffalo

Citation: Winter weather depriving city dwellers of vitamin D (2015, February 13) retrieved 25 April 2024 from

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