

# ABOUT ASTHMA AND HOW TO MANAGE IT

Presented by  
Trevor W. Newby, MHS

# Overview

- What is Asthma
- Who is Affected
- Idaho Statistics vs. National Statistics
- Environmental Triggers
- How to Improve Air Quality/Reduce Exposure to Asthma Triggers
- Summary
- Resources
- Contact Information

# What is Asthma?

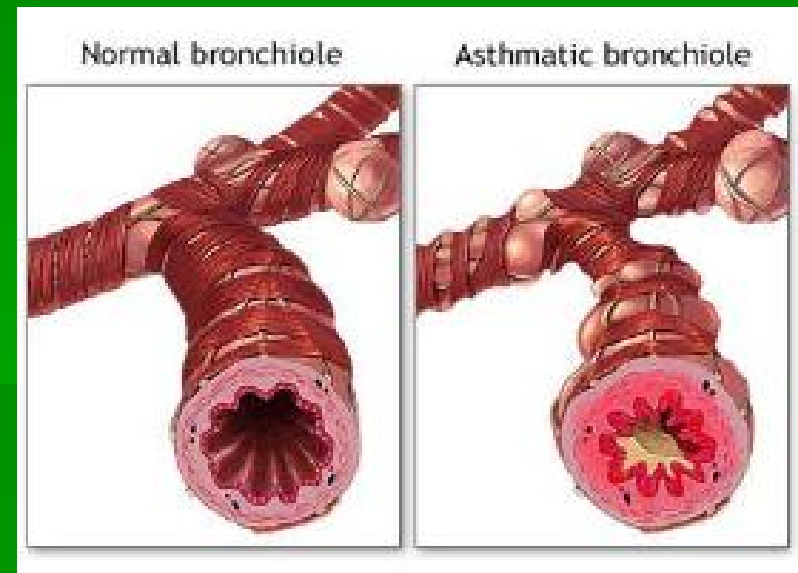
- Chronic disease
- No known cure, but can be controlled
- No known cause, but has been linked to heredity
- Symptoms can vary in severity and length of time and include the following:
  - Coughing
  - Wheezing
  - Shortness of breath
  - Fast and/or noisy breathing
  - Chest tightening
  - Skin discoloration

[http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma\\_WhatIs.html](http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma_WhatIs.html)

[http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma\\_SignsAndSymptoms.html](http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma_SignsAndSymptoms.html)

# What is Asthma? Cont....

- Individuals with asthma have inflamed airways that restrict the amount of air a person can breathe.
- Airways are very sensitive to triggers that may further inflame the inner airways of the lungs and increase mucus production leading to an asthma attack



# Who is Affected?

- 20 million people in U.S. have been diagnosed with asthma, with 9 million being children.
- More prominent in children and the elderly
- African-Americans more likely than Caucasians to be hospitalized for attacks and die from asthma related issues
- Most likely to start in childhood
  - Childhood: more in boys than girls
  - Adulthood: more in women than men

# Asthma Statistics: National vs. Idaho

- **Adults who have been told they currently have asthma**

State		Yes	No
Nationwide	Median %	8.5%	91.5%
	# States	51	51
Idaho	%	9.2%	90.8%
	CI	(8.1-10.3)	(89.7-91.9)
	n	488	4807

■= Percentage, CI = Confidence Interval, n = Cell Size  
 Percentages are weighted to population characteristics.  
 Use caution in interpreting cell sizes less than 50.  
 N/A = Not available if the unweighted sample size for the denominator was < 50 or the CI half width was > 10 for any cell, or if the state did not collect data for that calendar year.

# Asthma Statistics: National vs. Idaho cont...

- **Adults who have been told they currently have asthma by gender**

State		Male	Female
Nationwide	Median %	6.4%	10.4%
	# States	51	51
Idaho	%	8.4%	9.9%
	CI	(6.8-10.0)	(8.6-11.2)
	n	164	324

# of States includes District of Columbia and excludes territories in years >1995

% = Percentage, CI = Confidence Interval, n = Cell Size

Percentages are weighted to population characteristics.

