

Redheads easily sunburned because of the mutation that gives them red hair

[M]ost everyone — regardless of hair color — burns. Even people who never burn build up mutations in their skin when they tan; after all, [tanning is the human body's direct response to mutations triggered by ultraviolet radiation](#).

But [redheads](#) are in extra danger, thanks to a strange quirk of [genetics](#).

One mutation in [the gene](#) that regulates pigmentation gives their hair that vivid color and sprinkles them with freckles, while also damaging their skin's ability to protect itself from the [sun's harsh UV](#).

Sherrif Ibrahim, a dermatologist and skin cancer expert at the University of Rochester Medical Center, said that, thanks to that mutation, the cells in the skin of redheads do a bad job communicating with each other.

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[R]edheads have a mutation to the gene that builds the melanocortin 1 receptor, or MC1R. When the genes in their skin start to mutate under a blast of UV radiation, their protective tanning response breaks down.

Those mutations build up until cells give up on surviving the brief flash of DNA damage and kill themselves to protect that damage from spreading throughout the body.

And that's what we call a sunburn.

**The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [A Single Mutation Is Responsible for Gingers Burning in the Sun](#)**