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NICOTINE IN E-CIG LIQUIDS A POISONING RISK FOR KIDS

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RISKS to children from the accidental ingestion of e-cigarette liquids containing nicotine "should not be underestimated", according to the authors of research published online today by the *Medical Journal of Australia*.

One millilitre of a highly concentrated nicotine solution such as those contained in e-cigarette refill bottles can be lethal if ingested by a child, wrote the authors, led by Carol Wylie, manager of the Queensland Poisons Information Centre in Brisbane.

"Imported products may not conform to Australian standards, including having child-resistant closures and appropriate labelling, and refill bottles containing highly concentrated nicotine solutions ... can be purchased online," Wylie and colleagues wrote.

The authors undertook a retrospective analysis of calls to Australian Poisons Information Centres (PICs) during 2009–2016.

"The numbers of calls about e-cigarette exposures increased considerably across the study period, although the overall PIC call volume was stable at about 164 000 cases per year," they wrote. "Of 202 sequential e-cigarette-related cases, 38% were from relatives of children worried about their exposure to the liquid component of an e-cigarette after children were found with uncapped vials, sucking the mouthpiece, drinking from separated liquid containers, inhaling the liquid, eating the cartridge, or having splashed liquid in their eyes.

"Adults and adolescents were the subjects of calls in 126 cases (62%), including calls about the potential side effects of routine use or accidental ingestion, or about skin or eye splash exposures. Twelve calls followed deliberate administration for self-harm, ten by oral ingestion and two by injection."

Although most patients had mild symptoms – mainly gastrointestinal disturbances and, in some cases, sedation – the authors warned that children were particularly vulnerable.

"The potential risks ... should not be underestimated; we are aware that an infant recently died in Australia after ingesting a concentrated nicotine solution. Almost all exposures of children to nicotine-containing e-cigarette liquid require their hospitalisation for monitoring possible toxic effects."

Wylie and colleagues wrote that nicotine-containing products should be stored where children could not access them.

"We would welcome any move to improve the safety of electronic cigarettes, including changes to their labelling, storage, and packaging," they concluded.

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