toxtidbits
the maryland poison center's monthly update. news. advances. information.
1-800-222-1222
July/August 2006

Camphor

Approximately 10,000 exposures to camphor-containing products are reported to poison centers in the United States each year. Approximately 80% of cases involve children less than 6 years old. Most poisonings are unintentional or due to misuse of a product. Camphor-containing products include cold sore ointments and liquids, muscle liniments, rubefacients and camphor spirits. Some common brand names include Campho-phenique (10.8% camphor), Mentholatum Ointment (9% camphor), Vicks VapoSteam (6.2% camphor), and Vicks VapoRub (4.7% camphor). Prior to 1983, most fatalities due to camphor ingestions were associated with camphorated oil (20% camphor) being mistaken for castor oil. An FDA ruling in 1983 limits the concentration of camphor in non-prescription products to not greater than 11%. Fatalities are now rare, but serious poisonings still occur. Non-FDA approved ethnic remedies can be found in the U.S. that contain greater than 11% camphor. Recently, patches containing camphor intended for topical use on children were voluntarily withdrawn. Triaminic Vapor Patch (4.7% camphor) and WellPatch Cough & Cold Soothing Vapor Pads (5% camphor) were removed from the market in June and July 2006 due to the possibility of small children removing them and ingesting them.

One gram of camphor in small children has been fatal. This amounts to as little as 2 teaspoonfuls of an OTC product containing 10% camphor! Ingested amounts of less than 30mg/kg are unlikely to produce severe toxicity. Exposure to camphor is often detected because of it's characteristic odor. Camphor-containing liquids are absorbed rapidly from the gastrointestinal tract. Dermal and mucous membrane absorption also occurs; however, serious toxicity with topical exposure is rare. Camphor's mechanism of toxicity is unknown, but it possesses both excitatory and depressant activity. Agitation, delirium and seizures may occur within 5-20 minutes. Severe symptoms may be preceded by oral irritation, nausea and vomiting, but often occur without warning. Lethargy and coma may follow. Death is secondary to respiratory failure or seizures.

Most ingestions in children warrant immediate referral to an emergency department for an observation period of at least 2-4 hours. There is no evidence that activated charcoal is beneficial. Camphor-induced seizures are treated with benzodiazepines.

DID YOU KNOW THAT… *mothballs used to contain camphor?*

Years ago, mothballs were made of camphor. Most, if not all, of the mothballs sold in the United States today contain paradichlorobenzene or naphthalene instead. A characteristic odor similar to camphor is evident with these products. The toxicities associated with the ingestion of naphthalene and paradichlorobenzene are very different from that of camphor. Call the Maryland Poison Center at 800-222-1222 for help in diagnosing and treating all mothball and camphor-containing product ingestions.

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