

# Fear of the Dark

Findings suggest that inky hair dyes may pose a higher risk for cancer.

March 5, 2018 By [Alicia Green](#)

---

From temporary tints to permanent dyes, hair coloring is so popular that analysts say hair color products account for 20 percent of the overall hair care market. However, researchers continue to speculate about the effects these products have on health.

According to the National Cancer Institute, more than 5,000 chemicals are used in hair dyes. These include ingredients such as formaldehyde (classified as cancer-causing to humans and animals), paraphenylenediamines, ammonia and coal tar, which can irritate the skin and cause rashes.

These consequences are some reasons why scientists continue to study hair dyes. But their ultimate goal is to determine whether there's any connection between these pigments and an increased risk for cancer.

Although some investigations have linked use of hair dyes to breast and bladder cancer as well as certain cancers of the blood and bone marrow, others have found no such associations. Thus far, then, findings still remain inconclusive.

A recent study of more than 4,000 African-American and white women assessed the prevalence and patterns of use of hair dyes and chemical relaxers and their link with breast cancer.

Researchers noted that Black women who used dark brown or black hair dye registered a 51 percent increased risk for breast cancer overall.

Among white women who dyed their hair and used chemical relaxers breast cancer risk rose by 74 percent. (Black women who dyed and relaxed their hair were also at higher risk for breast cancer.)

"It is unclear why the association between hair product use and the risk for breast cancer differs by race," says Adana Llanos, PhD, MPH, an assistant professor of epidemiology at Rutgers School of Public Health and Cancer Institute of New Jersey and the study's lead author.

One possible explanation, she suggests, is that there may be a difference in the chemical composition of hair products that are marketed to and used by African-American women compared with those geared toward white women.

But “future research is needed to describe the associated risks in relation to specific products more completely,” Llanos explains.

Llanos, who is Black, occasionally colors her hair and takes precautions when doing so. She uses lighter dyes instead of darker ones, since more vivid hues don’t seem to be connected with a greater cancer risk.

This may be because dyeing locks a lighter hue lifts pigment from tresses with bleach whereas strands absorb the darker shades that are applied onto hair, according to Llanos.

Additionally, professional hair coloring is associated with fewer health risks. Unlike less expensive do-it-yourself dyes that may contain cheaper ingredients, salon dyes include components that help protect a person’s tresses as well as their skin.

Temporary and semipermanent dyes don’t contain ammonia to open the cuticle so the colorants in them cannot penetrate the hair shaft.

For this reason, experts consider these types of sprays, pastes and mousses, which wash out after a few shampoos, less damaging than permanent dyes.

Educate yourself and stay informed, Llanos advises. “It’s important that we are all aware of the hair products, cosmetics and other personal care products that we use and whether they contain chemicals that may be harmful to our health.

## Chemical Reactions

### What to consider before coloring your hair after chemo

According to experts, individuals should wait six months after chemotherapy to color their hair. The reason? Dyes contain strong chemicals that can further damage the hair and scalp.

In addition, some professionals recommend waiting until the hair grows about an inch.

Folks with short manes who are newly recovered from cancer may want to experiment with different tinting techniques, including highlights, or try out natural colors.

But ask your hairdresser to administer a sensitivity test before taking a seat in that salon chair and having a plastic cape draped around your shoulders.

Having this patch-test assessment conducted in advance can help determine whether you’re allergic to certain ingredients in hair dyes. Always have an evaluation done before using permanent or semipermanent dyes—even if it’s a brand you’ve previously used.

In addition, consider natural vegetable and plant-based dyes, such as henna and indigo, that don’t contain the harsh chemicals usually found in regular hair color products. Many believe these are healthier as well as more gentle on fragile tresses compared with traditional dyes.

Finally, experts advise, always consult a physician before subjecting your hair to chemical treatments or processes following cancer therapy.

---

© 2026 Smart + Strong All Rights Reserved.

<http://beta.docker.cancerhealth.com/article/fear-of-the-dark-hair>