

Effect sun light on health

By

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Health benefits of sunlight



SUN EXPOSURE

History

- The first scientifically-established health benefit of sun exposure was the discovery in 1919 that sunlight cured rickets.
- This was followed in 1924 up by the discovery that an inactive lipid in the diet and skin could be converted by UV light into an antirachitic substance.

- The identification of vitamin D occurred in 1931. The association between sun exposure and reduced cancer mortality in North America was identified in the 1960s.
- In the 1980s, it was hypothesized that vitamin D was the protective factor. For most of the intervening years, instead of pursuing further benefits of sun exposure, scientific inquiry focused on the health risks of sun exposure, especially melanoma and other types of skin cancer.

- Chemical sunscreens were developed in 1928. Avoidance of intentional sun exposure and use of chemical sunscreens persisted as the standard advice of physicians and public health authorities for reducing the risk of melanoma and other forms of skin cancer.
- The risks of inadequate sun exposure have been largely ignored.
- Recently, however, scientific inquiry has increasingly turned to the benefits of moderate sun exposure and the public health risks of inadequate sun exposure

- Ozone layer depletion decreases our atmosphere's natural protection from the sun's harmful ultraviolet (UV) rays. This fact sheet provides a quick overview of the major health problems linked to overexposure to UV radiation:

- Skin cancer (melanoma and non-melanoma)
- Premature aging of the skin and other skin problems
- Cataracts and other eye damage
- Immune system suppression

What is ultraviolet radiation?

Energy from the sun reaches the earth as visible, infrared, and ultraviolet (UV) rays.

1. Ultraviolet A (UVA) is made up of wavelengths 320 to 400 nm (nanometers) in length.
2. Ultraviolet B (UVB) wavelengths are 280 to 320 nm.
3. Ultraviolet C (UVC) wavelengths are 100 to 280 nm.

→ Only **UVA** and **UVB** ultraviolet rays reach the earth's surface. The earth's atmosphere absorbs UVC wavelengths.

→ **UVB** rays cause a much greater risk of skin cancer than **UVA**.

→ But **UVA** rays cause aging, wrinkling, and loss of elasticity.

→ **UVA** also increases the damaging effects of UVB, including skin cancer and cataracts.

- In most cases, ultraviolet rays react with melanin. This is the first defense against the sun.
- That's because melanin absorbs the dangerous UV rays that can do serious skin damage.
- A sunburn develops when the amount of UV damage exceeds the protection that the skin's melanin can provide.

- A suntan represents the skin's response to injury from the sun. A small amount of sun exposure is healthy and pleasurable. But too much can be dangerous.
- Measures should be taken to prevent overexposure to sunlight. These preventive measures can reduce the risks of cancers, premature aging of the skin, the development of cataracts, and other harmful effects.