Overview

- Asthma: a critical chronic disease
- Effect of ozone on lung function
- Ozone and asthma management
- Wildfires and health effects
- Public health surveillance
- Public health response
Prevalence: Adults

Lifetime and Current Asthma Prevalence
Adults 18+ Years, NC & US, 2000-2009

Prevalence: Children

Lifetime and Current Asthma Prevalence
Children <18 Years, NC & US, 2005-2009

Sources: NC: NC State Center for Health Statistics. Child Health Assessment and Monitoring Program, 2005-2009
Ozone and the Respiratory Tract

Ozone and Neurally-mediated Responses

Ozone and Lung Function

Ozone and Use of Unscheduled Asthma Medication

Ozone and Clinic Visits

Air Pollution-Ozone Days: North Carolina, 2006

Ozone Awareness

Ozone/Air Quality Awareness Campaigns (Not all states are represented):

- Arizona - Clean Air Make More
- Arkansas - Ozone Action Days
- Colorado - Denver - Ozone Aware
- Connecticut - Ozone Action Days
- Indiana - Clean Air Indiana
- Indiana - Partners for Clean Air
- Indiana - Knozone
- Kansas - Department of Health Kids Zone
- Kentucky - Kentuckiana Air Education KAIRE
- Michigan - Mlair (select the Mlair icon)
- Michigan - Mid-Michigan Action Day Info by CATA
- Michigan - Southeast Michigan Council of Governments Ozone Action
- Michigan - West MI Clean Air Action
- New York - Pollution Control Publications
- North Carolina - Air Awareness Program
- North Carolina - Dept of Public Health Ozone
- North Carolina - Triangle Air Awareness
- North Carolina, Unifour region
- North Carolina, Triad region
- Texas - Ozone Heroes
- Texas - Clean Air Force of Central Texas
- Texas – Clean Air Action

Wildfires and Health Effects

- Coughing
- A scratchy throat
- Irritated sinuses
- Shortness of breath
- Chest pain
- Stinging eyes
- A runny nose
- Asthma exacerbations
Wildfires and Pre-existing Health Conditions

**Heart Disease**
- Chest pain
- Rapid heartbeat
- Shortness of breath
- Fatigue

**Respiratory Conditions**
- Inability to breath normally
- Cough with or without mucous
- Chest discomfort
- Wheezing and shortness of breath
Public Health Surveillance

Division of Public Health
► Epidemiology Section (Public Health Preparedness & Response)
► Chronic Disease and Injury (Asthma, Heart Disease & Stroke Prevention))

North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT)
► Emergency department data

Division of Air Quality
► Smoke/particulate and visibility data
Public Health Surveillance

**ED: Count of Asthma (ICD-9-CM) Grouped by Date**

- **Total Count:** 341
- **Date Range:** 07/01/2011 - 07/21/2011
- **Count:** Beaufort, Bertie, Carteret, Dare, Hertford, New Hanover, Onslow, Pender

**Source:** NC DETECT; Generated: 07/21/2011

Source: Epidemiology Section. Division of Public Health. NC DHHS. NC DETECT Asthma ED Visits, July 1-21, 2011.
Public Health Surveillance

**ED: Count of Asthma (ICD-9-CM) Grouped by Date**

Total Count: 509
Date Range: 07/01/2011 - 07/21/2011
County: Bladen, Cumberland, Sampson
Source: NC DETECT; Generated: 07/21/2011

Source: Epidemiology Section. Division of Public Health. NC DHHS. NC DETECT Asthma ED Visits, July 1-21, 2011.
Public Health Response

Peat Bog Wildfire Smoke Exposure in Rural North Carolina is Associated with Cardio-Pulmonary Emergency Department Visits Assessed Through Syndromic Surveillance

Public Health Response

Poor Air Quality from Eastern North Carolina Wildfires Takes Toll on the Public’s Health

The N.C. Division of Public Health has identified an increase in visits to local emergency departments in eastern North Carolina as local residents suffer the effects of poor air quality. Data from the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (N.C. DETECT) indicates that a significant increase in acute respiratory hospital visits was observed the week of June 18-24, but appears to be decreasing.

Forest fires present health risks for everyone, but smoke may make symptoms worse for people who already have conditions such as respiratory allergies, asthma, heart conditions and chronic obstructive pulmonary disease (COPD).

“While older people are usually at risk for health problems resulting from smoke exposure, we also want to be sure that parents are watching out for children who may be exposed,” State Health Director Dr. Jeff Engel said. “Children’s airways are still developing and they take in more air per pound of body weight than adults, so we encourage parents to limit children’s exposure outside when the air quality is poor.”

Wildfire costs tallied in millions: This year’s drought-extended wildfire season exhausts crews and budgets

Respiratory distress

The Dare County fire has generated other costs as well.

Health officials there and in Pender County report an increase in respiratory ailments caused by exposure to smoke… …in June, …, there was an increase in the number of visits to local emergency rooms because of respiratory problems.

Contact Information

Winston Liao
Asthma Program
N.C. Division of Public Health
1915 Mail Service Center
Raleigh, NC 27699-1915
Tel: 919 707 5210
winston.liao@dhhs.nc.gov