

Housing and Health

DEFINITION

Housing and health is the percentage of children under age 18 who live in low-income families that reside in older housing, defined as housing built before 1980. Low-income families are those with incomes less than 200% of the federal poverty level. Data are from the 2005-2007 American Community Surveys (three-year average).

SIGNIFICANCE

Healthy child development requires a home that is well-built and free of health and safety hazards and that provides a place to eat well, play safely, and sleep soundly. Housing quality affects a child's ability to grow, think, learn, relax, and form critical early bonds.¹

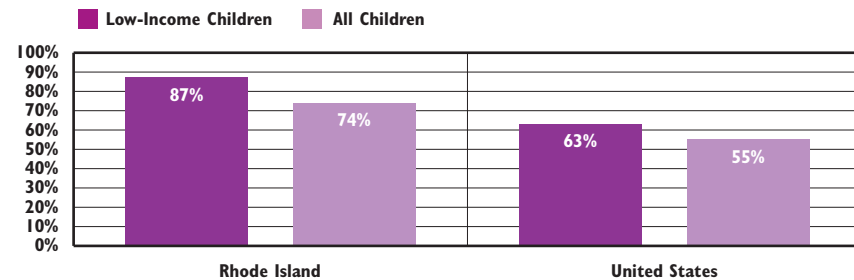
Unhealthy housing can cause or intensify many health conditions. Children living in homes built before 1978, when lead paint was banned from interior use in the United States, are at risk for lead poisoning.^{2,3} Studies have also connected allergies, respiratory distress, asthma, unintentional injuries, poisoning, cancer, and heart disease to poor quality construction, inadequate maintenance, and unhealthy behaviors.^{4,5}

Adopting a comprehensive "healthy homes" approach that includes both

education and physical interventions can help prevent housing related injuries and illnesses, reduce health costs and improve children's quality of life. Because the causes of many health conditions related to the home environment are interconnected, it may be cost-effective to address multiple hazards simultaneously.⁶ For example, repairing cracks in a home's foundation can help keep both water and pests from entering the house and would address several asthma triggers – mold, cockroaches and rodents. Similarly, most lead programs that repair painted surfaces containing lead also fix the leaks that caused the paint to peel in the first place. Fixing the leaks helps the lead repair last longer and also prevents mold problems.

The affordability of housing and the quality of a child's home and surrounding neighborhood are all important to a child's development. The lack of affordable housing puts safe, healthy, well-maintained housing out of reach for many families, forcing families to raise their children in overcrowded and unsafe environments that can interfere with their growth and development. Overcrowded housing is associated with feelings of helplessness, delayed cognitive development, and behavioral problems among children.⁷

Children Living in Older Housing*, 2005-2007 Average, Rhode Island and the United States



Source: Population Reference Bureau analysis of the 2005-2007 American Community Survey (ACS) Public Use Microsample (PUMS) data. *Older housing is defined here as built before 1980. The ACS reports data on the year a housing structure was built by decade, so this is the best available approximation for housing built before 1978 (when lead paint was banned from interior use in the United States).

- ◆ In both Rhode Island and the nation as a whole, children in low-income families are more likely to live in older housing than children in general. Between 2005 and 2007, 87% of low-income children in Rhode Island lived in older housing, while 74% of all children lived in older housing.⁸ Of all 50 states, Rhode Island has the highest percentage of low-income children living in older housing.
- ◆ Rhode Island children were more likely to live in older housing (74%) than children in the nation as a whole (55%). In fact, Rhode Island has the second highest percentage of children living in older housing in the nation.⁹
- ◆ Rhode Island's older housing stock poses additional health risks for children because until 1978 lead paint was commonly used in the interior and exterior of homes, and exposure to lead paint is associated with numerous health risks.^{10,11}
- ◆ Low-income families are more likely to lack the resources required to maintain, repair or improve their homes in ways that reduce residential health hazards, such as by removing lead paint hazards, repairing unsafe stairs, repairing leaks or sealing cracks that may allow moisture or rodents to enter the home.¹²
- ◆ The Weatherization Assistance Program exemplifies the comprehensive "healthy homes" approach. This program helps low-income families reduce their heating bills and also provides up to \$500 per home to fix health and safety problems.