Use caution in interpreting cell sizes less than 50.

N/A = Not available if the unweighted sample size for the denominator was < 50 or the CI half width was > 10 for any cell, or if the state did not collect data for that calendar year.

# Asthma Statistics: National vs. Idaho cont...

- **Adults who have been told they currently have asthma by age**

State		18-34	35-64	65+
Nationwide	Median %	9.1%	8.3%	7.6%
	# States	51	51	51
Idaho	%	9.2%	5.9%	9.1%
	Ci	(5.8-12.6)	(7.0-11.2)	(7.3-10.9)
	n	93	275	120

# of States includes District of Columbia and excludes territories in years >1995

% = Percentage, CI = Confidence Interval, n = Cell Size

Percentages are weighted to population characteristics.

Use caution in interpreting cell sizes less than 50.

N/A = Not available if the unweighted sample size for the denominator was < 50 or the CI half width was > 10 for any cell, or if the state did not collect data for that calendar year.

# Asthma Statistics: National vs. Idaho cont...

- **Adults who have been told they currently have asthma by race**

State		White	Black	Hispanic	Other	MultiRacial
Nationwide	Median %	8.6%	9.5%	5.8%	8.3%	11.1%
	# States	51	37	43	44	25
Idaho	%	9.5%	N/A	3.3%	12.3%	12.3%
	CI	(8.4-10.6)		(1.0-5.6)	(4.7-19.9)	(4.1-20.5)
	n	448		13	15	9

# of States includes District of Columbia and excludes territories in years >1995

% = Percentage, CI = Confidence Interval, n = Cell Size

Percentages are weighted to population characteristics.

Use caution in interpreting cell sizes less than 50.

N/A = Not available if the unweighted sample size for the denominator was < 50 or the CI half width was > 10 for any cell, or if the state did not collect data for that calendar year.

# Asthma Triggers

- **Allergens**
  - **Animal Dander**
  - **Dust Mites**
  - **Cockroaches**
  - **Pollen**
  - **Mold**



# Asthma Triggers cont...

- **Others**

- Medicines such as aspirin and beta-blockers
- Sulfites in food (dried fruit and wine)
- Gastroesophageal reflux (causes heartburn)
- Irritants or allergens in work settings (specific Chemical or dust)
- Infections



# Asthma Triggers cont...

- Irritants
  - Cigarette smoke
  - Cold air or changes in weather
  - Strong odors from painting or cooking
  - Scented products (including air fresheners)
  - Strong emotional expression (including crying or laughing hard) and stress
  - Air pollution

# Asthma Triggers cont...

- Irritants
  - Ozone: Good in stratosphere/bad in troposphere
    - Main ingredient for smog
    - Formed when gas, oil, and coal are burned and mix with heated air/sunlight
    - Also formed by evaporating chemicals such as paint
    - Attacks lung tissue
    - Can cause wheezing, coughing, shortness of breath, and asthma attacks
    - Attributed to 3,700 annual deaths

# Asthma Triggers cont...

- Irritants

- Particle Pollution: A mix of particles in the air we breathe
  - Can be as big as 1/10<sup>th</sup> the width of a hair strand or microscopically small
  - Mechanical: Produces coarse materials from dust storms, mining, construction/demolition, agriculture, etc.
  - Chemical: Produces finer materials from residential wood burning, forest fires, field burning, and gases emitted from combustion sources like factories, steel mills, vehicles, and power plants.
  - Has similar health effects as cigarette smoking.
  - Short and long term particle pollution exposure can lead to a shortened life span, heart disease, lung cancer, and asthma attacks

# Asthma Triggers cont...

**“Two of every five people (42 percent) of the U.S. population live in counties that have unhealthful levels of either ozone or particle pollution”.**

