



## Earth Gauge™ Boston – Public Health

### Environmental Information for Broadcast Meteorologists

*This fact sheet is part of a series on key weather-environment topics for the Boston area. The Earth Gauge™ Healthy Communities project is designed to provide basic background information on environmental impacts in major U.S. urban areas, as well as simple messages meteorologists can deliver to their viewers.*

Not only does the weather impact the environment, it can also impact your health. While everyone is susceptible to weather-related health problems, poor air quality and water quality, extreme heat, and other weather conditions can be especially dangerous for sensitive groups – the elderly, children, and individuals with chronic health conditions.

#### How Does Weather Affect My Health?



The prevalence of asthma in Boston is 9.4 percent is higher than the national average. Ground-level ozone pollution, created by a reaction between air pollutants and sunlight, can aggravate asthma and other lung conditions. Particle pollution in the air can cause problems for asthmatics and individuals with cardiovascular disease.



Parts of the Boston area still have a combined sewer system, which is designed to carry both sewage and rain water to treatment plants. Heavy rain events and flooding can overload the system, discharging a combination of rain water and sewage our local streams and rivers. Bacteria and viruses contained in the overflow can cause health problems for individuals coming in contact with the water, and can result in closures of recreation, fishing, and swimming areas.



Extreme heat events are expected to increase in future years. Extreme heat events can result in illnesses such as heat exhaustion and heat stroke, and are often coupled with poor air quality and stagnant air that exacerbate health problems.



Nice weather offers an excellent opportunity for individuals to get outside, get the recommended 30 minutes of exercise each day, and reconnect with natural areas in the Boston region.

#### Learn More about Weather and Public Health

**The Centers for Disease Control (CDC)** offer extensive resources on the health effects of extreme weather events and natural disasters, including extreme heat, floods, hurricanes, tornadoes, and others. [www.bt.cdc.gov/disasters](http://www.bt.cdc.gov/disasters)

**Designing and Building Healthy Places**, a CDC program, address health issues related to land use – accessibility, children and elders' health, physical activity, air quality and respiratory health, water quality, and others. [www.cdc.gov/healthyplaces](http://www.cdc.gov/healthyplaces)

***Flip this page over to find simple messages and tips about weather and public health you can use during your on-air weather report.***



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## **Making the Connection: What You Can Say On-Air**

Here are some simple facts and tips you can provide to your viewers to help make the connection between weather and public health. Help your viewers understand how they can protect their health.

### ***Asthma Avoidance***

While the average adult breathes in about 3,000 gallons of air each day, children breathe in even more air per pound of body weight, making them more susceptible to health problems from air pollution. High levels of air pollution can trigger asthma attacks and other health problems for individuals with chronic lung conditions.

**Viewer Tip:** If you or your child suffers from asthma, there are easy steps you can take to reduce exposure to air pollution. Use the air quality forecast provided by your local meteorologist or visit [www.airnow.gov](http://www.airnow.gov) to find out when pollution levels are likely to be high, and try to stay indoors during those times. If you do go outside, avoid strenuous exercise (such as running) to reduce your risk.



### ***Combined Sewer Overload***

More than 100 New England communities are served by pipelines that carry both rain water runoff and sewage. During heavy rain events this system can overflow, and untreated sewage mixed with rain water is discharged into local streams and rivers.

**Viewer Tip:** You can help prevent overflows by installing a rain barrel at your home. Rain barrels connect to downspouts, collect rain water and store it for later uses, such as outdoor watering, car washing, cleaning windows, and watering houseplants. If you have multiple downspouts, try to direct as much water as possible away from impervious surfaces such as streets and driveways, and onto surfaces like your lawn and gardens. This allows rainwater to be filtered and slowly soak into the ground, instead of running off into storm drains and local waters, untreated!

### ***Heat and Age***

High temperatures, coupled with high humidity, can create dangerous health conditions. These unhealthy conditions can be especially noticeable in cities, where "hard" surfaces absorb and trap heat, and hot air traps pollutants. Older people can be especially vulnerable to heat-related illnesses because the ability to respond to hot weather becomes less efficient with age.

**Viewer Tip:** Older individuals - especially those with special health conditions - should try to stay indoors on hot, humid days, particularly when air pollution levels are elevated. If you don't have a fan or air conditioner, try to get to a mall, library, movie theater, or other air-conditioned community building to cool off (many communities offer cooling centers during heat waves). If you have an older relative or friend, check in with them often to make sure they are coping with the heat.



### ***School Haze?***

In the mornings, 20 to 25 percent of American commuter traffic is made up of parents driving their children to school! As traffic increases, many parents feel even less inclined to have their children walk or bike to school.

**Viewer Tip:** Encouraging children to walk or bike to school on nice days can cut down on traffic and subsequent air pollution from cars that can trigger childhood respiratory problems, including asthma. You can help your kids find a safe route to school, or even walk with them in the mornings. If you drive your children to school, consider setting up a carpool with other parents in the neighborhood to cut down on the number of drivers in the morning.