



## STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH

### RESOURCES FOR CHILDREN'S ENVIRONMENTAL HEALTH

Children today face an array of potential exposures to toxic environmental hazards such as lead, solvents, radon and other air pollutants. These substances may be present in homes, schools, playgrounds and childcare centers. Exposures to these substances can have a negative impact on children's health, such as increasing the risk of developing learning disabilities, chronic and acute respiratory diseases, and cancers and illnesses caused by damage to their developing nervous systems. When children are exposed to contaminants, their bodies are affected differently than adults' bodies. Consequently, negative effects of environmental hazards are greater in children than in adults.

Children are more at risk from exposure to environmental hazards because:

- Their body systems are still developing;
- They eat, drink, and breathe more in proportion to their body size; and,
- Their behavior, such as crawling on floors and in grass, as well as putting things in their mouths can expose them to more chemicals and organisms.

However, there are steps that can be taken to eliminate or reduce exposure to these hazards. The Connecticut Department of Public Health (DPH) has a number of programs that provide support to parents, guardians, schools and those interested in reducing a child's risk to environmental health hazards.

The following pages contain a summary of DPH programs and their activities related to children's environmental health. For more information please visit the DPH website at [www.ct.gov/dph](http://www.ct.gov/dph). Additional resources are also listed under the program summaries.

#### INDOOR AIR

Children spend about 80-90% of their time indoor either at home or at school. The indoor air may contain allergens, such as dust, mold, and pet dander; chemicals from fragrances, cleaning products, and craft supplies; and carbon monoxide from furnaces or fireplaces. Young children are especially affected by indoor air pollution. Therefore, the quality of the indoor environment is very important. Children who spend long hours breathing in polluted air are more likely to develop respiratory difficulties like allergies or asthma, as well as serious long-term health problems. The Indoor Environmental

Quality Unit provides education materials and conducts the EPA *Tools for Schools* program to improve the indoor environment for children.

For more information contact the [Environmental & Occupational Health Assessment Program](#) at (860) 509-7740.

Additional Resources:

- The Environmental Protection Agency: [www.epa.gov/iaq](http://www.epa.gov/iaq)
- Children's Health Environmental Coalition: [www.checnet.org/healthhouse](http://www.checnet.org/healthhouse)
- Art and Creative Materials Institute: [www.acminet.org](http://www.acminet.org)
- National Institute of Health - Tox Town: [www.toxtown.nlm.nih.gov](http://www.toxtown.nlm.nih.gov)

## **ASTHMA**

In 2005, 86,000 children in Connecticut under the age of 18 were reported as having asthma, according to the *Asthma in Connecticut 2008: A Surveillance Report*. To address issues surrounding asthma in the state, the DPH Asthma Program provides leadership and coordination for asthma prevention and intervention activities statewide. The Asthma Program develops and disseminates educational materials for parents, daycare providers, schools, and clinicians throughout the state. This program has been successful in executing a regional approach in its implementation of the *Connecticut Statewide Asthma Plan*. The Asthma Program partners with local health departments in Connecticut to distribute information in a variety of programs including home environmental assessments, as well as professional and patient education programs. DPH also partners with the pediatric *Easy Breathing Program*. This is a professional education program that trains health care providers to administer a validated survey to determine whether a child has asthma, conduct an assessment to determine asthma severity, utilize best practice treatment protocol guidelines for determining proper therapy, and developing individual treatment plans.

For more information contact the [Asthma Program](#) at (860) 509-8251 or by e-mail at: [salina.hargrove@ct.gov](mailto:salina.hargrove@ct.gov).

Additional Resources:

- Quest for the Code: Asthma Web Game:  
[http://www.starlight.org/site/c.fuLQK6MMIpG/b.1352333/k.28D2/Quest\\_for\\_the\\_Code\\_Asthma\\_Game.htm](http://www.starlight.org/site/c.fuLQK6MMIpG/b.1352333/k.28D2/Quest_for_the_Code_Asthma_Game.htm)
- National Institute of Health - Asthma:  
[http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma\\_WhatIs.html](http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma_WhatIs.html) ;
- Allergy and Asthma Network – Mothers of Asthmatics: Breatherville, USA:  
<http://www.aanma.org/breatherville.htm>

## **RADON**

According to the Surgeon General, radon is the number one cause of lung cancer among non-smokers. Radon is responsible for approximately 21,000 lung cancer deaths every year in the United States. It is a naturally-occurring radioactive gas that can build up to extremely high levels in homes and buildings. Testing for radon gas is the only way to know if there are elevated levels in a home. To prevent radon-induced lung cancer in CT, the DPH Radon Program conducts outreach activities and media campaigns, develops and distributes information to the general public, and provides technical guidance to the workforce. The Radon Program works closely with CT's public schools (K-12) to ensure quality in radon testing and mitigation. Additionally, the program tracks radon measurement results in Child Day Care Centers and Group Day Care Homes. When elevated levels of radon are found, the Radon Program provides assistance and technical guidance to the general public, school administrators, students and concerned parents, as well as child daycare operators to ensure radon levels are reduced.

