

Tanning bed exposure can be deadly when complicated by medication reactions

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Tanning bed exposure can produce more than some tanners may bargain for, especially when they self-diagnose and use the radiation to treat skin eruptions, according to research conducted by the Indiana University School of Medicine Department of Dermatology.

"There are many reasons to be cautious of tanning bed radiation but some people use tanning beds to 'self-treat' skin eruptions," said Jeffrey B. Travers, M.D., Ph.D., senior author of a study published online in the [Archives of Dermatology](#). "If the skin eruption is eczema or even psoriasis, a tanning bed might help. However, if the eruption is caused by a drug reaction then it can be dangerous."

Dr. Travers, who is a professor of dermatology and of pharmacology and toxicology at the IU School of Medicine, said caution should be exercised when a person has an undiagnosed skin condition.

The study reported a patient who went to a tanning bed to self-treat a mild skin rash caused by an allergy to ibuprofen. Following the tanning bed exposure, the skin subjected to the UV light developed toxic epidermal necrolysis (TEN) with severe blistering. Her blood pressure dropped significantly and her rash spread. TEN can be a life-threatening skin disorder that can attack the skin and other tissues causing hemorrhaging, [respiratory failure](#), vision abnormalities and digestive track complications.

"The mortality rate of this most serious reaction is more than 20 percent

by causing multi-system organ failure", said Dr. Travers.

High levels of a protein responsible for inflammation were found in the patient's skin. The researchers then used laboratory studies to show that normal [skin cells](#) when exposed to the protein for inflammation and [UV radiation](#) of the type found in tanning beds produced very large amounts of protein responsible for inflammation and cell death. These studies demonstrate that patients with rashes caused by allergic reactions to nonsteroidal anti-inflammatory or prescription drugs can experience severe reactions following exposure to the radiation of tanning beds.

The researchers said that a recent random study of 1,200 individuals indicated that nearly 10 percent of those who frequented tanning salons did so in response to treatment of skin disease and only 5 percent were doing so on the advice of a physician.

"There is an increasing trend for patients to seek tanning bed radiation exposure as a means of self-treatment because, among much of the general public, the perceived benefits of [tanning bed](#) radiation include its ability to treat rashes," the study noted.

Provided by Indiana University School of Medicine

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