Family & Consumer SCIENCES

TREND ANALYSIS

Environmental Health

Summary of Trends:

Today we live in an environment that is vastly different from that of previous generations. During the past 50 years hundreds of thousands of chemicals have been developed and the production of synthetic chemicals has increased from 1.3 billion pounds in 1940 to 320 billion pounds in 1980. The development of a human being from conception through adolescence provides an entrée of vulnerability to environmental hazards including chemicals. Exposure at those periods of vulnerability can lead to permanent and irreversible damage.

North Carolina has eight western counties that have been classified as zone one with elevated levels of 4 pCi/L (picocuries per liter of air). In the USA, 15,000–20,000 lung cancer deaths are attributed to radon per year. North Carolina is ranked fifth in the nation for ozone. Elevated levels of ozone aggregate respiratory conditions and may trigger asthma attacks. Exposure to environmental tobacco smoke (ETS or second hand smoke) ETS causes serious respiratory problems in children, such as greater number and severity of asthma attacks and lower respiratory tract infections. ETS exposure increases the risk for sudden infant death syndrome (SIDS) and middle ear infections for children. Environmental Protection Agency estimates that between 200,000 and 1,000,000 children with asthma have their condition made worse by exposure to ETS. Currently, use of more than 70,000 chemicals is allowed in the United States. The most current data available for North Carolina is from 1990 to 1993, and approximately 300 cases of acute pesticide poisoning required hospitalization. Of these, roughly 61% (184 cases) were due to acute exposures to insecticides, primarily the organophosphate, carbamate, and pyrethrin compounds. Of the poisonings due to insecticides, 25% were children and of those 96% were in pre-school aged children.

Emerging Trends:

The public is becoming more concerned about environmental health, especially pertaining to children. Indoor air quality issues (mold, asthma, lead, asbestos, second-hand tobacco smoke, cleaning products and radon) continue to be a concern. Exposure to mercury and pesticides along with mold, are receiving significant attention in the research community.

Relevance of Trends to County Programs:

In order to protect consumers, especially children, more effectively and proactively, learning why children are more vulnerable than adults, what types of exposure affect children and which children are more at risk is accomplished through education.

The County Extension Center continues to be the primary source of environmental education as it relates to health. Extension agents are well known for the breath and quality of their indoor air quality and environmental health education programs. A $5,000 EPA grant has been awarded to support this program for year 2003.

Sources of Supporting Data:

http://www.cehi.org/

http://www.cehn.org

http://epa.gov/iaq

http://www.cdc.gov/nceh

Other relevant sites may be assessed through a Google search.

Key words: Environmental Health and Children's Environmental Health

Primary Contact: M. Cassandra Wiggins
sandy_wiggins@ncsu.edu

2003

NC STATE UNIVERSITY
A&T STATE UNIVERSITY
COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Family & Consumer SCIENCES

www.ces.ncsu.edu/depts/fcs