



## WHY do people have freckles?

Human skin contains melanin, a chemical that gives skin its characteristic color and offers protection from the sun. People with lighter-colored skin have less melanin, and so are more likely to develop freckles—tiny spots of melanin-rich cells—rather than an even tan when they're exposed to sunlight. Unlike sunburns, though, freckles are completely harmless—and lots of people think they're cute.

A close relative of the freckle is a mole—a collection of melanocytes, the cells in the skin that produce color (which is why moles are always brown). Most people have at least a few moles, usually on their arms or back. Moles are usually harmless, too, but a sudden change in a mole's size or color can be an indication of melanoma, a dangerous kind of cancer.

### WHAT is a scab?

When you cut your skin, tiny cells in your blood called “platelets” rush to the site and stick together in a big, fibrous mass, plugging up the hole and preventing further bleeding. As the cut heals, this clump of platelets (and other assorted proteins) dries up and takes on a reddish-brown color, resulting in a scab. When the skin underneath is healed enough, the scab will fall off on its own. Picking a scab too early can make the scar bigger.



### WHY do some injuries cause scars?

When you scratch the top layer of your skin, the cells quickly regenerate and cover it over like it was never there. However, if the scratch goes deeper to the tissue beneath, the skin manufactures collagen (a tough, stringy protein) to fill the gap. Collagen is a different color and texture from the surrounding skin, and results in a lasting scar.

### WHAT causes sunburns?

Sunburns aren't caused by just any kind of sunlight—the culprit is high-energy ultraviolet light, which is just out of the visible range of the spectrum and especially prevalent in the summertime. A pigment called melanin (which gives skin its characteristic color) normally protects the skin from sunlight, but prolonged exposure to ultraviolet light is too much for the melanin to handle, and the result is a painful burn.