For more information contact the [Radon Program](#) at: (860) 509-7367.

### Additional Resources:

- The National Radon Safety Board: <http://www.nrsb.org>
- The National Environmental Health Association: <http://www.radongas.org>
- The United States Environmental Protection Agency: <http://www.epa.gov/radon>
- The American Lung Association of CT: <http://www.lungct.org>

## **TOBACCO**

No amount of exposure to secondhand smoke is safe. Infants and children are more susceptible to the more than 250 toxic and cancer-causing chemicals found in secondhand smoke (SHS) since their bodies are still developing. SHS exposure causes coughing, phlegm, wheezing, breathlessness, and acute lower respiratory infections (e.g., bronchitis and pneumonia) in infants and in children. Children exposed to SHS are at increased risk for ear infections and are more likely need an operation to insert ear tubes for drainage. SHS exposure causes children who already have asthma to experience more frequent and severe attacks. To help eliminate exposure do not allow smoking in homes, cars or near children.

For more information contact the [Tobacco Use Prevention and Control Program](#) at: (860) 509-8251.

### Additional Resources:

- The Environmental Protection Agency: <http://www.epa.gov/smokefree/>
- Centers for Disease Control and Prevention: <http://www.cdc.gov/tobacco/>
- The American Academy of Pediatrics:  
<http://www.aap.org/healthtopics/tobacco.cfm>

- American Lung Association:  
<http://www.lungusa.org/site/pp.asp?c=dvLUK9O0E&b=22937>

## **LEAD**

As stated by the U.S. Centers for Disease Control and Prevention, lead may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. Since infants and small children are still developing neurologically and physically, they are at the greatest risk of lead poisoning. Lead from deteriorating paint, lead contaminated dust, and lead contaminated soil can pose serious health hazards for children and adults. Many houses and apartments built prior to 1978 contain lead-based paint that deteriorates or is disturbed during repainting or renovation. Eventually small dust-size particles of lead can become part of general house dust. Children are most commonly exposed to lead by the ingestion of this lead dust. However, there are many other factors that put a child at an increased risk, including traditional herbal medicines, hobbies, as well as contaminants found at a parent's workplace. The Lead Poisoning Prevention and Control Program (LPPCP) provides case management, investigation oversight, and associated services for children ages six months through six years (in support of local health departments); monitors environmental lead hazards such as lead-based paint; and provides community and professional outreach and educational services.

For more information, contact the [LPPCP](#) at (860) 509-7299.

### Additional Resources:

- The Centers for Disease Control and Prevention: <http://www.cdc.gov/nceh/lead/>
- The Environmental Protection Agency: <http://www.epa.gov/lead/>
- The Consumer Product Safety Commission: <http://www.cpsc.gov/>

## **DRINKING WATER**

The majority of children spend their days in schools, childcare centers, and at home; and most likely consume water from one of the regulated public water systems in Connecticut on a daily basis. Therefore, assuring adequate, safe drinking water is extremely important. The Drinking Water Section (DWS) regulates approximately 2,800 public water systems, which provides drinking water to 85% of CT (2.7 million people). The remainder of the residents in CT are served by private well water. The DWS is responsible for the administration of all state and federal drinking water regulations.

For more information on public water systems, contact the [Drinking Water Section](#) at (860) 509-7333. For more information on private wells, contact the Private Well Program at (860) 509-7296.

Additional Resources:

United States Environmental Protection Agency Links:

- <http://www.epa.gov/safewater/>
- <http://www.epa.gov/safewater/kids/kidshealth/index.html>
- <http://www.epa.gov/safewater/lead/lead1.html>
- <http://www.epa.gov/safewater/schools/index.html>

## **CHILD DAY CARE LICENSING**

The Community Based Regulation Section assists parents, childcare providers, and others to promote the importance of a safe, healthy and caring environment for children to grow and learn. The Community Based Regulation Section falls under the Regulatory Services Branch at the DPH and oversees all aspects of licensing and regulation of childcare in Connecticut to assure that a child's minimum needs are being met.

Childcare in Connecticut falls into three categories: Family Day Care Homes, Group Day Care Homes and Child Day Care Centers. *Family Day Care Homes* provide services for not more than six full-time and three before/after school children in a private family home. *Group Day Care Homes* provide supplementary care for seven to twelve children. *Child Day Care Centers* provide supplementary care for more than twelve children. In all three childcare categories, the physical environment of the programs is inspected to ensure that the children are safe while in care. Every licensed program in Connecticut is responsible for maintaining the facility in compliance with the state Child Day Care Statutes and Regulations. Child Care Licensing Specialists make unannounced visits to ensure that the facilities are being properly maintained. The Community Based Regulation Section also maintains a Help Desk, which is a resource for both parents and childcare providers. In addition to the Help Desk, [Child Care Licensing](#) Specialists are available to provide technical assistance.

For information please call the Help Desk at (800) 282-6063 from 8:30 am to 4:30 pm Monday through Friday.

Additional Resources:

- 2-1-1 Childcare