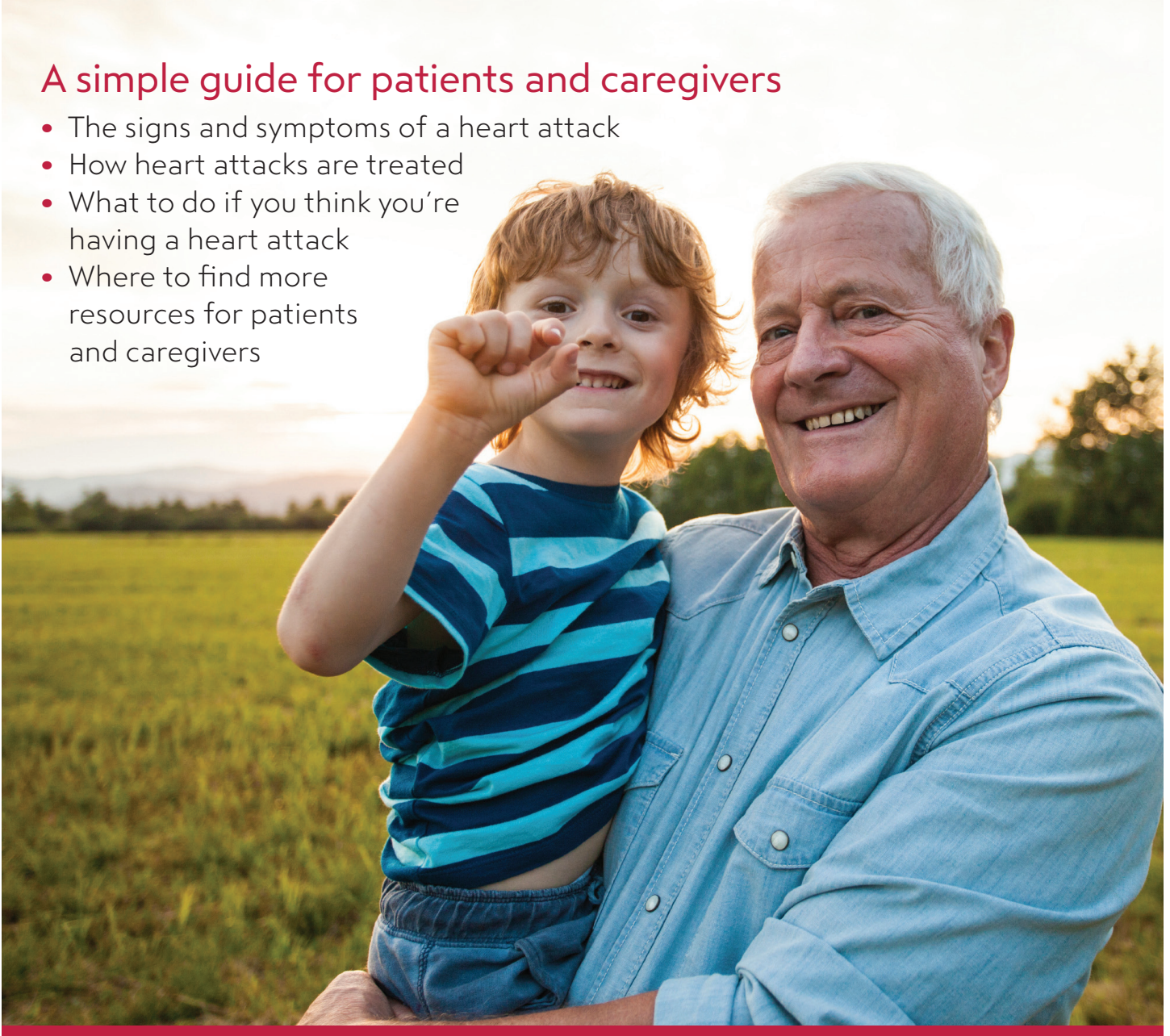


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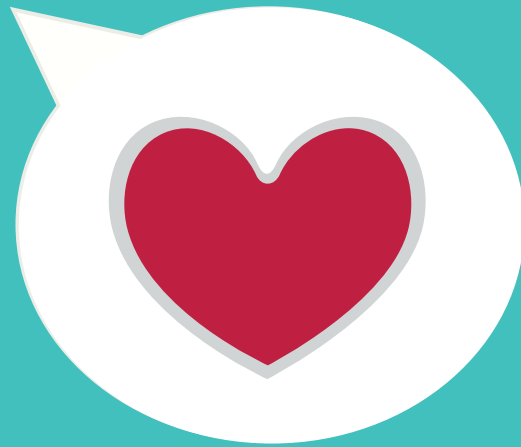
Heart Attacks