American Lung Association *State of the Air: 2008*

# How to Improve Air Quality/Reduce Exposure to Asthma Triggers

- Lobby state Reps and Senators to protect your air quality
- Encourage schools and public transit to reduce bus emissions



# How to Improve Air Quality/Reduce Exposure to Asthma Triggers cont...

- Use hand powered or electric lawn tools instead of gasoline powered tools
- Don't burn trash or wood
- Fill gas tank after dark



# How to Improve Air Quality/Reduce Exposure to Asthma Triggers cont...

- Walk more



- Bike more



- Carpool



# How to Improve Air Quality/Reduce Exposure to Asthma Triggers cont...

- Avoid outside exercise and physical exertion when air quality is poor
- Check daily air quality (DEQ) levels <http://www.deq.state.id.us/air/aqindex.cfm>



Air Quality	Protect Your Health	AQI
Good	No Precautions Necessary. Breath deeply and enjoy!	0-50
Moderate	Sensative people should plan strenuous outside activities when air quality is better.	51-100
Unhealthy for Sensitive Groups	Sensiitive people should cut back or reschedule strenuous outside activities. Everyone else should consider limiting strenuous outdoor activities	101-150
Unhealthy	Sensitive people should avoid strenuous outside activities. Everyone else should cut back or reschedule strenuous outside activities.	151-200
Very Unhealthy	Sensitive people should avoid outside activities. Everyone else should significantly cut back on outside physical activities	201-300
Hazardous	Everyone should avoid all outside physical activities	301-500

*\* Sensitive people include children, the elderly, those with existing health conditions, and people who have high exposure (those who work, exercise, or spend extensive time outdoors).*  
 ([http://www.deq.state.id.us/air/data\\_reports/monitoring/aqi.cfm#how](http://www.deq.state.id.us/air/data_reports/monitoring/aqi.cfm#how))

# Summary

- Asthma effects all ages, races, and socioeconomic backgrounds (more in children and elderly)
- Asthma is exacerbated by triggers such as air pollution (be aware of your triggers)
- Make a stand to improve air quality for everyone...GET INVOLVED!!!!

# Resources

## Asthma information

- *Center for Disease Control:*
  - <http://www.cdc.gov/asthma/>
- *American Lung Association:*
  - [http://www.lungusa2.org/sota/SOTA08\\_TipSheet.doc](http://www.lungusa2.org/sota/SOTA08_TipSheet.doc)
  - <http://www.stateoftheair.org/2008/health-risks/>
  - <http://www.stateoftheair.org/2008/air-basics/>
  - <http://www.stateoftheair.org/2008/health-risks/health-risks-sota-2008.htm>
  - <http://www.stateoftheair.org/2008/health-risks/health-risks-pm.html>

# Resources cont...

- *National Heart Lung and Blood Institute:*
  - [http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma\\_Causes.html](http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma_Causes.html)
  - [http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma\\_WholsAtRisk.html](http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma_WholsAtRisk.html)
  - [http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma\\_WhatIs.html](http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma_WhatIs.html)
  - [http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma\\_SignsAndSymptoms.html](http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma_SignsAndSymptoms.html)
- **Statistics**
  - *Center for Disease Control:*
    - <http://apps.nccd.cdc.gov/brfss/>
- **Department of Environmental Quality**
  - [http://www.deq.state.id.us/air/data\\_reports/monitoring/aqi.cfm#how](http://www.deq.state.id.us/air/data_reports/monitoring/aqi.cfm#how)
- **Images provided by**
  - *Google Images:*
    - [www.images.google.com](http://www.images.google.com)

# Contact Information

Trevor Newby, MHS  
Health Education Specialist, Senior  
Idaho Respiratory Health Program  
Bureau of Community and Environmental Health



[newbyt@dhw.idaho.gov](mailto:newbyt@dhw.idaho.gov)  
208-334-5972