

It's no wonder people are confused. **A couple of weeks ago the headlines read vitamin D reduces winter colds and flu. This week's headlines say vitamin D has no effect on colds and flu.** In fact if you read the articles and much of the commentary that appears on blogs and websites, it would appear that you're just wasting your money if you supplement with vitamin D to reduce your risk of colds and flu.

### **So what is the truth?**

The truth is that you have to read the actual scientific articles and not depend on other people to tell you what they say. You have to understand the strengths and limitations of each study so that you can put them into perspective.

I reported on the first study last week. You may recall that study was done with 250 Mongolian school children during the winter. At the beginning of the study their blood levels of 25 hydroxy vitamin D, the accepted measure of active vitamin D in the bloodstream, was only 7 ng/dL - a level that is clearly deficient.

**Supplementing their diet with 300 IU of vitamin D per day during the winter increased their blood levels of 25 hydroxy vitamin D to 19 ng/dL - a level that is borderline adequate - and decreased their susceptibility to colds and flu by a highly significant 50%.**

The second study (Murdoch et al, JAMA, 308: 1333-1339, 2012) was equally robust, but it was conducted in New Zealand starting in the summer. The average blood level of 25 hydroxy vitamin D at the start of this study was 29 ng/dL - a level that's considered borderline optimal. The lowest average blood level of 25 hydroxy vitamin D in the placebo group in mid-winter was 20 ng/dL - slightly higher than the highest average blood level of 25 hydroxy vitamin D in the previous study.

In this study supplementation with high levels of vitamin D had no effect on the incidence of colds and flu in this population.

**Unfortunately, this study did not report the percentage of the population who had inadequate blood levels of 25 hydroxy vitamin D. Nor did it report the effect of vitamin D on the incidence of colds and flu in the subset of the population that started with inadequate levels of 25 hydroxy vitamin D.**

**In short, the difference between these two studies is pretty clear cut, and the conclusions are obvious. Vitamin D clearly reduces the incidence of colds and flu in people who have inadequate blood levels of 25 hydroxy vitamin D, but has no effect on the incidence of colds and flu in people who have optimal levels of 25 hydroxy vitamin D.**

In summary, the headlines that you read about both studies are correct once you put them in the proper perspective. However, those headlines that tell you that you are wasting your money by supplementing with vitamin D are a little misleading. Whether vitamin D reduces your risk of colds and flu depends on your blood levels of 25 hydroxy vitamin D.

So, the important question for you is which of these two groups do you fall in? Some experts have estimated that anywhere from 20 to 40% of the US population in northern areas of the country have inadequate blood levels of 25 hydroxy vitamin D during the winter - and these percentages may even be higher for certain ethnic groups.

Of course, what you really want to know is if you are one of those people who may need more vitamin D to fend off colds and flu this winter.

To start with there are certain common characteristics that predispose you to low blood levels of 25 hydroxy vitamin D. These are:

- little Sun exposure or excessive use of sunscreen during the summer month
- residence in the northern third of the United States
- inadequate consumption of vitamin D containing foods
- dark skin color
- obesity

If you have two or more of these risk factors you might want to consider supplemental vitamin D - especially during the winter months.

**However, there is also a genetic component. Some people who have none of these risk factors still have low 25 hydroxy vitamin D levels. The reason for this is not fully understood at present, but if you have frequent colds and flu during the winter months, you may want to have your blood levels of 25 hydroxy vitamin D measured and consider vitamin D supplementation if they are suboptimal**

To Your Health!

Dr. Stephen G Chaney