A simple guide for patients and caregivers

- The signs and symptoms of a heart attack
- How heart attacks are treated
- What to do if you think you're having a heart attack
- Where to find more resources for patients and caregivers



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The GoToGuide on Heart Attacks

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How to Use This Online Guide

Use the interactive features described here to add to your learning experience.



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Quizzes. Check what you have learned throughout this guide.

Overview of Heart Attacks



Downloadable Resource:
Heart Attack or Anxiety?

What is a heart attack?

We've all heard of heart attacks, but how many of us really know what they are? The term *heart attack* refers to when an artery is blocked, which in turn keeps blood from flowing to the heart. It's also known as a *myocardial infarction* (MI). A heart attack causes heart tissue to die because oxygen cannot get to the heart.

Every organ in our body, including the heart, needs oxygen to work properly. Organs receive this oxygen through the blood that our hearts pump throughout our bodies. When organs — including the heart — are cut off from oxygen, they can't do their job.

Where does the heart get its oxygen? From the coronary arteries. But if these arteries are blocked, then oxygen-rich blood can't get to the heart. The lack of oxygen causes the heart tissue to become damaged or die. This is a heart attack.

Recent figures from the Centers for Disease Control and Prevention indicate that 735,000 Americans have a heart attack every year. Most of these incidents — about 525,000 — happen to people who have never had a heart attack. The remainder — about 210,000 — occur in people who have previously had a heart attack. The good news is that most people who have a heart attack, if treated quickly, will survive.

How do arteries get blocked?

When plaque builds up in the interior walls of the arteries, it prevents the blood from flowing smoothly into the heart. Plaque is made up of cholesterol, a fatty substance that comes from several sources. The body produces some cholesterol. We also get cholesterol from certain types of food, such as red meats.



Audio Clip:
Smoking and Your Heart

The buildup of plaque can reduce the blood flow to the heart, causing the heart tissue to die. Another concern with plaque buildup in your arteries is that if the plaque breaks off the artery wall, it will form a clot that completely blocks the blood flow, causing a heart attack. Clogged arteries also put you at greater risk for stroke.

Who is likely to have a heart attack?

Most heart attacks occur in people who have some form of coronary heart disease. Coronary heart disease is the most common of all heart diseases, killing more than 370,000 people every year. It can be caused by such factors as high blood pressure, high blood cholesterol, uncontrolled diabetes, aging, poor diet, sedentary lifestyle and smoking. All of these factors cause plaque to build up on the artery walls.

Heart disease is often called a “silent killer” because it is brought on in a slow progression — often with no symptoms or warning signs. It occurs after years of poor personal health choices. Lifestyle plays such an important role in having or avoiding a heart attack. Smoking actually speeds up hardening of the plaque in your coronary arteries. But being a non-smoker doesn’t necessarily let you off the hook; a poor diet leading to high

Sudden Cardiac Arrest and Heart Attack Are Not the Same

There’s another form of heart event that many people use interchangeably with “heart attack,” but it’s actually quite different. This is “sudden cardiac arrest,” or SCA. SCA is caused by an abnormal heart rhythm, or what is known as arrhythmia. This is when the heart’s electrical impulses beat abnormally. The erratic electrical impulses cause the heart to suddenly stop beating and to stop pumping blood throughout the body. To remember the difference between these two events, think of a heart attack as a “plumbing” problem (that is, the problem occurs in the arteries, or the “plumbing” of the heart), and think of SCA as an “electrical” problem (that is, the issue is with the heart’s electrical pulses).

According to the American Heart Association, 95 percent of people who experience SCA will die, usually within minutes of the attack. An important cause of SCA is heart attack.

cholesterol and being overweight also causes plaque in the arteries. Genetic causes of high cholesterol are also important to consider. Staying at a healthy body weight is also key, as those who are overweight or obese are more likely to have high blood pressure, diabetes and heart attacks.

