

Effect of Hair Dye on Consumers; Allergies and Cancer Risks

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ABSTRACT

Since many people regularly dye their hair, either through a professional hairdresser or at home, concerns have arisen about possible side effects from the chemical substances in the hair dye product. Many studies have been undertaken to assess the safety of hair colorant products. In this paper, each recent relevant study is critically reviewed, summarized, and interpreted. My research method is summarize the studies into the tables with separate categories for study types, samples sizes, genders, ethnicities, ages, allergies, and risk of specific cancer types. Using these summaries of findings, I will draw conclusions of each study. I will consider the prevailing view drawn from various studies that there is no association between using hair dye and an increased risk of cancer.

LITERATURE REVIEW

Hair dying is an ancient cosmetic practice that can be traced back to about 4000 years ago. However, hair dye has become very widely used since the beginning of 20th century. (Schlatter, Harald, Long, and Gray, 33), and it should be noted that the key technology in the oxidative formula of hair dye product has changed a little since then. Not surprisingly, numerous studies and intensive research have taken place to assess the safety of these products. No hair dye product will be placed on the market until there is thorough assurance of the safety.

In the European union, there is a list of approved ingredients for hair dye, as well as a list of prohibited ingredients that cannot legally be used. A Hair Dye Safety Strategy has been adopted by the EU commission in a joint effort with the European Cosmetic Industry Association (Schlatter, Harald, Long, and Gray, 33)

The focus of numerous studies has been the possible association between cancer and the use of hair dyes. According to Schlatter, Harald, Long, and Gray, 33, "The vast majority of these epidemiologic studies suggest no association of hair dye exposure with an increased human cancer risk." A number of studies have been conducted to assess genotoxicity in humans who were exposed to hair dyes. "The human biomonitoring studies evaluating genotoxicity do not support the conclusion that personal hair dye use or occupational exposure to hair dyes is associated with an increased cancer risk" (Preston, Skare, and Aardema, 23). Other studies of aromatic amines focused specifically on the carcinogenicity of hair dyes in humans on the target organs, especially the urinary bladder. The conclusion was the same: "In accordance with a number of key reviews in this field, there seems to be no relevant bladder cancer risk associated with the use of hair dyes, which are available today." (Bolt, Hermann, and Golka, 533)

Nonetheless, some individuals are sensitive to hair dye and have allergic reactions. This problem could be dealt with by conducting a skin sensitivity test with the hair dye 48 hours before coloring is actually applied. (Schlatter, Harald, Long, Gray, 35) If consumers notice a skin reaction after the test, it is strongly recommended that they not color their hair, and seek medical assistance if necessary.

In conclusion, from the three related articles I have reviewed, there is agreement that there is no association between using hair dye and increased risk of cancer. Based on the vast majority of studies toward the cancer risk of hair dye product, consumers can feel more confident of the safety of today's hair dye formulations.

METHODS

My methodology includes reading pertinent articles and summarizing the studies into the tables which separate categories regarding to study types, samples sizes, genders, ethnicities, ages, allergies, risk of specific cancer types, and the conclusions of each study. Once I have collected data from all relevant recent studies, I will analyze the findings, draw conclusions, and suggest areas where additional research is needed.



PURPOSE

The purpose of this project is to review data about the safety of the hair colorant product toward both occupational and individual users.

Most current studies indicate that consumers should feel safe in concluding that there is no risk of cancer from the professional or individual use of hair colorant products.

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ACKNOWLEDGEMENTS

Warren Burggren, Ph.D., Provost and Vice President for Academic Affairs
Vish Prasad, Ph.D., Vice President for Research and Economic Development
Gloria C. Cox, Ph.D., Dean, Honors College
Susan Eve, Ph.D., Associate Dean, Honors College
Art Goven, Department Chair, Department of Biological Sciences
Michael Monticino, Dean, College of Arts and Sciences
HNRS 1500 Classmates and Instructor, Dr. Susan Eve, Associate Dean, Honors College

