

# FDA discussing ban of formaldehyde in hair straighteners

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Crystal Lumpkins, PhD, MA. Credit: Huntsman Cancer Institute

The Food and Drug Administration (FDA) is expected to [ban formaldehyde](#) as an ingredient in chemical hair straighteners, also known as relaxers.

Theresa Werner, MD, deputy director of Huntsman Cancer Institute and a professor of oncology at the University of Utah (the U), and Crystal Lumpkins, Ph.D., MA, investigator at Huntsman Cancer Institute and associate professor at the U, discuss some things you need to know.

"I think this is an important step based on scientific research and data showing increased [health risks](#), including [cancer](#)," says Werner. "This ban emphasizes that we are always learning about risk and should be adaptable, using information to improve health and safety for our patients."

## **What is formaldehyde?**

Formaldehyde is a colorless, flammable, and strong-smelling [chemical](#), most widely known for its use as embalming fluid. The [National Toxicology Program officially listed the substance](#) as a known human carcinogen, or substance that causes cancer, in 2011. According to the American Cancer Society, exposure to formaldehyde has been linked to cancer in both lab studies in animals and people.

But in that time, formaldehyde has remained a common ingredient in relaxers.

This is the first time the FDA has moved to ban the chemical in hair straighteners—but it has been on regulators' radar for some time. The agency started advising users of [relaxers](#) about possible exposure to formaldehyde in 2010.

The [FDA warns](#) that formaldehyde in the straightener can be released into the air as a gas—which can cause health problems if inhaled or touched. Recent studies have also identified chemical straighteners as having possible long-term effects—particularly in cases of uterine cancer.

In 2022, the National Institutes of Health found that women who used chemical straighteners had a higher rate of uterine cancer than those who did not. [Researchers found](#) that 1.64% of women who had never used hair straighteners would develop uterine cancer by the age of 70. For women who frequently used relaxers, that number increased to 4.05%.

"It's over double, right? You may say, 'oh my gosh,' the risk increases by more than 100%. But again, you have to take into account that the risk of uterine cancer is so low in general, and they had fewer than 400 cases in that study," says Werner. "So, looking at the absolute number, it's not that big of an increase, but we're always looking for things that potentially increase risk."

## **Black women, relaxers, and uterine cancer**

Uterine cancer makes up only 3% of new cancer cases. But experts have noted that rates are on the rise, particularly for Black women—who have twice the rate of deaths from uterine cancer compared with other racial groups.

"We know that there are a lot of health disparities based on race and ethnicity with cancer, and a lot of Black Americans use chemical straighteners," says Werner. "Maybe it's not just genetics, maybe there are other [environmental factors](#) for Black women because they're using these relaxers that may increase the risk of cancer."

Chemical straighteners are marketed to Black women to straighten their

natural hair. According to a 2014 [article](#) in the *Journal of Clinical and Aesthetic Dermatology*, 60% of Black women choose to chemically straighten their hair. This practice typically begins at a young age— 46% of respondents said they had their hair first chemically straightened between the ages of four and eight. Women may spend decades chemically relaxing their hair, making multiple visits to their stylist per year.

"It would make sense that something like an environmental exposure would take a long time to actually cause the cancer," says Werner.

"These women are older, and they've lived longer. And the incidence of uterine cancer goes up the older you get."

Which may be why another longitudinal project, the Black Women's Health Study, also found statistically higher rates of uterine cancer among postmenopausal women.

Werner says the scalp is a very vascular region—with vessels that carry blood and lymph fluid throughout the body. "For whatever reason, the uterus cells tend to be a little more sensitive to whatever compound is in there that could be carcinogenic," says Werner.

NIH researchers identified formaldehyde as just one ingredient that could be contributing to the increased cancer risk.

## **Hair and culture**

For Black women, the decision to use chemical relaxers is culturally sensitive—especially for older generations.

"There was the expectation that this is what you do, you straighten your hair so that it looks like other ethnic groups," says Lumpkins.

"Straightened hair was seen as a representation of professionalism, and it

was a representation of beauty."

Lumpkins says this societal pressure makes public health communication on this topic difficult.

"There are people whose straighteners were burning their scalp, but they went back and did another appointment," Lumpkins says. "The hair fell out, but they said, 'I'm going to go back when my hair gets better, and I'm going to get my hair straightened.'" Now, that's not healthy."

If the FDA decides to ban formaldehyde in relaxers, it will still be up to the consumer to weigh other chemical risk factors in the decision to straighten their hair. For Lumpkins, that means continued discussion among Black women—particularly medical doctors and salon owners.

"What I have found is very important when engaging with the stakeholders is: how do you leverage risk like this that's culturally sensitive and culturally appropriate? And how do we pragmatically and scientifically look at how to tailor that information that is relevant and drives the importance of informed decision making?" says Lumpkins.

"If there are products that don't use [formaldehyde](#), if there's a safe alternative, then maybe those relaxers are safe for women to use."

Ultimately, people who use chemical hair straighteners will have to make the best decision for their own hair-care and health needs.

"Black women's [hair](#) is an important part of who they are," says Lumpkins. "And it really does impact a major part of their life, their health, and their well-being."

Provided by Huntsman Cancer Institute

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