

Hair Dyes and Cancer

Origin of the myth

Many hair dyes used before 1980 contained tar-like compounds to darken hair. Women who used these dyes were found to have an increased risk of bladder cancer. These chemicals were also found to cause cancer in mice. As a result of these findings many women refused to colour their hair, forcing cosmetics companies to find new ingredients to darken hair. The carcinogenic (cancer causing) chemicals are now banned in several countries.

Current evidence

Hair dyes come in two forms – oxidative (permanent) and non-oxidative (semi-permanent and rinses). Most studies have focused on the permanent or oxidative hair dyes.

Over the years, much research has been conducted assessing the link between hair dyes and cancer.

The International Agency for Research on Cancer (IARC) evaluated hair dyes in 1993 and concluded that they were possibly carcinogenic to humans. This judgement was based on studies which had found an increased risk of bladder cancer amongst hairdressers and barbers who are highly exposed to the chemicals in hair dyes. The evaluation also found mixed evidence for increases in lung cancer and non-Hodgkin lymphoma as a result of hair dye exposure.¹

In 2002, the Yale school of Public Health studied 1200 women, half of whom had been diagnosed with breast cancer and half who were unaffected by the disease. The women were interviewed as to whether they had used hair dye, which colours and products they had used, and for how long and how often they had done so. The study found no connection between use of hair colour and development of breast cancer.²

A study conducted in Sweden of more than 45,000 hairdressers found no increase in the incidence of bladder cancers for hairdressers in recent decades. Researchers concluded that modern dyes were not linked with bladder cancer. The incidence of other cancers linked to hair dye also dropped consistently until, in the 1990-1998 period, it was no longer statistically significant.³

In 2008, IARC released an updated report which found that occupational exposure to hair dye (hairdressers and barbers) was probably carcinogenic; however there was inadequate evidence to suggest personal use was carcinogenic.⁴

A 2011 case-control study found no overall association between use of hair dye and bladder cancer in women, although an increased risk was found for certain subgroups. Women who used permanent hair dyes and were highly educated had an increased risk, especially if they had a certain genetic profile. These results require confirmation with larger numbers.⁵

The lack of an overall link has been confirmed by a recent meta-analysis of 17 studies which observed no association between the personal use of hair dyes and bladder cancer in either women or men.⁶

Summary

These studies should give reassurance that the link between using modern hair dyes and cancer is, at most, very minimal. Further research is needed to investigate whether certain subgroups may be at increased risk, such as those with a genetic predisposition. People who colour their hair are unlikely to have an increased risk of cancer, even if they have been colouring their hair regularly for many years. If you are still concerned, ensure that you colour your hair in a well ventilated room or salon, so as to minimise exposure to the fumes from hair dyes. Otherwise, embrace your natural colour.

References

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