

Prematurely Gray? This Is Probably Why

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STORY AT-A-GLANCE

- › Gray hair is inevitable for most people, but scientists and the beauty industry have been working on ways to change that fact for centuries
- › Human hair cycles between the anagen growth phase, the catagen resting phase and the telogen dormant phase. Hair follicles use pigment to color hair during the anagen phase while it's growing
- › As your hair grows, cells produce melanocytes – cells that produce melanin – but as you age the melanocyte activity slows down and eventually stops, leaving less pigment in your hair
- › Genetics, hormones and environmental pollutants can speed the graying process, so your chances of going gray increase 10% to 20% every decade after reaching 30

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It's a sign of advancing age. Some call it a sign of wisdom. It varies from person to person and seems to run in families. Some do everything they can to mask it or use some other method to make it go away, while others barely notice and simply go about the business of living.

What is it? The way of the gray. Gray hair has been, for want of a better phrase, "the way it is," since the beginning of time. Like taxes and that other thing we won't mention, "earning" gray hair is inevitable for the vast majority of people.

Proverbs says, "Gray hair (in the King James version it's 'hoary head') is a glorious crown; it is found in the way of righteousness." This observable fact has been linked to [aging](#) since humans lived long enough to experience the privilege. The alternative is generally undesirable.

They've said it was genetic for years. But is that really the case for hair that turns gray prematurely or otherwise? Science says it's something altogether, at least partially.

Explanations of the Hair-Growing and Pigmentation Process

The Conversation¹ reveals there are "plausible biological mechanisms" that could allow stress to whiten your hair in a short time, especially something horrifically hair-raising. However, signaling proteins involved in the process are the same ones that create and activate pain signals.

"Human hair cycles between a growth phase (anagen), a resting phase (catagen) and a dormant phase (telogen). Pigment is produced by the hair follicle to color the hair during the anagen phase while it is growing.

The length of the anagen phase varies according to your genes and certain hormonal levels. It can be anything between two years and eight years.

When the follicle receives orders to end the anagen phase, it stops producing more hair and begins to prepare for telogen. Telogen phase lasts for between six and eighteen months at a time before heading back into anagen."

Here's where it gets interesting. After about 10 of these cycles, the hair follicle has no more pigment left, so it produces hairs with no pigment at all. Natural Living Ideas explains:²

"Every hair on your head actually starts off as white, and is then colored by a natural pigment called melanin. As your hair grows, melanocytes – cells that produce melanin – transfer melanin to each individual hair follicle, which seamlessly colors each strand of hair.

As we age, melanocyte activity slows down and eventually stops, leading to less pigment in the hair.

Although genetics, hormones and environmental pollutants can speed along the graying process, the sad fact remains that your chances of going gray increase 10% to 20% every decade after the age of 30."

When Does the Gray Hair Phenomenon Appear?

People are said to go "prematurely gray" when the telltale age-markers start showing up before their 20s, because it's fairly rare. Ethnicity plays a part; Caucasians experience this more often than African-Americans.

Canities subita is the term for someone who turns gray overnight, or at least very quickly, as in the case of Marie Antoinette, whose hair was said to turn gray the night before her beheading, but her guards could have simply denied her the hair dye she'd used to cover it. After all, she was just days from her 38th birthday.³

Today, scientists believe premature grayness could be related to environmental pollution or even lifestyle factors, according to Health.⁴ Board-certified dermatologist Dr. Marie Jhin, director of Premier Dermatology in San Francisco, put it down to a handful of different scenarios:

- **Stress** — Research shows a possible link between gray hair and stress. Nature Medicine⁵ published a study conducted on mice at New York University and concluded that stress can indeed deplete stem cells from the base of hair follicles, but there's nothing to indicate that it affects hair color.
- **Medical condition** — Thyroid disease or pituitary gland problems could trigger the beginnings of gray hair. Or, as in the above study, problems with hair follicles, which trigger conditions like alopecia, where hair falls out, or vitiligo, causing patches of skin to be devoid of color.

"Autoimmune means your own cells are attacking your body," Jihn says. "So if your body is attacking your hair cells, you can go gray as a result."⁶

- **Vitamin deficiency** — It's possible that you have a **vitamin B12 deficiency**, and certain issues make it more of a risk, such as being vegetarian or vegan, having **Crohn's disease**, which makes your body unable to absorb vitamin B12, having had gastric bypass surgery, taking certain medications or birth control, or anemia.
- **Nicotine** — It's possible that smokers aren't aware of how damaging their habit can be to both their hair and their skin.

In fact, Jihn says it's one of the worst things you can do, and there is a link between premature aging — and premature graying — and smoking. Again, it's because the hair follicles are affected.

- **Lack of sun** — Because hair follicles have vitamin D in them, it only stands to reason that without plenty of the "**sunshine vitamin**," your hair could begin losing pigmentation. It's not sunlight on your hair that's important, however — it's getting sunlight on your skin regularly that matters, as your skin absorbs vitamin D from it.⁷

Jihn contends that these factors have more of an impact on your hair color than your genes. However, "If you notice you're getting premature graying and it doesn't run in your family, then you should see your doctor to check if your **thyroid** is okay, your vitamin levels are fine and that you don't have anemia."⁸

What You Eat Affects Your Gray-Haired Status

Catalase is a potent antioxidant enzyme that resides in plant and animal cells, and breaks down hydrogen peroxide. That's how scientists say it also helps stop the development of gray hair. Natural Living Ideas says hydrogen peroxide is:⁹

"A naturally occurring waste by-product of the metabolic process ... thought to be a major contributor in the breakdown of pigments in hair. As we age, our bodies produce less catalase, resulting in the build-up of hydrogen peroxide in our hair follicles — which literally bleaches hair follicles from the inside out.

By eating foods high in catalase, such as garlic, onions, cauliflower, potatoes, broccoli, kale and cabbage, we introduce this gray hair-fighting enzyme back into our bodies, resulting in the gradual return of our youthful hair pigmentation through a safe, all-natural process."

Keep in mind that hair turns white when the pigment cells at the base of the follicle responsible for color cease to form.¹⁰ Researchers say there are foods that can trigger the accumulation of silver strands and even foods you can eat to prevent them.

Copper and Zinc – Hair Color Minerals

Researchers measured the amounts of copper, zinc and iron levels in the blood of 66 study subjects under age 20 going prematurely gray and discovered their copper concentrations to be far lower than people the same age who weren't turning gray.¹¹

Both prawns and shrimp contain zinc, which experts say helps you retain your original hair color. Whether it's cooked or raw makes a difference. Three ounces of cooked crustaceans like shrimp and prawns contain 1.39 milligrams (mg) of zinc¹² while the raw version has 1.14 mg.¹³

Heal With Food notes that the zinc in this seafood plays an important role in the production of new cells, including new hair and skin cells, which helps hair gain thickness and intensify its color.¹⁴ Pumpkin and cheese also contain zinc.

Regarding shrimp and prawns, keep in mind that farmed shrimp tends to be far more contaminated than wild-caught shrimp, and less than 2% of shrimp imported into the U.S. gets inspected by U.S. regulatory agencies.

However, just like wild-caught fish, shrimp can be a delicious, nutritious food, but it's important to find [wild shrimp](#) harvested from the cleanest cold-water sources possible.

Sources and References

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