When it comes to heart attacks, women are less likely to survive than men are. The most concerning part about this statistic is that no one is sure why this is the case, though there are several theories. It could be because women have smaller blood vessels than men, or that women tend to wait longer before seeking treatment. Some studies have also shown that women don't receive the same level of treatment for heart attacks as men do. That's why knowing the warning signs — and knowing what immediate actions to take — is so important.



Quiz: **Overview of Heart Attacks**

1. Heart attacks are caused by blocked blood flow to the heart.

True

False

2. Myocardial infarction is the same thing as sudden cardiac arrest.

True

False

3. Coronary heart disease, which can lead to heart attacks, is hereditary, so there's nothing you can do about it.

True

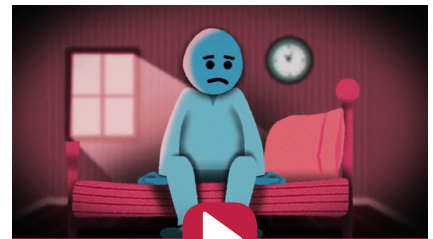
False



Signs of a Heart Attack

According to the American Heart Association, heart attacks claim a victim approximately every 43 seconds. Because 80 percent of heart attacks occur in private, residential settings, it's important to understand the signs and symptoms. Knowing the common signs of a heart attack can mean the difference between life and death because heart attacks require immediate medical attention.

If the symptoms aren't the chest-crushing pain that you see in the movies, then many people dismiss them as temporary illnesses such as nausea or acid reflux and will try to "power through" the symptoms. This only leads to more heart damage, or even death.



Video:
**Are You Having a
Heart Attack?**

Hands-Only CPR Keeps People 'Stayin' Alive'

Did you know that you can administer lifesaving CPR using just your hands (and no mouth-to-mouth resuscitation)? In recent years, the American Heart Association has put out a call-to-action to let people know: Don't be afraid to take action. If you see a teen or adult suddenly collapse, call 9-1-1, and then push hard and fast in the center of the person's chest to the beat of the disco song "Stayin' Alive." CPR can double the victim's chances of survival.



Smoking actually speeds up hardening of the plaque in your coronary arteries.



The reason people may not know they are having a heart attack is because most heart attacks start out slowly with less common warning signs such as nausea or dizziness and the person doesn't experience chest pain. They may feel weakness or fatigue, break into a cold sweat or become very pale and think it's just a cold or flu coming on.

Here are some of the common signs that can mean a heart attack is happening, according to the American Heart Association:

- **Chest discomfort.** The majority of heart attacks include discomfort in the center of the chest that lasts more than a few minutes. Sometimes the pain goes away and then returns. It can be an uncomfortable pressure, squeezing, fullness or pain. Chest pain or discomfort is the most common heart attack symptom for both men and women.
- **Discomfort in other areas of the upper body.** Symptoms can include pain or discomfort in one or both arms, the back, neck, jaw or stomach.
- **Shortness of breath.** This may or may not be accompanied by chest discomfort.
- **Other signs.** These could include breaking out in a cold sweat, nausea, paleness or lightheadedness.

Overlooking the signs of a heart attack is more common among women. While chest pain with discomfort is the most common symptom of a heart attack, in many cases women don't feel pain and pressure in their chest. As a result, their symptoms may not appear to be as severe as when men have heart attacks, and they may downplay their symptoms or don't recognize them as signs of a heart attack. Some of the common signs for women include:

- Shortness of breath
- Pressure or pain in the lower chest or upper abdomen
- Dizziness, lightheadedness or fainting
- Upper back pressure

- Extreme fatigue

Because these aren't classic heart attack symptoms, women may not recognize just how serious their condition is until the symptoms become more severe. By then, more heart damage has occurred and they may have waited too long to seek medical assistance to survive the attack.

If you think you're having a heart attack...

If your symptoms last more than 10 minutes, seek immediate medical help. Your best bet is to call 9-1-1. Most ambulances are equipped with emergency cardiac equipment, and the responders are trained in lifesaving procedures, so they can start treating you as soon as they arrive. (Arriving at the hospital via ambulance and showing symptoms of chest pain typically means that you'll get treated more quickly than if a family member or friend drives you to the ER. Never drive yourself to the hospital if you think you are having a heart attack.)

