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## ***CDC's Third National Report on Human Exposure to Environmental Chemicals***

### **Spotlight on Cotinine**

Cotinine is a metabolite, a product formed by the body, from nicotine, a chemical in tobacco smoke and chewing tobacco. Levels of cotinine in blood indicate the amount of exposure a person has had to tobacco smoke.

#### **How People Are Exposed to Cotinine**

Nicotine gets into people's bodies if they

- Smoke or chew tobacco. All people who smoke have cotinine in their bodies.
- Are exposed to secondhand tobacco smoke (also called environmental tobacco smoke or ETS).
- Are involved in tobacco production and must handle tobacco.

#### **How Environmental Tobacco Smoke Affects People's Health**

- ETS increases the risk for lung cancer and heart disease in adults who do not smoke.
- ETS is a known human carcinogen (cancer-causing agent).
- Because their lungs are not fully developed, young children are more susceptible to the effects of ETS. Exposure to ETS increases the risk for sudden infant death syndrome, asthma, bronchitis, and pneumonia in young children.

#### **Levels of Cotinine in the U.S. Population**

- For the *Third Report*, scientists measured levels of cotinine in blood samples of nonsmokers who took part in CDC's national study known as the National Health and Nutrition Examination Survey.
- The *Third Report* shows that median cotinine levels in nonsmoking Americans have decreased by 68% in children, by 69% in adolescents, and by about 75% in adults since the early 1990s. These results are encouraging, but children's levels still are double those of adults.

- The *Third Report* also shows differences in cotinine levels among different groups of people. For example, non-Hispanic blacks have levels twice as high as do Mexican Americans and non-Hispanic whites.
- Public health officials have steadily reduced exposure to ETS in the U.S. population, but ETS exposure, especially among children, remains a major health problem.

### For More Information

- **Centers for Disease Control and Prevention**

Tobacco Web site:

[www.cdc.gov/tobacco](http://www.cdc.gov/tobacco)

- **U.S. Environmental Protection Agency**

Office of Air and Radiation, Secondhand Smoke/Smoke-Free Homes:

<http://www.epa.gov/smokefree/>

- **U.S. Environmental Protection Agency**

Office of Air and Radiation. Indoor Environmental Asthma Triggers-Secondhand Smoke:

<http://www.epa.gov/iaq/asthma/shs.html>

- **National Cancer Institute (NCI)**

Cancer Information System Secondhand Smoke: Questions and Answers:

[http://cis.nci.nih.gov/fact/10\\_18.htm](http://cis.nci.nih.gov/fact/10_18.htm)

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