

CANADIAN DERMATOLOGY ASSOCIATION POSITION STATEMENT THE USE OF SUNLESS TANNERS

Topical sunless tanners such as bronzers and self-tanners give a tanned appearance without the need for sun or ultraviolet exposure. Temporary bronzer lotions, creams, and powders are similar to make-up and only last until the skin is washed.

Self-tanners contain dihydroxyacetone (DHA), a sugar from plants. They are available in lotions, creams, mousses, gels, and sprays. DHA reacts chemically with amino acids in the stratum corneum (the outer skin layer which is comprised of dead cells) to produce pigment. It takes approximately 2-4 hours for the darkening of the skin to start, and it continues for 1-3 days. The tan gradually fades 3-7 days after application due to normal skin exfoliation. The tan will fade more quickly with anything that causes exfoliation to occur more quickly (e.g., scrubbing the skin). The Food and Drug Administration (FDA) in the United States has not approved spray tanning booths even when nose plugs, goggles, and petrolatum is applied to the lips since there is a concern about the application of DHA containing products to non-skin areas (e.g., lips, area of the eyes, mucous membranes) and internally.²

Self-tanners applied to the skin are thought to be safe since DHA penetration is primarily limited to the dead stratum corneum. However, an FDA report suggested that approximately 11% penetrates into the living epidermal and dermal cells.¹ DHA levels of 5% or more may increase free-radical damage from sunlight for 24 hours after application.¹ There is a concern that chronic spray tanner use may increase the risk of lung diseases such as chronic obstructive pulmonary disease (COPD), asthma, and cancer.¹ The CDA suggests caution when using tanning sprays to avoid inhalation and exposure of the eyes, nose, lips, and mucous membranes. Additionally, fragrances and preservatives may be added to self-tanners and may induce allergic contact dermatitis.¹

It is important to note that DHA self-tanning products do not protect the skin from the sun and are not alternatives to sunscreens or other sun protection methods. Users must use sun protection as well. Some products combine DHA and sunscreen which may protect against the harmful effects of the sun. The sunscreen should be broad-spectrum against ultraviolet (UV) A and B, have a sun protection factor (SPF) of at least 30, and enough product needs to be applied to provide adequate sun protection, particularly since self-tanning products are often applied in a very thin layer. For adequate sun protection, sunscreen needs to be applied generously. The average adult requires approximately two to three tablespoons of sunscreen to cover the whole body, and a teaspoon to cover the face and neck. Sunscreen should be reapplied after swimming, strenuous exercise, sweating or towelling off, yet self-tanners are usually not. Sunscreen applied separately, either before or after a self-tanner, is a better option than a combined product.

Oral tanning drugs have not been approved for sale in Canada and Health Canada recommends they be avoided.

1. Garone, M., Howard, J., & Fabrikant, J. *J Clin Aesthetic Dermatol* 2015;8(2):43-47.
2. <https://www.fda.gov/cosmetics/cosmetic-products/sunless-tanners-bronzers>