After you've called for help, if you have aspirin available, chew a tablet to begin dissolving the blood clot as you wait for help to arrive. (It's important to remember to tell first responders and medical staff that you took an aspirin before they start working on you.)

The most important thing you can do is to be aware of these symptoms and react quickly because your life or that of your loved one depends on it.



Quiz: Signs of a Heart Attack

1. If you think you are having a heart attack you should:

- A** Call 911 and chew an aspirin
- B** Wait a day or two to see if the symptoms go away
- C** Drive yourself to the hospital

2. Signs of a heart attack can sometimes feel like the flu or acid reflux.

True

False

3. Women and men experience heart attacks differently.

True

False

Symptoms of Coronary Heart Disease

Many heart attacks are caused by coronary heart disease. While heart attacks often come on suddenly, there are also early indicators that you may have coronary heart disease.

Coronary heart disease occurs when plaque builds up inside the coronary arteries. It doesn't happen overnight; it builds up over many years because of various lifestyle choices and health conditions such as obesity, high cholesterol, diabetes and high blood pressure.

Lifestyle choices play a huge role in heart health. Today's typical diet of fast food, sugary sodas and processed snacks undermine your body's ability to control its insulin, weight, triglycerides and many other important aspects of health. Making poor lifestyle choices often affects more than one area of your health and creates a domino effect.

It's important to realize that one lifestyle issue, such as being overweight, can cause health issues such as diabetes and high blood pressure. And when multiple health issues are combined, they put you at even greater risk of developing coronary heart disease that can lead to a heart attack.

The cellular waste caused by these health issues builds up in the arteries as plaque,



which narrows the arteries and makes it more difficult for the blood to pass through. This is especially taxing on the heart when a person with plaque buildup chooses to do a more rigorous activity that requires the heart to pump harder. Oxygenated blood being forced through a narrowed artery can cause symptoms such as chest pain, shortness of breath or a full-blown heart attack. Coronary heart disease can be your wake-up call that you may be on the road to having a heart attack, and its complications closely mimic heart attack symptoms.

If you are diagnosed with coronary heart disease, consider it your chance to take back control of your health. Create an overall wellness plan to see your doctor on a regular basis and make healthier lifestyle choices.



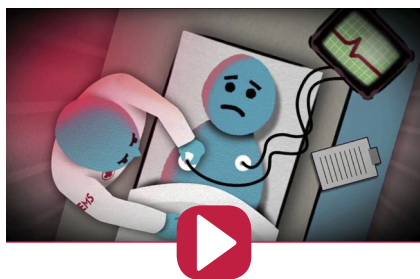
Making poor lifestyle choices often affects more than one area of your health and creates a domino effect.



Treatment of Heart Attack



Downloadable Resource:
Caring for the Caregiver



Video:
How Is a Heart Attack Treated?

Speed is everything when it comes to recognizing a heart attack because you need to get proper medical assistance immediately. The faster you get help, the better you limit the damage to your heart.

Doctors treating a heart attack will make restoring blood flow to the heart their priority. They may use medications that break up the clot, or they may use *percutaneous coronary intervention or PCI* — better known in layman's terms as coronary *angioplasty*. In this procedure, a physician uses a catheter with a balloon at the end to compress the plaque or clot against the wall of the artery, allowing the blood flow to resume.

Follow-up treatment may include medicines, medical procedures and lifestyle changes. Some of the medicines you may be prescribed could include:

- ACE inhibitors to help lower blood pressure and prevent heart failure
- Blood thinner antiplatelets such as aspirin and clopidogrel to prevent blood clots
- Beta blockers to help lower blood pressure and reduce the heart's workload
- Statins to help lower cholesterol

All of these medicines can help prevent another heart attack.

Besides coronary angioplasty, another common medical procedure for heart attack victims is coronary artery bypass surgery, in which a doctor removes a healthy artery or vein, usually from the patient's leg, and then connects the healthy vein or artery around the blocked section of the coronary artery. The newly attached healthy vein or artery

allows the blood to bypass the blocked area and gives the blood a new route to flow back into the heart.

Depression After a Heart Attack

Depression is fairly common among people who have had a heart event. As many as one in three who've had a heart attack report feelings of depression.

