

## **Without Cholesterol, There Is No Vitamin D**

Cholesterol's connection to vitamin D is intimate. It is the synthesis of cholesterol that ultimately provides for the synthesis of vitamin D, and it is cholesterol-rich foods that provide the dietary sources of vitamin D during times of the year when it is impossible for us to make our own.

Vitamin D is not *one* more reason to consider cholesterol good for the body. The days when vitamin D is seen as a unifunctional vitamin responsible simply for calcium metabolism and bone health are quickly disappearing into the annals of history. Vitamin D is quickly being recognized as a hormone with myriad important roles in the body -- and thus credit for each of those benefits of vitamin D falls back on its close relative and precursor, cholesterol.

The lesson? Lots of sunshine and cholesterol-rich foods are good for you. If you skip the cholesterol and take vitamin D supplements, make sure they are vitamin D<sub>3</sub> and not vitamin D<sub>2</sub> -- and you can thank our favorite molecule that provided the precursor for the vitamin D in your supplement

## **Vitamin D Deficiency: Do Cholesterol-Lowering Statin Drugs Inhibit Vitamin D Synthesis?**

Researchers know that vitamin D synthesis declines with age -- and so does the concentration of 7-dehydrocholesterol in the skin. Without 7-dehydrocholesterol in the skin, sunlight has nothing to turn into vitamin D. The researchers consider it likely, then, that the decreased synthesis of 7-dehydrocholesterol is responsible for the decreased synthesis of vitamin D that comes with age.<sup>2</sup>

It follows then, that the cholesterol-lowering drugs known as statins, or HMG CoA reductase-inhibitors, which inhibit the synthesis of 7-dehydrocholesterol, also inhibit the synthesis of vitamin D.