



THE CITY OF NEW YORK

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Michael R. Bloomberg
Mayor

Thomas R. Frieden, M.D., M.P.H.
Commissioner

nyc.gov/health

2008 DOHMH Health Alert # 2 - Childhood Seizures Associated with the Use of Camphor Products

- Three children were hospitalized with seizures after ingestion and contact with camphor from misuse of over-the-counter products.
- The Health Department is investigating 7 additional cases suspected to be associated with camphor use.
- Camphor is rapidly absorbed into the body from the skin, gastrointestinal tract and respiratory tract, and readily crosses the blood-brain barrier.
- Physicians should have a high index of suspicion for the excessive use of camphor-containing products by parents of children with new onset seizure or unexplained seizure disorder.
- Counsel all parents on the dangers of camphor-containing products and advise them to keep these products out of the reach of children.
- Advise families never to use unlabeled products.
- The three confirmed cases were all Hispanic but camphor (called *alcanfor* in Spanish) is used by many cultures for the treatment of respiratory symptoms and to ward off illness. It is also used as an insecticide and an air freshener.
- Camphor products are widely available, sold in bodegas, botanicas, discount stores and neighborhood pharmacies. The products associated with recent poisonings are sold as small white cubes packaged in clear plastic.
- If you suspect a poisoning, call the New York City Poison Control Center 24 hours a day at (212) POISONS (764-7667).

Please Distribute to All Clinical Staff in Primary Care, Pediatrics, Family Medicine, Emergency Medicine, and Neurology

January 17, 2008

Dear Provider,

In the past week, three children under two years of age were poisoned by ingesting camphor products, resulting in seizures and requiring hospitalization. The Health Department is

investigating seven additional cases potentially associated with camphor use. All three confirmed cases occurred in the Bronx and resulted from children accidentally ingesting or mouthing camphor cubes and/or having excessive skin and inhalation exposure. Camphor is commonly used as an over-the-counter treatment for colds and congestion, or as an insecticide or air freshener.

Case 1. A 15 month old generally healthy boy presented to the pediatric emergency department approximately 40 minutes after licking a cube of '*alcanfor*' [camphor]. He had intractable vomiting followed by a generalized tonic-clonic seizure. The parents purchased the '*alcanfor*' at a local botanica to treat the child's cold. The camphor was placed in a bowl of water on the floor of the child's room. The parents also added the camphor to the water of the humidifier.

Case 2. A 22 month old generally healthy boy presented with status epilepticus to the pediatric emergency department approximately 1 hour after the parents found him with a piece of '*alcanfor*' in his mouth. The family had been using the product, which was purchased in the Dominican Republic, to control roaches in the apartment by placing it along the wall and in the corners.

Case 3. A 15 month old girl presented to the emergency department with her second seizure after the mother applied an '*alcanfor*' chest rub once an hour for 10 hours to the child's chest, back and head for cold symptoms. The mother also added '*alcanfor*' to the humidifier, placed it in a bowl with water under the crib, hung '*alcanfor*' tablets in cheesecloth from the corners of the crib and spread crushed tablets around the house to control roaches. The child's two older siblings had both been recently diagnosed with a seizure disorder.

Camphor is readily and rapidly absorbed through the skin, gastrointestinal and respiratory tract. Being lipophilic, gastrointestinal absorption is enhanced by fatty foods and it readily crosses the blood-brain barrier. The main symptoms of toxicity in children include stomatitis, nausea, vomiting, epigastric distress and CNS effects such as irritability, agitation, and seizures. This may eventually progress to CNS depression characterized by apnea and potentially, coma. Onset of symptoms is generally within 5 to 20 minutes of ingestion and peaks within 90 minutes.

Camphor is a white crystal with a familiar characteristic, fragrant, and penetrating odor. *Alcanfor* is the Spanish word for camphor. It is widely used in many different cultures and has varied applications. Camphor associated with the current poisonings are commonly sold in small white tablets or cubes for varied uses, including: adding to room humidifiers and vaporizers; placing it in a bowl of water to ward off illness or evil spirits; using as an insecticide; applying to the skin as an insect repellent; and using as a room air freshener.

Camphor is regulated by the federal Food and Drug Administration (FDA) in over-the-counter nasal decongestants and analgesics. FDA approved products must be labeled with information and directions for use, appropriate warnings (e.g., keep away from children and do not heat), and manufacturer's information. Camphor products that are not approved and labeled in accordance with FDA are illegal and unsafe.

Exposure Evaluation

If you see a patient for new onset seizure or otherwise unexplained seizure disorder under the age of 2 years, in addition to a comprehensive assessment for other etiologies, ask the parents about their use of camphor (*alcanfor*) and its relationship to the child's seizures. Question parents in detail if a family has more than one child in the home with seizure disorders and they report the frequent use of camphor containing products.

Clinical Tests and Treatments

Specific laboratory tests are not readily available for camphor. There are no toxin-specific treatments for camphor poisoning. Call the Poison Control Center for guidance on the management of suspected cases of camphor poisoning at 212-POISONS or 800-222-1222.

Anticipatory Guidance for Parents

Counsel all parents to:

- Keep all camphor-containing products out of the reach of children.
- Avoid using these products for children under 2 years of age.
- Never use products that are sold without labels.
- Read all product labels and follow the instructions carefully.
- Do not use unapproved camphor-containing products to control pests in your home.
- Report suspected poisonings to the Poison Control Center 24 hours a day at (212) POISONS (764-7667); Spanish-speaking callers, call (212) VENENOS (836-3667).

Report All Poisonings

Report all cases of known or suspected poisonings to the New York City Poison Control Center at 212-POISONS or 800-222-1222 as required by the New York City Health Code.

As always, we appreciate our ongoing partnership with healthcare providers in New York City in reporting cases of poisonings.

Sincerely,

Nancy Clark

Nancy Clark, MA, CIH
Assistant Commissioner,
Bureau of Environmental
Disease Prevention

Robert Hoffman

Robert Hoffman, MD
Director,
NYC Poison Control Center

Nathan Graber

Nathan Graber, MD, MPH
Director,
Environmental and
Occupational Disease
Epidemiology