Symptoms of depression include:

- Feeling sad or having a depressed mood, including crying often
- Losing interest in activities you used to enjoy
- Any change in appetite or weight
- Sleeping too much or too little
- Feeling agitated, cranky or sluggish
- Losing energy
- Feeling guilty or worthless
- Having trouble concentrating or making decisions
- Having thoughts of death or suicide

Depression can make recovery more difficult because it can lead to:

- A lower desire to follow the treatment plan
- Greater likelihood to smoke and drink
- Greater risk for another heart event
- Lower desire for physical activity
- Bad eating habits
- Anxiety
- Problems at work or school
- Family and relationship problems
- Social isolation and suicide

If you think you're having symptoms of depression, let your primary care physician know. More details are at www.mendedhearts.org/education.

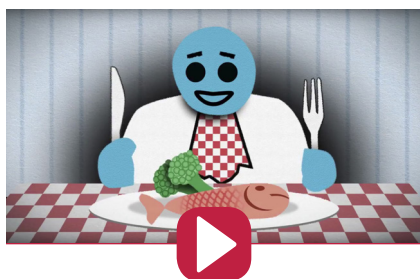


Speed is everything when it comes to recognizing a heart attack because you need to get proper medical assistance immediately.



**Audio Clip:
Depression and
Heart Attacks**

Preventing Your First (or Second) Heart Attack



Video:
Eating for Your Heart



Audio Clip:
Good vs. Bad Fats



Downloadable Resource:
Eat This, Forget That

There are two important areas to consider when it comes to preventing a first — or subsequent — heart attack. The first one is knowing your family history. Heart disease can have a genetic component and can cluster in families. If close relatives have had heart disease, this may put you at a higher risk for developing problems. Being aware of your family's heart history and sharing that information with your doctor will allow you to work together to prevent a heart attack.

While you can't control your family history, you can control another risk factor for heart attacks, and that is your lifestyle choices. For instance, if you smoke, stop. If you drink alcohol in excess, limit it. Maintain a healthy weight. Exercise. All of these factors are within your control.

Choosing a heart-healthy diet doesn't mean you have to give up all of your favorite meals, but it does mean you should consider controlling your portion sizes, eliminating processed foods (which are often loaded with unhealthy "trans" fats) and replacing saturated fats in your diet with the healthy ones.

A heart-healthy diet should include:

- Fat-free or low-fat dairy products
- Fish high in omega-3 fatty acids at least twice a week (this would include salmon, tuna and trout)
- Fruits
- Legumes (kidney and lima beans, lentils, chickpeas, black-eyed peas, etc.)
- Vegetables: broccoli, cabbage, asparagus and leafy greens such as spinach and kale
- Whole grains

It's also important to learn the difference between "good fats" and "bad fats" so you can make sure you're getting the proper kind in your diet. Avoid trans fats completely. Also look for heart-healthy monounsaturated and polyunsaturated fats. Some of the foods with these fats are:

- Avocados
- Nuts and seeds
- Olive, canola, peanut, safflower, sesame oils
- Peanut butter
- Salmon and trout
- Tofu

In addition to food choices, there are some other lifestyle changes you can make to improve your heart health. They include:

- Reducing the amount of stress in your life.
- Exercising at least 30 minutes three days a week. Not only will this help reduce stress, but it also strengthens your heart muscle and keeps the blood flowing.
- Reducing your sodium intake.
- Replacing sugary drinks and sodas with water and drinks sweetened with the healthy, all-natural sweetener stevia.
- Quit cigarettes and e-cigarettes.

Making such lifestyle choices will not just help you live longer, it will help you enjoy your years with more energy.



Quiz: Preventing Your First (or Second) Heart Attack

1. You can avoid a heart attack by making healthy food choices.

True

False

2. Fats are bad for your heart.

True

False

3. In addition to watching what you eat, making the following lifestyle changes can improve your heart health:

- A** Reducing stress
- B** Exercising regularly
- C** Eliminating processed foods and excess sodium intake
- D** Quitting smoking
- E** All of the above

Like what you see here?

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- HeartGuide Patient Resource
- AFib and Stroke
- Chronic Heart Failure
- Complicated Atrial Fibrillation
- Depression and Your Heart
- High Cholesterol and FH
- Medication Adherence
- Tips for Caregivers

