

File under: UV exposure and cardiovascular disease

This study concludes that moderate sun exposure might be positive for your heart.

Is sunlight good for our heart?

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Introduction

Humans evolved being exposed for about half of the day to the light of the sun. Nowadays, exposure to sunlight is actively discouraged for fear of skin cancer, and contemporary lifestyles are associated with long hours spent under artificial light indoors.

Besides an increasing appreciation for the adverse effects of these life-style-related behavioral changes on our chronobiology, the balance between the beneficial and harmful effects of sunlight on human health is the subject of considerable debate, in both the scientific and popular press, and the latter is of major public health significance.

While there is incontrovertible evidence that ultraviolet radiation (UVR) in the form of sunlight is a significant predisposing factor for non-melanoma and melanoma skin cancers in pale skinned people,

1 a growing body of data suggest general health benefits brought about by sunlight.

2 These are believed to be mediated either by melatonin or vitamin D.

Melatonin is produced from serotonin by the pineal gland located in the centre of the brain during periods of darkness, and its release is suppressed as a function of the visible light intensity sensed through ocular photoreceptors.

Vitamin D is formed by ultraviolet B (UVB)-mediated photolysis of 7-dehydrocholesterol in the skin.

Both melatonin and vitamin D are pleiotropic hormones that exert a multitude of cellular effects by interacting with membrane and nuclear receptors, and receptor-independent actions.

People with more heavily pigmented skin require higher doses of UVB to produce adequate amounts of vitamin D, and this may have been an evolutionary driver to the variation of human skin color with latitude and intensity of solar irradiation.

Our degree of exposure to sunlight is easily modified by behavioral factors such as the use of clothing, sunglasses, and sun-blocking creams, and time spent outdoors. Balancing the carcinogenic risks with the requirement for vitamin D has led to advice on moderating sun exposure, while supplementing food with vitamin D.

Guidance on such behavior is part of the public health campaigns in most countries with Caucasian populations.

Following these suggestions, we may, however, be missing out on other health benefits provided by natural sunlight that are less obvious and unrelated to the above classical mediators.