


Hair colouring products: self-tests can cause allergies

BfR opinion No. 015/2014, 10 February 2014

Oxidative hair dyes frequently contain the substance p-phenylenediamine (PPD) which has high allergenic potential. PPD is used in these products, because, under the influence of hydrogen peroxide, it combines with coupling substances to form a colour pigment which penetrates the hair and thus creates a lasting colour effect. In order to find out whether consumers are allergic to the product, manufacturers of oxidative hair dyes recommend that a self-test is carried out on the skin, before their products are used.

The Federal Institute for Risk Assessment (BfR) draws consumers' attention to the fact that PPD in the concentrations used can lead to sensitisation even in a self-test. Since it is not only the quantity of PPD but also the frequency of contact that determines whether an allergy is triggered, the self-test even increases the risk of developing an allergy to PPD. For this reason, the BfR recommends that consumers do not carry out any allergy tests themselves.

BfR		BfR risk profile: Self-test for allergy to p-phenylenediamine (PPD)-containing hair dyes (Opinion No. 015/2014)			
A Who is affected	General population 				
B Probability of health impairment through self-testing for allergy to p-phenylenediamine (PPD)-containing hair dyes	Practically non-existent	Unlikely	Possible	Likely	Certain
C Severity of health impairments in case of allergy to p-phenylenediamine (PPD)-containing hair dyes [1]	The degree of severity varies				
D Informative value of the available data	High: Essential data are available and free of contradictions		Medium: Some essential data missing or unavailable	Low: Large amounts of data missing or contradictory	
E Controllability by consumers [2]	Control not necessary	Controllable by taking precautionary measures	Controllable by refraining from testing	Not controllable	

Dark blue shaded fields designate the characteristics of the risk assessed in this opinion (more detailed information on this can be found in the text of BfR opinion No. 015/2014 from 10 February 2014).

Explanations

The purpose of the risk profile is to visualise the risk described in the BfR opinion. It is not intended for risk comparisons. The risk profile should only be read in the context of the opinion.

Row C – Severity of health impairment:

[1] – The degree of health impairment can vary. An allergy to p-phenylenediamine (PPD) is not curable. PPD is used as a colourant in a wide variety of products. Once a person is sensitised, it is difficult to avoid the allergen.

Row E – Controllability by consumers:

[2] – The information given in the row "Controllability by consumers" is not intended as a BfR recommendation but is of a descriptive nature only. The BfR made recommendations for action in its opinion: BfR recommends that consumers do not carry out any allergy tests themselves.