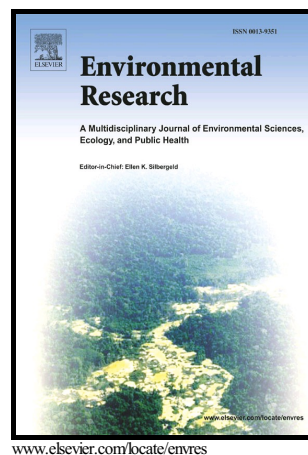


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# Human health risks due to exposure to inorganic and organic chemicals from textiles: A review

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## ABSTRACT

It is well known that a number of substances used in the textile industry can mean not only environmental, but also health problems. The scientific literature regarding potential adverse health effects of chemical substances in that industry is mainly related with human exposure during textile production. However, information about exposure of consumers is much more limited. Although most research on the health effects of chemicals in textiles concern allergic skin reactions, contact allergy is not the only potential human health problem. In this paper, we have reviewed the current scientific information regarding human exposure to chemicals through skin-contact clothes. The review has been focused mainly on those chemicals whose probabilities of being detected in clothes were rather higher. Thus, we have revised the presence of flame retardants, trace elements, aromatic amines, quinoline, bisphenols, benzothiazoles/benzotriazoles, phthalates, formaldehyde, and also metal nanoparticles. Human dermal exposure to potentially toxic chemicals through skin-contact textiles/clothes shows a non-negligible presence in some textiles, which might lead to potential systemic risks. Under specific circumstances of exposure, the presence of some chemicals might mean non-assumable cancer risks for the consumers.

*Keywords:* Textile industry; clothes; organic substances; trace elements; dermal exposure; human health risks

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