

# How Your Skin Tans

As a tanner, you've probably always been curious about exactly how your skin tans. The process is really quite simple, and works the same whether you tan indoors or outdoors.

- Ultraviolet light is the catalyst, and a pigment in your skin called melanin does the rest.

Here's a layman's description of the entire process:

Tanning takes place in the skin's outermost layer, the epidermis. About five percent of the cells in your epidermis are special cells called melanocytes. When exposed to ultraviolet B light (short wave ultraviolet), melanocytes produce melanin—the pigment which is ultimately responsible for your tan. The pinkish melanin travels up through the epidermis and is absorbed by other skin cells. When exposed to ultraviolet A light (longer wave), the melanin oxidizes or darkens. This darkening is your skin's way of protecting itself against too much UV light.

Everyone has the same number of melanocytes in their body—about five million. But your heredity dictates how much melanin your body's melanocytes naturally will produce. For example, the skin of African-Americans contains enough melanin to create a black or brown skin color, while the skin of Caucasians has less melanin and is pale.

In order to most effectively avoid overexposure, a tan should be acquired gradually, according to the guidelines prescribed by your salon professional. A sunburn, or erythema, occurs when too much ultraviolet light reaches the skin and disrupts the tiny blood vessels near the skin's surface.

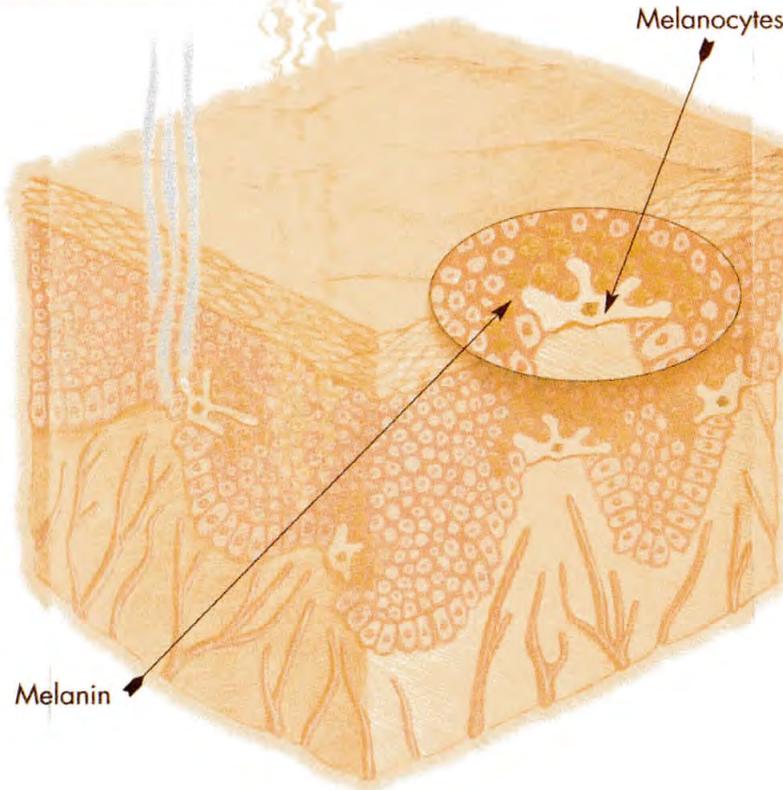
Why does a tan fade? Cells in the epidermis' germinative layer (also called the living epidermis) are constantly reproducing and pushing older cells upward toward the horny layer (dead epidermis), where they are sloughed off in about one month. As your skin replaces its cells, the cells laden with melanin are removed. So the tanning process must continue with the new cells.

## UVA

UVA is a longer ray that penetrates the skin more deeply and slowly than UVB. The melanin in your skin absorbs the UVA rays, turning the pigment brown.

## UVB

UVB rays are short, intense waves of energy, stimulating melanocytes in your skin to produce the pigment we call melanin.



# Understanding Ultraviolet Light

Ultraviolet light, whether produced by the sun or an indoor tanning unit, consists of two main components, UVA and UVB, both of which contribute differently to your tan. Indoor tanning equipment utilizes a carefully formulated and controlled mixture of the two light waves, designed to tan you with a minimized risk of sunburn. Tanning outdoors does not give you this control, because the sun emits the entire spectrum of ultraviolet light, including the most intense rays that burn you more quickly.

That's why we call indoor tanning "Smart Tanning."

## Epidermis

Your skin's epidermis consists of two layers: the germinative layer (sometimes called the "living" epidermis) and the horny layer (the "dead" epidermis).

When exposed to ultraviolet light, melanocytes in the germinative layer produce melanin which is absorbed by the surrounding cells. This creates a protective barrier from ultraviolet light reaching deeper, more sensitive layers of the skin. This whole tanning process is the body's own natural defense against sunburn and skin damage.

## Why Redder Isn't Better

Many people grow up thinking that if they don't experience a slight red or pinkish tint after they tan that they didn't "get anything." The truth is that the red or pinkish tint you see is actually sunburn (or erythema)—your skin's worst enemy. The fact is that the sunburns we experience due to lack of information when we are growing up are the very things that lead to skin damage later in life.

Smart tanners know that the key to avoiding sunburn is moderation in terms of UV exposure. The best way to ensure a "smart tan" is to take advantage of the years of research that have gone into tanning equipment to provide you with a controlled, predictable dosage of UV light. Also, use lotions to moisturize your skin before tanning and, if you do tan outdoors, remember that the sun emits whatever types of UV rays it wants. Several other environmental factors come in to play with outdoor UV light, making exposure unpredictable.

Don't rely on the color of your skin to tell you when to get out of the sun. Overexposure isn't evident sometimes until hours after the sun's gone down. It's better to use a sunscreen and to wear protective clothing than to risk overexposure which can lead to skin damage.



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