



Family and Consumer Sciences Extension

— *Indoor Air Quality Education 2003:*
Exposure to Environmental Contaminants in the Home
Putting Knowledge to Work for Georgia Families

The University of Georgia

Cooperative Extension Service

The Problem

- Many Georgians are exposed to contaminants within their home and near environment which can negatively impact their health, and thereby their quality of life. Of primary concern are polluted drinking water, poor air quality and toxic chemicals and/or gases such as lead, radon and asbestos.
- Scientific evidence has indicated the air people breathe in their homes could be more polluted with toxins than outdoor air. This is quite significant if one realizes that people spend 90% of their time indoors, particularly older adults and children.
- Sources of indoor air pollution, which are common in a typical home, are: household products and chemicals (volatile compounds), carbon monoxide, formaldehyde, dust (allergens), mold and mildew, asbestos, radon gas, lead poisoning, and tobacco smoke.
- According to the United States Environmental Protection Agency, indoor air quality problems in schools are responsible for triggering asthma related problems such as children's absenteeism and visits to the emergency room.
- Each year 21,000 people die from radon-related lung cancer.
- According to the 2003 Georgia County Guide, chronic respiratory diseases caused 3,089 deaths in Georgia accounting for 4.8% of deaths in 2001.

Research-based Solutions

- Pollutant identification through various tests helps families single out pollutants, which create immediate adverse health symptoms.
- Source control helps prevent indoor air pollution by not allowing the source of pollution in the first place.
- Mitigation measures serve to remove the pollutants in the home.

Extension's Role

- Create an awareness of the availability of pollutant identification devices, source control practices and mitigation measures.
- Provide healthy indoor air classes/educational information for consumers through research-based solutions.

Extension's Contribution to Solving the Problem

- Over 14,500 contact hours of *Indoor Air Quality Education* were provided to 7,574 participants in 2003. Nearly 26% of them were low-income participants.
- Almost 28% of the participants were school food service employees. Nearly 9% of the participants were educators.
- Indoor air quality education articles in newsletters reached 32,833 individuals; radio spots were broadcast to over one million listening audience; newspaper columns went to a circulation of almost 589,800; and television programs were broadcast to a viewing audience of 552,700. Exhibits reached over 3,700 individuals.

- Children environmental health partnership - Region 4 EPA, Lead Education, Healthy Homes, National Extension Pharmacy Alliance, Asthma Research Project, and the Radon education program - was started in 2003.

Impact on Georgians

- Almost 95% of the participants in the *Radon Education* programs said it was helpful to understand the significance of testing Radon for indoor air quality.
- The children who participated in the *Radon Education* program significantly improved their indoor air quality knowledge and learned how to prevent Radon contamination in near environment. Almost 39% of the children improved their knowledge.
- Almost 96% of the participants in *Radon Education* program said that they plan to test their homes for Radon and if detected seal entry points and reduce pressure driven forces to prevent Radon contamination.
- After participating in *Indoor Air Quality* extension programs, most of the participants said that they plan to implement learned indoor quality practices for preventing potential health hazards. For example, all the participants indicated that they plan to change the filters on heating and air conditioning units at every three months; 96% of the participants plan to do a walkthrough of their schools to determine if indoor air quality problems exist; 92% of the participants said that they plan to control asthma triggers by taking steps such as proper cleaning, keeping the house smoke free, controlling moisture in the house, and keeping pets out of bedrooms; 71% of the participants planed to check for lead if their homes/schools were built before 1978; and 87% of the participants said that they plan to take children to have their blood tested for lead levels.
- Nearly 75% of the participants said that they intend to educate their families and schools about potential air quality hazards and how to prevent them.
- Among the school food service employees who participated in the indoor air quality program, 96% said that they plan to put on the kitchen exhaust fan when cooking and empty kitchen containers frequently as measures to improve the school lunchroom air quality.
- By responding to a follow-up evaluation, most of the participants in Indoor Air Quality extension programs reported improved practices and benefits. For example, 52% of the respondents reduced exposure of children to second hand smoke; 64% of the respondents checked all heating & cooling systems each year to prevent malfunction and potential carbon monoxide poisoning; 60% of the respondents reduced Indoor Air Quality problems in their homes and 55% of the respondents reduced allergy symptoms or adverse effects of poor indoor air as caused by mold, dust mites, etc.

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