Nonmelanoma Skin Cancer Myths: Debunked

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1. Tanning beds do not increase your risk of skin cancer.

False. Tanning beds use artificial UV radiation to stimulate tanning of the skin. They emit higher amounts of UV radiation than the sun, including both UVA and UVB. UV radiation increases your risk of developing skin cancer, and the more exposure you have had, the higher your risk. Indoor tanning was officially classified as a human carcinogen in 2009.

2. Individuals with darker skin do not get skin cancer.

False. Though individuals with darker skin have a lower risk of developing skin cancer, the risk is not zero. Because skin cancer in darker skinned individuals is often detected at later stages, mortality rates are typically higher.

3. If you tan easily and rarely burn, you are not at risk for developing skin cancer.

False. Any change in the natural color of your skin is a sign of skin damage. Tanning is the result of an increase in the skin pigment melanin, which is produced as a form of physical protection against the DNA-damaging effects of the sun. Cumulative sun exposure, even if you do not burn, increases your risk of developing skin cancer.

4. Only older individuals get skin cancer.

False. While the risk of developing skin cancer increases with age, skin cancer has become increasingly common in young adults. This risk is particularly high in young adults with history of extensive sun exposure or tanning bed use. Additional risk factors include prolonged immunosuppression, radiation therapy, and chemotherapy. In young adults, basal cell carcinoma (BCC) is more common than squamous cell carcinoma (SCC).

5. Having a family history of skin cancer does not increase your risk of developing skin cancer.

False. Any family history of skin cancer, regardless of skin cancer type, places individuals at an increased risk of SCC. There is a known genetic basis for SCC, as evidenced by an increased risk among first-degree relatives and from hereditary syndromes, including xeroderma pigmentosum, Fanconi anemia, and Muir-Torre syndrome. Hereditary BCC can also occur as part of genetic syndromes, including Gorlin syndrome and Bazex-Dupre-Christol syndrome. In addition to genetic disorders, certain inherited phenotypic traits including fair skin, light-colored eyes and hair, childhood freckling, inability to tan, and northern European ancestry are known to increase the risk of BCC.

6. You do not need to wear sunscreen in the winter or on a cloudy day.

False. The sun produces harmful UV radiation even during the winter and on cloudy days. Up to 90% of UV rays can penetrate through the clouds, and snow and ice can reflect up to 80% of UV rays. It is important to wear sunscreen year-round to decrease your risk of developing skin cancer.

7. Sun exposure is necessary to get vitamin D.

False. You can obtain vitamin D from sources other than sunlight, including dietary sources, fortified foods, and supplements. Fatty fish such as salmon, tuna, and mackerel contain high amounts of vitamin D, while cheese and eggs contain lower amounts. Additionally, milk, orange juice, breakfast cereals, and yogurt are fortified with vitamin D. Vitamin D supplements, including D2 (ergocalciferol) and D3 (cholecalciferol), are widely used to help maintain optimal levels of vitamin D. There is no research to support the notion that you can safely get vitamin D from the sun without also increasing your risk of developing skin cancer.

8. Higher SPF sunscreen is always more protective against the sun.

False. High SPF sunscreen tends to provide a false sense of security, so individuals stay in the sun longer and overexpose themselves. There is also a negligible difference between SPF 50, which blocks 98% of UVB rays, and SPF 100, which blocks 99%. When used correctly, sunscreen with SPF values between 30 and 50 offers adequate protection. The FDA has long contended that SPF higher than 50 is inherently misleading, and has even proposed prohibiting labels higher than SPF 50+.

9. Skin cancer is not a dangerous type of cancer.

False. While most common skin cancers are not as deadly as other malignancies, they can be dangerous if left untreated, and can also significantly impair quality of life. Untreated SCC can grow and spread to local lymph nodes, distant tissues, and organs, making it more difficult to treat. Similarly, untreated BCC can grow deep and cause significant destruction and disfigurement. Some patient populations, such as organ transplant recipients, are at a significantly increased risk of death from BCC and SCC.

10. Skin cancer is always easy to detect.

False. In their early stages, SCC and BCC can be hard to detect because they can resemble other skin conditions. Early SCC can appear as a small, red, scaly patch or bump, or a growth that scabs and bleeds. Moreover, early SCC may not cause pain, itching, or other noticeable symptoms, which can delay detection. Early BCC can appear as a shiny, pearly bump, a red patch, or an open sore that does not heal. Because BCC is typically slow growing, there can be delays in diagnosis if early signs are overlooked. Seeing a dermatologist every year for a full body skin exam is critical for early detection.

References

- 1. Dessinioti C, Stratigos AJ. An Epidemiological Update on Indoor Tanning and the Risk of Skin Cancers. *Curr Oncol.* 2022;29(11):8886-8903. Published 2022 Nov 17. doi:10.3390/curroncol29110699
- 2. Sangha AM. Dermatological Conditions in SKIN OF COLOR-A Look at Skin Cancer in Skin of Color. *J Clin Aesthet Dermatol*. 2022;15(6 Suppl 1):S17-S18.
- 3. Khosravi H, Schmidt B, Huang JT. Characteristics and outcomes of nonmelanoma skin cancer (NMSC) in children and young adults. *J Am Acad Dermatol*. 2015;73(5):785-790. doi:10.1016/j.jaad.2015.08.007
- 4. Thingnes J, Oyehaug L, Hovig E, Omholt SW. The mathematics of tanning. *BMC Syst Biol*. 2009;3:60. Published 2009 Jun 9. doi:10.1186/1752-0509-3-60
- 5. Asgari MM, Warton EM, Whittemore AS. Family history of skin cancer is associated with increased risk of cutaneous squamous cell carcinoma. *Dermatol Surg.* 2015;41(4):481-486. doi:10.1097/DSS.000000000000292
- 6. Kilgour JM, Jia JL, Sarin KY. Review of the Molecular Genetics of Basal Cell Carcinoma; Inherited Susceptibility, Somatic Mutations, and Targeted Therapeutics. *Cancers* (*Basel*). 2021;13(15):3870. Published 2021 Jul 31. doi:10.3390/cancers13153870
- 7. Wehner MR, Cidre Serrano W, Nosrati A, et al. All-cause mortality in patients with basal and squamous cell carcinoma: A systematic review and meta-analysis. *J Am Acad Dermatol*. 2018;78(4):663-672.e3. doi:10.1016/j.jaad.2017.11.026