Despite European legislation to restrict nickel in jewellery, new Danish research has found that one fifth of a sample of jewellery and hair clasps released nickel at a level that could lead to an allergy. Of particular concern, 80 per cent of hair clasps intended for children released an excessive amount of nickel.

In 1990 and 1994 EU legislation restricted the use of nickel in jewellery and personal objects coming into contact with the skin\(^1\). The aim was to prevent a nickel allergy epidemic. In Denmark nickel allergies remain common with nearly 10 per cent of young women allergic to nickel. Those who develop the allergy are at risk of acquiring hand eczema and possibly other health problems.

The study used a well-known test (the 'dimethylglyoxime test') to investigate the level of nickel in inexpensive jewellery purchased from random selection of shops in Copenhagen. It defined excessive nickel release as the EU threshold of over 0.5 micrograms of nickel per cm\(^2\) of skin per week.

354 earrings, bracelets, necklaces, finger rings and hair clasps were tested and 22 per cent of these released an excessive amount of nickel. Nine of the 25 shops visited were selling products with excessive nickel levels. None of these were department stores or supermarkets.

Products for adults and adolescents that were most likely to release excessive amounts of nickel were hair clasps (19.3 per cent), earrings (14.8 per cent) and necklaces (12.9 per cent). For children excessive nickel was mostly identified for hair clasps (79.4 per cent). This is of particular concern as children tend to have thinner hair than adults and hair clasps are more likely to be in direct skin contact. The research also noted that there is a current fashion trend in Denmark for young children to wear metal hair clasps. Hair clasps are covered by EU legislation if they are assumed to be in prolonged skin contact.

According to the researchers, compliance with EU regulation is usually only monitored by the Danish Environmental Protection Agency when a violation report is received. Random control checks are no longer performed and there have been no instances of fines or imprisonment where the law has been violated.

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