

Who we are

As scientists, we are pleased to present a line of skincare products with only natural medicinal ingredients and without any harsh, synthetic chemicals. Moondust Cosmetics® sunscreens are specifically created to provide effective sun protection and can even be worn on top of your daily moisturizer.

We are committed to using only the purest ingredients in our high quality, scientifically formulated sunscreens and skincare products.

There has been No Animal Testing and all our products are tested on volunteers.

We are dedicated to helping change the face of this industry by dispelling myths about sunscreens and skincare.

Contact Us

If you have any questions, feel free to reach out to Moondust Cosmetics® at:

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Why do you get a sunburn while wearing sunscreen?



Written by Dr. Moondust®

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Introduction

Ultraviolet (UV) radiation from the sun is a major cause of skin cancer and accounts for 1.3 million new cases in the USA alone each year. It is classed as a complete carcinogen in that it has the capacity to induce carcinogenesis without the presence of any other stimuli. Solar UV radiation is largely comprised of UVB (280-320 nm) and UVA (320-400 nm) wavelengths. UVB radiation has been associated with sunburn, immunosuppression, photoaging, skin cancers and DNA lesions. UVA radiation which represents 95 percent of the total UV received at ground level, is less energetic than UVB. It has also been associated with immunosuppression, photoaging, and mutagenesis.

UVA and UVB

According to the albino hairless mouse model, both UVB and UVA can be involved in the development of cutaneous cancers including squamous cell carcinomas (SCC) and basal cell carcinomas (BCC). However, the relative efficiency of UVA in inducing these carcinomas is approximately 10,000 times lower than UVB and much higher doses of UVA are required. Both UVA and UVB act by causing programmed cell death [apoptosis] which has been linked to the induction of cancer. Thus, ideally, sunscreen products should provide efficient protection in the range of both **UVB** and **UVA** radiation.

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Moreover, wearing sunscreen does not always protect against sunburn because not all sunscreens are formulated to prevent **Phase I**, **Phase II**, and **Phase III** of sunburn. These three stages or *phases* of sunburn include **Inflammation**, **New Tissue Formation**, and **Apoptosis**.

The Role of Sunscreen

As a result, sunburn can occur despite the use of sunscreen (SPF 15) during winter months in a temperate climate. Indeed, it may even cause burns to be more severe or to occur in regions in which they are not ordinarily seen, for example, around moles. This may be because melanin is a conductor of various metals like titanium. However, as one would expect in areas of melanin concentration, moles themselves remain unsusceptible to peeling and apoptosis (See Figure 1).

Figure 1. Sunburn with Sunscreen {Titanium Dioxide 5.3%; Zinc Oxide 1%}



In addition, sunburn can still occur while wearing stronger sunscreens (SPF 30) containing titanium dioxide, methoxycinnamate, or, benzophenone. Although they may attenuate or even eliminate the redness and inflammation caused by Phase I sunburn, Phase II and Phase III may not be prevented (See Figure 1 as an example). As it is **Phase III** or the *apoptotic phase* that has been linked to *carcinogenesis* via various scientific studies, this would appear to reflect an inherent weakness in the general composition of many sunscreens available to the consumer.

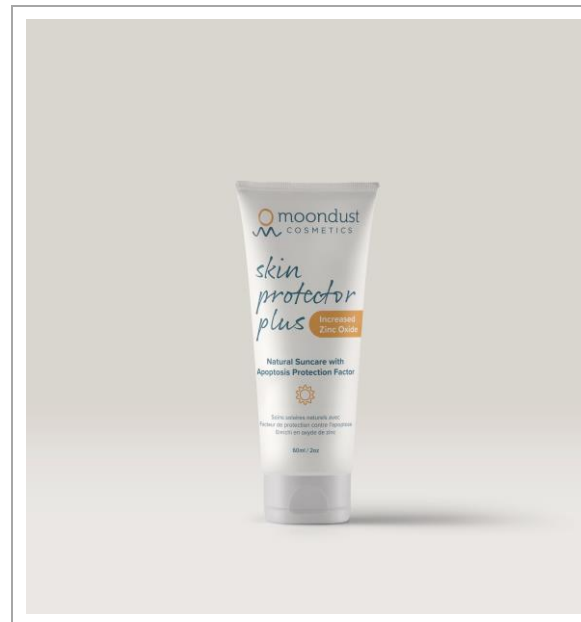
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Efficacy and Safety of Sunscreen

It also brings into question the efficacy and safety of sunscreens which effectively block inflammation, but are unable to prevent peeling following sun exposure in providing protection against skin cancer. Thus, using a sunscreen which blocks **Phase I, II, and III** sunburn is essential for adequate prevention.

How Moondust Cosmetics Can Help



Moondust Cosmetics® Skin Protector Plus with APF (Apoptotic Protection Factor) is designed to help protect people with sensitive skin from sunburn due to routine exposure to **UV radiation**. It can be used safely every day, all year round even under make-up because it contains *no harsh or harmful chemicals*. Our formula may be suitable for people with certain allergies and skin conditions like acne.

To purchase, visit <http://moondustcosmetics.com>