

The global problem of Solvent inhalant abuse, hazards and toxicity

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Solvent inhalant is a term applied to a diverse group of volatile, psychoactive substances found in a number of common commercial products. Solvent inhalant abuse refers to the intentional inhalation of vapors from these products to achieve intoxication. Abusers self-administer inhalants to maintain a preferred level of intoxication. Solvent inhalants are easily available, inexpensive and not illegal; which collectively contribute to their abuse by individuals of lower socioeconomic status who cannot easily get other drugs of abuse. Yet, rates of inhalant abuse are currently increasing in other socioeconomic groups indicating an abuse epidemic. Today, inhalation of volatile substances is practiced worldwide, with a marked variability in the type and pattern of substances abused. Hence, inhalant abuse has become a particularly serious health and socioeconomic worldwide problem.

In Egypt, a local glue “Kolla” is widely abused; especially among street children. In a previous study in our department; we identified the physicochemical, neuropharmacological and some of the toxicological properties of this glue in rats. In the present study we explored more behavioral, biochemical, neuropharmacological and toxic effects of “Kolla” inhalation. Effects of inhalation on brain neurotransmitters (GABA, serotonin and dopamine) levels were studied in rats, to determine the possible mechanisms underlying these effects. In addition, we evaluated the influence of glue sniffing on liver and kidney functions and the pathological changes occurring in the brain of rats following glue inhalation. This presentation we will focus on the numerous hazards of “solvent inhalant” abuse and toxicity.

Biography

Alaaeldin Elkoussi is a Professor of Pharmacology and Toxicology in Assiut College of Medicine since 1984. He was the Department Chairman between 1996-1999 and 2005-2007. Prof. Elkoussi obtained his PhD in 1972 and in 1982 and 1984 was granted postdoctoral fellowships in the University of Florida College of Pharmacy. From 1990 to 1994 he worked as a Senior Research Scientist in the Center for Drug Design and Delivery and Center for Drug Discovery, University of Florida and in 2002 obtained a Hubert Humphrey Fellowship at Johns Hopkins University. Prof. Elkoussi has published over 50 manuscripts in international journals and presented several lectures and research work in more than 40 international scientific conferences.

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