Flu and Vitamin D Deficiency

Despite Anti-Vitamin D Bias, CDC Stumbles on Deficiency Link to H1N1 Deaths

Posted by: Dr. Mercola
<http://articles.mercola.com/members/Dr.-Mercola/default.aspx>
September 22, 2009 | 14,891 views

So far, Swine flu, H1N1, has killed thirty-six children in U.S. and analysis of CDC data indicates Vitamin D deficient children at higher risk of death.

The CDC did not realize they discovered this. However, anyone familiar with the Vitamin D literature will recognize it. Almost two-thirds of the dead children had epilepsy, cerebral palsy, or other neurodevelopmental conditions like mental retardation.

All of these neurological conditions are associated with childhood Vitamin D deficiency. Exacerbating the problem further, many of these kids take anticonvulsant drugs, which lower Vitamin D levels.
58 million American children are Vitamin D deficient; 7.6 million are severely deficient.

When researchers looked at more than 6,000 American kids (age one to 21) who were carefully selected to be representative of the average American child. 9 percent of the kids had 25(OH)D levels less than 15 ng/mL and 70 percent had levels less than 30 ng/mL.

Dr. Mercola's Comments:

As the advent of the experimental swine flu vaccine program draws near, I want to highlight the information coming out that confirms the importance of having sufficient vitamin D levels in order to limit your chances of contracting the swine flu, or any other influenza for that matter. Dr. Cannell, who is a leader in the field of vitamin D research and education, points out that the CDC unwittingly supports the theory that your vitamin D levels likely play an equally important role in the swine flu as in other types of seasonal flu. According to the CDC's statistics, the H1N1 flu has killed 36 children in U.S. , and of those, almost two-thirds had either epilepsy, cerebral palsy, or some other neurodevelopmental condition like mental retardation. All of these neurological conditions are associated with childhood vitamin D deficiency, Dr.. Cannell observed, which could also have made them far more susceptible to flu complications.

The Connection Between Your Vitamin D Levels and Contracting the Flu

Previously, Dr. Cannell has published a very credible hypothesis that explains the seasonal nature of the flu <http://www.pdfdownload.org/pdf2html/pdf2html.php?url=http://www.biochem.wisc.edu/courses/biochem901/secure/materials/readings/09_Cannell.pdf&images=yes> . His findings were first published in the journal <http://www.ncbi.nlm.nih.gov/sites/entrez?orig_db=PubMed&db=pubmed&cmd=Search&term=Epidemiology%20and%20infection%5BJour%5D%20AND%201129%5Bpage%5D%20AND%202006%5Bpdat%5D> Epidemiology and Infection two years ago, followed up with another study published in the <http://www.virologyj.com/content/5/1/29> Virology Journal last year. His hypothesis was then confirmed by another study -- the largest and most nationally representative of its kind to <http://articles.mercola.com/sites/articles/archive/2009/03/21/Can-Vitamin-D-Cure-the-Common-Cold.aspx> date -- that involved about 19,000 Americans. It too found that people with the lowest

blood vitamin D levels reported having significantly more recent colds or cases of the flu.
The positive correlation between lower vitamin D levels and increased risk of upper respiratory tract infections was even more pronounced in individuals with asthma and chronic obstructive pulmonary disease.

Part of the explanation is that vitamin D creates over 200 antimicrobial peptides in your body that serve as natural broad-spectrum antibiotics, so when your vitamin D levels fall, you also reduce your natural capacity to ward off colds, influenza and other respiratory infections. During flu seasons, vitamin D levels in your blood are typically at their lowest point due to lack of exposure to sunshine.
At least four other recent studies show this inverse association between lower respiratory tract infections and 25(OH)D levels. That is, the higher your vitamin D level, the lower your risk of contracting colds, flu, and other respiratory tract infections:

1. A 2007 study <http://www.ncbi.nlm.nih.gov/pubmed/17823437?ordinalpos=1&itool=EntrezSystem 2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum> suggests higher vitamin D status enhances your immunity to microbial infections. They found that subjects with vitamin D deficiency had significantly more days of absence from work due to respiratory infection than did control subjects.

2. A 2009 study <http://www.ncbi.nlm.nih.gov/pubmed/18030309?ordinalpos=1&itool=EntrezSystem 2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum> on vitamin D deficiency in newborns with acute lower respiratory infection confirmed a strong, positive correlation between newborns' and mother's vitamin D levels. Over 87 percent of all newborns and over 67 percent of all mothers had vitamin D levels lower than 20 ng/ml, which is a severe deficiency state.

