

## Moth Balls Can Be Dangerous to Children



Moth balls have been used for many years to keep moths away. However, they are not always safe, especially if used improperly. Babies are at greatest risk. Some countries have banned moth balls containing the chemical naphthalene because they can be dangerous to children.

### How to Keep Your Children Safe



- Never sprinkle moth balls in closets, attics, gardens or storage areas
- Use other methods to repel moths such as cedar chips.
- If you do continue to use moth balls, choose a brand that contains paradichlorobenzene instead of naphthalene because it is less harmful.
- If clothing was stored with moth balls, wash and air out before allowing it to be worn by children.
- Report any moth ball exposures to the Connecticut Poison Control Center at 800-222-1222.

## **Why are Moth Balls a Health Risk?**

Moth balls contain a toxic chemical, either naphthalene or paradichlorobenzene. Both become a gas when exposed to air and cause that pungent moth ball smell. These gases are irritating to the eyes and lungs and may cause headache, dizziness and nausea. They are both suspected of causing cancer. Naphthalene is the more toxic ingredient as it causes red blood cells to break apart, a condition known as hemolytic anemia.

Babies are most vulnerable because they can receive the highest exposure and they are less able to clear toxic naphthalene byproducts formed in blood. Babies who have a hereditary defect called glucose-6-phosphate dehydrogenase (G6PD) deficiency are at the highest risk; their red blood cells have little ability to fend off the effects of naphthalene. G6PD deficiency is fairly common, especially in African-Americans in whom 10% carry this trait.

## **How Could Children and Others Be Exposed?**

- Ingestion - moth balls can be easily swallowed by crawling young children. They may think it is candy. Moth balls sprinkled in closets, floors and gardens can be reached by children.
- Inhaled and Skin Uptake - naphthalene and paradichlorobenzene can penetrate into blankets and clothing when stored with moth balls. Dressing babies in these fabrics can cause exposure to chemicals. But this is only if the fabrics have not been washed and aired out before use.
- Everyone in the home is exposed to the vapors if moth balls are not used properly.



## **What Problems Have Moth Balls Caused?**



4000 children per year are exposed to moth balls with over 600 of these cases requiring medical attention. Ingestion of one moth ball can be toxic to a young child, and even lethal if G6PD deficiency is present in that child. A key symptom is jaundice (yellow skin) which can progress to organ damage and death.

## **What Should I Do If My Child is Exposed?**

- If you suspect that your child has eaten a moth ball, immediately seek medical care and call the Connecticut Poison Control Center at 800-222-1222. Rapid treatment can block the chemical from being taken up in the stomach.
- If you are concerned that your baby was dressed in moth ball containing fabrics, call the Poison Control Center and carefully monitor your baby over several days. If its skin or eyes appear yellow, immediately seek medical care.

## How Can I Keep My Children Safe from Moth Balls?



- Use safer methods to prevent moths (see below).
- Remove any moth balls already sprinkled into closets and storage areas.
- Do not use moth balls as room deodorizers or as animal repellents. This usage increases the chance that children will find them.
- If you do use moth balls, read the label and avoid those that contain naphthalene. Follow label directions by:
  - 1) Using only in tightly sealed storage bags or cabinets.
  - 2) Wash and air out fabrics immediately after storage and before use; they should no longer have a strong moth ball smell.
  - 3) Store the unused portion of the box in a sealed plastic bag in a locked, childproof cabinet.

## Are Moth Flakes any Safer?

No, they also contain the same chemicals described above.

## Are there Safe Alternatives?

Yes. The best approach is to wash clothing before storage and then store in tightly sealed storage bags which moths can't get into. Moth repellent is not needed if moths can't get to the clothes. Storage of clothing in cedar closets or sealed up with cedar chips can also help. Sachets made with lavender, cloves, thyme and eucalyptus have been reported to help as well.



## Where Can I Get More Information?



Connecticut Poison Control Center: 800-222-1222  
Connecticut DPH Toxicology: 860-509-7740

Environmental Protection Agency: Learn About Chemicals in your House:

<http://www.epa.gov/kidshometour/products/moth.htm>



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