

Frequently Asked Questions (FAQs)
Heart Attacks
Wisconsin Environmental Public Health Tracking
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What is a heart attack?

A heart attack is an acute health event in which one or more regions of the heart muscle experience a severe or prolonged decrease in oxygen supply caused by a blocked blood flow to the heart muscle. A heart attack is also called myocardial infarction (MI).

In 2007, the American Heart Association estimated 565,000 new attacks and 300,000 recurrent attacks of myocardial infarction annually (National Heart, Lung, and Blood Institute).

What is the relationship between heart attacks and the environment?

Particulate matter in our environment is a definite risk factor for heart attacks.

A number of studies reported associations between some air pollutants and hospitalizations for heart attacks and other forms of heart disease. Models have demonstrated increases in heart attack hospitalization rates in relation to fine particles, called PM_{2.5}. Especially sensitive subpopulations are the elderly, patients with pre-existing heart disease, or those with diseases that cause airflow blockage and breathing-related problems such as, emphysema, bronchitis, and asthma.

What are symptoms of a heart attack?

The National Heart Attack Alert Program notes these major symptoms of a heart attack:

- **Chest discomfort.** Most heart attacks involve discomfort in the center of the chest that lasts for more than a few minutes, or goes away and comes back. The discomfort can feel like uncomfortable pressure, squeezing, fullness, or pain.

- **Discomfort in other areas of the upper body.** This can include pain or discomfort in one or both arms, the back, neck, jaw, or stomach.
- **Shortness of breath.** This often comes along with chest discomfort. But it also can occur before chest discomfort.
- **Other symptoms.** These may include breaking out in a cold sweat or experiencing nausea or light-headedness.

How can you prevent heart attacks?

In principle, all people can take steps to lower their risk for heart disease and heart attack with the following:

- **Prevent and control high blood cholesterol**
All adults should have their cholesterol levels checked once every five years.
- **Prevent and control high blood pressure**
All adults should have their blood pressure checked on a regular basis.
- **Prevent and control diabetes**
People with diabetes have an increased risk of heart disease but can reduce their risk.
- **Don't use tobacco**
Never smoking is one of the best things a person can do to lower their risk. And, quitting smoking will also help lower a person's risk of heart disease. A person's risk of heart attack decreases soon after quitting.
- **Moderate alcohol use**
People who drink should do so only in moderation and always responsibly.
- **Maintain a healthy weight**
Healthy weight status in adults is usually assessed by using weight and height to compute a number called the "body mass index" (BMI). BMI usually indicates the amount of body fat. Normal weight is a BMI of 18 to 24.9. Proper diet and regular physical activity can help to maintain a healthy weight.
- **Regular physical activity**
Adults should engage in moderate level physical activities for at least 30 minutes on most days of the week.
- **Diet and nutrition**
Along with healthy weight and regular physical activity, an overall healthy diet can help to lower blood pressure and cholesterol levels and prevent obesity, diabetes, heart disease, and stroke. This includes eating lots of fresh fruits and vegetables, lowering or cutting out added salt or sodium, and eating less saturated fat and cholesterol to lower these risks.

What risk factors are related to heart attacks?

Besides air pollutants, there are several types of risk factors involved in heart attacks. These include your genetics, health, and lifestyle.

In terms of risk for heart attacks, the risk is greater for the following:

- persons with hypertension (high blood pressure)
- persons with low levels of HDL (high-density lipoprotein) or high levels of LDL (low-density lipoprotein) blood cholesterol

- persons with a family history of heart disease (especially with onset before age 55)
- persons with type 1 diabetes (diabetes mellitus)
- women, after the onset of menopause
- cigarette smokers
- people who are under a lot of stress
- individuals who are physically inactive
- persons overweight by 30 percent or more

Why are data about hospitalizations important for tracking heart attacks?

The WI EPHT Network uses hospitalization data to calculate the heart attack measures because heart attacks generally lead to hospitalizations. The data presented are for state hospital discharges. But there are some limitations to these data that are important to note, which are listed below.

What are the benefits of tracking heart attacks?

Tracking heart attack hospitalizations will help identify:

- Heart attack hospitalization changes over time.
- Seasonal changes.
- Geographic differences in hospitalizations.
- Differences in heart attack hospitalizations by age, gender, and race/ethnicity.
- Disparities in heart attack hospitalizations by factors such as age, race/ethnicity, gender, education, and/or income.
- Populations in need of targeted interventions?

How is WI EPHT measuring heart attacks on the website?

The website includes the following information about heart attacks:

- Annual number of hospitalizations, by age, gender, and geography
- Monthly average, maximum, and minimum daily number of hospitalizations by age, gender, and geography
- Annual unadjusted (crude) rate of hospitalizations for ages 35+, by gender and geography
- Annual age-specific rates of hospitalizations for all ages, by gender and geography
- Annual age-adjusted rate of hospitalizations for ages 35+, by gender and geography

How can tracking heart attacks improve public health?

The development of standardized measures for heart attack inpatient hospital admissions among Wisconsin residents will inform multiple users at the national, state, and local levels. These measures will allow for monitoring of trends over time, and have the potential to identify high-risk groups not reflected in current national data. These data may also inform heart attack prevention, evaluation and program planning efforts.

Are there important limitations on interpreting hospitalization data?

The WI EPHT program uses inpatient hospitalization data to calculate the heart attack measures. There are some limitations to these data that are important to note.

- Because these data are based on hospital admissions, some people who experience heart attack symptoms are not included, including those who do not receive medical care, those whose care does not result in hospitalization, and heart attack victims who die in settings such as ambulances, emergency departments, nursing homes, or at home.
- These data do not include hospitalizations of residents of Wisconsin in hospitals in other states (such as those that border Wisconsin).
- These data do not include inpatient admissions at hospitals owned by the federal government, such as Veterans Administration hospitals.
- Differences in rates by time or area may reflect differences or changes in diagnostic techniques and criteria and in the coding of heart attack or in medical care access.
- Differences in rates by area may be due to different sociodemographic characteristics and associated behaviors.
- When comparing rates across geographic areas, a variety of non-environmental factors, such as access to medical care and diet, can impact the likelihood of persons hospitalized for heart attack.

Are there other data collected that tracks heart attacks?

There currently is no single heart attack surveillance system in place in the US, nor does this exist for coronary heart disease in general. Mortality is the sole descriptor for national data for heart attacks. Estimates of incidence and prevalence of heart attacks and coronary heart disease are largely based on survey samples (e.g., National Health and Nutrition Examination Survey) or large cohort studies such as the Atherosclerosis Risk in Communities (ARIC) study.

Where can I find out more about heart attacks and heart disease?

<http://dhs.wisconsin.gov/health/cardiovascular/>
<http://www.cdc.gov/DHDSP/>
<http://www.nhlbi.nih.gov/>
<http://americanheart.org>

References:

1. U.S. Centers for Disease Control and Prevention, "Heart Disease Frequently Asked Questions," <http://www.cdc.gov/heartdisease/faqs.htm>
2. U.S. Centers for Disease Control and Prevention, "Heart Disease Prevention: What You Can Do," <http://www.cdc.gov/heartdisease/prevention.htm>