Newborns with vitamin D deficiency appear to have an increased risk of developing ALRI, and since the child's vitamin D level strongly correlates with its mother's, the researchers recommend that all mothers' optimize their vitamin D levels during pregnancy, especially in the winter months, to safeguard their baby's health.

3. A similar Indian study <http://www.ncbi.nlm.nih.gov/pubmed/15042122?ordinalpos=1&itool=EntrezSystem 2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum%20(%20http://www.ncbi.nlm.nih.gov/pubmed/15042122%20)> published in 2004 also reported that vitamin D deficiency in infants significantly raised their odds ratio for having severe ALRI.

4. Another 2009 report <http://www.ncbi.nlm.nih.gov/sites/entrez?orig_db=PubMed&db=pubmed&cmd=Search&TransSchema=title&term=Pediatric%20research%5BJour%5D%20AND%20The%20Vitamin%20D%20connection%20to%20pediatric%20infections%20and%20immune%20function> in the journal Pediatric Research stated that infants and children appear more susceptible to viral rather than bacterial infections when deficient in vitamin D. And that, based on the available evidence showing a strong connection between vitamin D, infections, and immune function in children, vitamin D supplementation may be a valuable therapy in pediatric medicine.

Most American Children and Teenagers are Vitamin D Deficient

It's been shown that vitamin D deficiency in American teens is very common. According to one recent

study <http://www.ncbi.nlm.nih.gov/pubmed/19661053?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum> , only 25 percent of more than 3,500 teenagers, aged 12 to 19, had levels higher than 26 ng/ml, and 25 percent had levels lower than 15 ng/ml, which is a severe deficiency state. And in another study that included 6,000 American kids between the ages of 1 to 21, 9 % had vitamin D levels less than 15 ng/mL, and 70 percent had less than 30 ng/mL. As you may recall, the optimal level of vitamin D is far higher than the conventionally recommended level of 30 ng/ml. Ranges calculated based on the values of healthy people in tropical or subtropical parts of the world, where they are receiving healthy sun exposures, shows that your optimal vitamin D level <http://articles.mercola.com/sites/articles/archive/2002/02/23/vitamin-d-deficiency-part-one.aspx> is likely to be in the 50-65 ng/ml range.

Canada Leads the Pack, Studying Vitamin D's Impact on Swine Flu

After studying the role of vitamin D in severe seasonal influenza, Canada 's Public Health Agency (PHAC) has confirmed that it will now adapt their research to investigate the role of vitamin D in protection against swine <http://articles.mercola.com/sites/articles/archive/2009/08/27/Canada-Looks-at-Vitamin-D-for-Swine-Flu-Protection.aspx> flu. Unfortunately, it may take years before we see the results of their findings, and in the meantime, little or nothing will be done to promote vitamin D by conventional medicine. I strongly suggest you don't wait for their results to come in, as there is already abundant evidence showing that your vitamin D levels play a role in your likelihood of getting the flu. Also, let's not forget the fact that there is also abundant evidence showing that flu vaccines do NOT protect you from the flu, and one recent study <http://www.ncbi.nlm.nih.gov/pubmed/18838647> found it had no impact on pediatric flu-related hospitalizations or doctor visits during the flu seasons studied. In fact, the researchers concluded that "significant influenza vaccine effectiveness could not be demonstrated for any season, age, or setting. "In addition, a systematic review <http://www.cochrane.org/reviews/en/ab004879.html> of 51 studies involving 260,000 children age 6 to 23 months also found no evidence that the flu vaccine is any more effective than a placebo. So if hedging bets, I would bet that optimizing your vitamin D levels will offer far greater advantages and protection than getting a flu shot - whether it's a seasonal flu vaccine or a swine flu vaccine.

You Can Use Vitamin D to Treat the Flu, Too

If you were to maintain your vitamin D levels within the optimal range of 50-65 ng/ml, you would likely avoid being affected during the cold and flu season entirely. That said, if you are coming down with flu-like symptoms and have not been on vitamin D you can take doses of 50,000 units a day for three days to treat the acute infection. Some researchers like Dr. Cannell believe the dose could even be as high as 1,000 units per pound of body weight for three days.

Ultimately, your best bet - not just for cold and flu prevention, but for the prevention of an astounding number of common and often chronic diseases - is to maintain healthy levels of vitamin D year-round. To find out even more important information about vitamin D, I strongly recommend you watch my one-hour free vitamin D lecture <http://articles.mercola.com/sites/articles/archive/2008/12/16/my-one-hour-vitamin-d-lecture-to-clear-up-all-your-confusion-on-this-vital-nutrient.aspx> along with my video on vitamin D<http://articles.mercola.com/sites/articles/archive/2008/10/21/avoid-flu-shots-vitamin-d-is-a-better-way.aspx> 's role in flu prevention.