Toxic Metals in Tattoo Ink

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Abstract

To bring attention to potential health risks of tattooing, the objective of this study is to describe the toxic metal composition of tattoo inks. Using the Inductively Coupled Plasma Spectrophotometer (ICP), the concentrations of component metals in eight tattoo inks from two manufactures were measured. It is estimated that over 23% of college students have one to three tattoos. Reports of allergic reactions to inks are prevalent, thus information on materials used in tattooing is critical for assessing health risks. Scientists have described compositions of very few tattoo inks. As new inks are developed risks to human health remain until compositions are described. The chemical constitutions for inks are kept confidential as secrets of the trade among ink manufacturers. The United States Food and Drug Administration regulates tattoo inks and ink pigments as cosmetics and color additives, but has yet to approve any ink for injection into the skin because many pigments are industrial-grade colors also used for printers' ink and automobile paint. Scientifically based information is not currently available in the tattoo industry. The results of this study provide suggestions of potential health risks of tattoos, while more data are needed for this topic to gain public attention.

Bibliography


