

Researchers develop concept for new sunscreen that allows body to produce vitamin D

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Credit: Marina Shemesh/public domain

For the first time researchers have developed a process for altering the ingredients in a sunscreen that does not impact its sun protection factor (SPF), but does allow the body to produce vitamin D. The findings, published in the peer reviewed journal *PLOS ONE*, has led to the production of a new sunscreen called Solar D.

Sun exposure is the major source of vitamin D for most children and adults worldwide. It is also recognized that vitamin D deficiency and insufficiency is a major health problem that afflicts approximately 40 percent of children and 60 percent of adults. However, because of concern for increased risk for skin cancer, widespread [sunscreen](#) use has been implemented. As a result, an SPF of 30 when properly applied, reduces the capacity of the skin to produce vitamin D by almost 98 percent

According to the researchers there are several chemical compounds that are typically used in a sunscreen that efficiently absorbed varying wavelengths of UVB radiation. After removing certain ingredients the researchers compared Solar D, which has an SPF of 30, to a popular commercial sunscreen with the same SPF, and found Solar D allowed for up to 50 percent more production of vitamin D in-vitro.

"Solar D was designed with compounds with differing filter compositions to maximize [vitamin](#) D production while maintaining its sun protection for reducing erythema or burning of the skin," explained corresponding author Michael F. Holick, PhD, MD, professor of medicine, physiology and biophysics at Boston University School of Medicine and an endocrinologist at Boston Medical Center.

Solar D is currently available in Australia and will be available in the U.S. summer 2016.

More information: Dieter Kockott et al. New Approach to Develop Optimized Sunscreens that Enable Cutaneous Vitamin D Formation with Minimal Erythema Risk, *PLOS ONE* (2016). [DOI: 10.1371/journal.pone.0145509](#)

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