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Sunscreen and Effects of Oxybenzone

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***Corresponding author:** Karla Rodriguez, Department of Nursing, USA.**Received Date:** December 15, 2018**Published Date:** December 20, 2018**Abstract**

Background: One ingredient, Oxybenzone, is found in most sunscreens. Oxybenzone is effective against protecting sunburn but it has also been found to be a potent hormone disruptor [1]. This ingredient mimics estrogen in the bodies of humans, marine animals, and fish. This article will discuss product and ingredient recommendations to protect your health, the health of your family, and our environment, particularly, our oceans.

Purpose: This opinion is to discuss the importance of sunscreen and to raise the public's awareness of one of the harmful ingredients, oxybenzone contained in sunscreen products.

Conclusion: Being informed about the uses of sunscreen and how choosing the right sunscreen product can safeguard the public from the harmful effects of oxybenzone to the environment as well as the public. Strides are already underway to ban ingredients, such as oxybenzone, in sunscreen products.

Keywords: Oxybenzone; Sunscreen; UVA; UVB; Hormone disruptor; SPF

Introduction

Spending time outdoors in the sun can be enjoyable but it can also come at a price, your health. Being out in the sun can damage your skin in as little as 15 minutes [2]. We all hear about the importance of sunscreen as there are many sunscreen products touted for their high sun protection factor and waterproof properties, which may sometimes be misleading for consumers. Not only that, but some sunscreen products contain harmful ingredients that can penetrate the skin and interrupt one's own hormone production (EWG, n.d.). One ingredient, Oxybenzone, is found in most sunscreens. Oxybenzone is effective against protecting sunburn but it has also been found to be a potent hormone disruptor [1]. This ingredient mimics estrogen in the bodies of humans, marine animals, and fish. This article will discuss product and ingredient recommendations to protect your health, the health of your family, and our environment, particularly, our oceans.

Background

A listing of an SPF does not dictate ultraviolet A (UVA) protection which are the rays that penetrate deeper into the skin and significantly causes sun damage. Yet, the market for sunscreen products can be misleading when they claim that a higher SPF implies more sun protection for the individual. Sunscreens with a

high SPF tend to lull users into staying out in the sun longer causing more sunburn which can lead to UVA skin damage [3]. The Food and Drug Administration (FDA) has postulated that sunscreens with an SPF higher than 50 do not provide adequate sun protection (2011). It is quite the opposite; the higher the SPF, the lower your UVA protection [3]. A listing of a high SPF will prevent sunburn but not sun damage such as melanoma which is the deadliest of skin cancers and is UVA induced.

Significance

What is worse are the aerosol sprays go into the air and eventually into our lungs causing lung damage. SPF only relates to UVB protection because UVB rays are the ones that cause sunburn. This is where it gets tricky. There has been some controversy about the ingredient, Oxybenzone, which is found in most sunscreens. When oxybenzone is applied to your skin, it appears in your blood and urine minutes afterwards. Oxybenzone is found in 97% of Americans, according to the [4]. It can also be found in some lip balms, some shampoos, moisturizers and even foundations.

Sunscreens with a high SPF can be inherently misleading; these products only protect sun burn but not sun damage or melanoma which is UVA induced. Sewage is the biggest of sunscreen chemical

pollutants anywhere. Because some of these toxins, specifically, oxybenzone, gets absorbed into our blood and spills out into our urine and feces, the simple act of flushing the toilet will send these toxins straight to sewage, into the river and out into the sea.

Oxybenzone also influences coral by interrupting their reproduction and growth in various ways as well as increasing coral sensitivity to temperature changes [4]. As a result, it is a prominent cause of coral death and bleaching worldwide. It will contaminate kelp forest, seagrass beds, and coral. It is estimated that fourteen thousand tons of sunscreen products enter our oceans and beaches every year [5]. Furthermore, oxybenzone is deadly to coral at concentrations equivalent to 1 drop diluted in 6 Olympic size swimming pools (EWG, n.d.). In July 2018, Hawaii became the first state to ban the sale of sunscreens containing oxybenzone and octanoate, implicating to harm coral reefs and other marine ecosystems.

We cannot always avoid being outdoors in the sun but when we are outdoors, however, below are some recommendations we can follow:

Avoid being outdoors between the hours of 10 am and 4 pm (depending on the time of year). Wear hats, visors, sarong, UV

protective rash guards, sunglasses, sun protection. Zinc oxide is safe to use as a sunscreen and has lower toxicity concerns and shows no evidence of hormone disruption [5,6].

Conflict of Interest

The author has no conflict of interest to declare.

Acknowledgement

None.

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