Key Principles of Healthy Housing

The National Center for Healthy Housing has developed seven key principles of healthy housing. According to these principles, a healthy home is: dry, clean, pest-free, safe, contaminant-free, ventilated, and maintained.

- ◆ **Dry:** Damp houses provide a welcoming environment for mites, roaches, rodents, and molds, all of which are associated with asthma.
- ◆ **Clean:** Clean homes are less likely to harbor household pests and reduce children's exposure to contaminants.
- ◆ **Pest-free:** Mice and cockroaches can trigger asthma in some children. The pesticides used to rid homes of household pests can also exacerbate health problems.
- ◆ **Safe:** A majority of injuries to children occur in the home. Falls are the most frequent cause of residential injuries to children, followed by injuries from objects in the home, burns, and poisonings.
- ◆ **Contaminant-free:** Many chemicals found in the home pose risks to children's health, including lead, radon, asbestos, pesticides, carbon monoxide, volatile organic compounds, and second-hand tobacco smoke.
- ◆ **Ventilated:** Research shows that having a well-ventilated home improves respiratory health.
- ◆ **Maintained:** Homes that are poorly maintained may have excessive moisture, pest problems, or deteriorating lead paint, all of which pose health risks to children.

Source: National Center for Healthy Housing. (n.d.). *Seven principles of healthy homes*. Retrieved March 13, 2009 from www.nchh.org/What-We-Do/Healthy-Homes-Principles.aspx

References

^{1,4,7} Roy, J., Maynard, M. & Weiss, E. (2008). *The hidden costs of the housing crisis: The long-term impact of housing affordability and quality of young children's odds of success*. Washington, DC: Partnership for America's Economic Success.

^{2,10,13,15} Centers for Disease Control and Prevention. (November 2, 2007). Interpreting and managing blood lead levels <10 mcg/dL in children and reducing childhood exposures to lead: Recommendations of CDC's Advisory Committee on Childhood Lead Poisoning Prevention. *MMWR*, 56(RR08); 1-14,16.

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Health Problems Associated with Housing

Lead Poisoning

◆ Children living in homes built before 1978, when lead paint was banned for residential use in the United States, are at risk for lead poisoning.^{13,14} Lead exposure during early childhood can cause irreversible damage, including loss of intelligence, impaired cognitive, motor, and physical abilities and behavioral problems.^{15,16,17}

◆ One in twenty (4.5%) Rhode Island children due to start kindergarten in 2010 has had a blood lead screen of ≥ 10 mcg/dL at some point in the past, indicating exposure to an environmental lead hazard.¹⁸ Children living in the core cities (who are disproportionately poor and/or minority) are at increased risk for lead exposure because the housing stock tends to be older.¹⁹

Asthma

◆ The presence of dust mites, cockroaches, rodents, mold, and pet dander can all trigger or exacerbate respiratory problems, including asthma.²⁰ Asthma is the most common chronic condition in children, the third leading cause of hospitalization for children under age 15 and a leading cause of school absences in the U.S.^{21,22}

◆ Between 2003 and 2007, there were almost 5,000 hospitalizations of children in Rhode Island due to asthma. Asthma hospitalization rates were highest for Black and Hispanic children.²³ Minority children are more likely to live in the core cities where the housing stock tends to be older and may be exposed to more asthma triggers.

Unintentional Injuries

◆ Falls are the leading cause of unintentional injuries among children in the U.S. More than 80% of fall-related injuries among children under age five occur in the home. Residential hazards associated with falls among children include a lack of safety devices, such as safety gates and window guards; structural problems, such as uneven floors; and insufficient lighting in stairways and other areas.^{24,25}

◆ In 2007, housing-related falls resulted in 4,837 emergency room visits by children under age 18 in Rhode Island. Half (50%) of these visits were for children under age six.²⁶