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What Happens to Your Body During a Heart Attack?

By Dr. Mercola | November 18th, 2017

A heart attack can strike suddenly. Its symptoms are quite common, and many people don't initially realize that they're already having one. At times, there may be only ONE symptom and this makes the heart attack even more difficult to diagnose.

But what really happens when you have a heart attack? Read on to find out more.

What Is a Heart Attack?

The heart is an extraordinary organ that can still function even when detached from your body, as long as it has an adequate supply of oxygen. It must work relentlessly to pump blood throughout your body.

It's vital that your heart receives ample oxygenated blood and the heart muscle can die if it receives an insufficient amount. The loss of blood supply may occur when plaque builds up in your coronary arteries and blocks the blood's flow to your heart. Plaque is made up of cholesterol, fatty substances, cellular waste, calcium, and fibrin.

When plaque builds up in your coronary arteries, it can result in coronary artery spasm or atherosclerosis, which is the tightening or hardening of heart muscles and can lead to a blood clot when the plaque ruptures. Atherosclerosis can lead to coronary heart disease, which can trigger a heart attack.

According to the American Heart Association, a heart attack can also occur when the blood supply cannot reach the heart due to narrowed heart arteries, commonly known as ischemic heart disease.

An Unconventional Perspective on Heart Attack

In an article published last December 2014, I featured Dr. Thomas S. Cowan who gave us a different perspective on how heart attacks occur. He said that a heart attack occurs not because your coronary arteries are blocked, but rather it is caused by an imbalance in the parasympathetic and sympathetic sections of your central nervous system.

Stress is a major reason for the imbalance in your central nervous system. When you experience chronic stress, an emotional sensor will activate your sympathetic nervous system. When your parasympathetic nervous system does not compensate for it, this will result in an unexpected release of adrenalin, a hormone that breaks down the myocardial cells, affecting the blood flow needed by your heart. Hence, a heart attack occurs.

The Difference Between a Heart Attack and Cardiac Arrest

It is important to know the difference between a heart attack and cardiac arrest since people are often under the mistaken impression that they are the same. Cardiac arrest happens due to the electrical malfunction of your heart, which causes an irregular heartbeat and usually occur without any warning.

Cardiac arrest is caused by different health reasons like cardiomyopathy or thickened heart muscle, heart failure, arrhythmias, long Q-T syndrome, and ventricular fibrillation. A heart attack may increase the risk of having a cardiac arrest, and is the common reason for its occurrence.

What Happens During a Heart Attack?

Ever wondered what happens during a heart attack? Let's dig deeper into what really goes on inside your body during a heart attack, and the role that plaque plays in this fatal condition.

If your heart has been accumulating plaque over the years, it can thicken enough to obstruct your blood flow. You might not readily notice that you already have a narrowed blood flow, because once a coronary artery becomes incapable of bringing blood to your heart, other coronary arteries expand to take care of the incapacitated artery's job.

Plaque is covered in a solid fibrous cap on the outside but its inside is soft due to its fatty contents. If the plaque in your coronary artery is ruptured, the fatty substances become exposed. Platelets rush to the plaque, forming a blood clot (the same thing that happens when you get a cut or any laceration).

The blood clot formed becomes the main obstruction to your blood flow. Your heart becomes starved of oxygen-rich blood, and your nervous system immediately sends signal to your brain about what's going on. You will start sweating and your heart rate will speed up. You will also feel nauseous and weak.

As your nervous system sends signals to your spinal cord, your other body parts start to ache. You will start feeling an immense chest pain that slowly crawls to your neck, jaw, ears, arms, wrists, shoulder blades, back, and even in your abdomen. Heart attack patients say that the pain they experienced was like a clamp squeezing their chest, and may last from several minutes to many hours.

Your heart's tissues will die if you're not given proper treatment right away. If your heart has stopped beating completely, your brain cells will die in a span of just three to seven minutes. If you are treated immediately, your heart will start to heal but the damaged tissue will never work again resulting in a permanent slow blood flow.

Heart Attack Risk Factors

Every year, 1 in 4 Americans die from heart disease, making it one of the leading causes of death in the US. About 735,000 Americans suffer from heart attack every year, 15 percent of which succumb to death. With these frightening statistics, you should pay close attention to the following risk factors for a heart attack:

- **Age.** Men who are 45 years old or older and women who are 55 years old or older are at high risk.
- **Tobacco.** Prolonged exposure to second-hand smoke puts you on a high risk for cardiovascular disease.
- **High cholesterol levels.** If you have high levels of triglycerides and low high-density lipoprotein (HDL), it is likely that you have a greater risk for a heart attack.
- **Diabetes,** especially if it goes untreated.
- **Family history of heart attack.** If someone in your family has a history of heart attack, you may also have it.
- **Sedentary lifestyle.** Being physically inactive leads to high bad cholesterol levels that may lead to plaque formation.
- **Obesity.** If you lose 10 percent of your body weight, you also lower your risk for a heart attack.
- **Stress.** German researchers found that once you experience stress, your white blood cell levels increase. These in turn raise your risk of developing atherosclerosis and plaque rupture.
- **Illegal drug use.** Using cocaine or amphetamines may cause coronary artery spasm.
- **Preeclampsia history.** If you have experienced high blood pressure during pregnancy, your risk of having a heart attack is high.
- **History of autoimmune disease,** such as rheumatoid arthritis or lupus.

If you have any of these risk factors, I strongly suggest that you pay a visit to your physician to keep you at bay from heart attack or any cardiovascular disease.

Signs and Symptoms of a Heart Attack

Some people may experience mild or no symptoms of heart attack at all – this is called silent heart attack. It happens mostly to people with diabetes.

In order to prevent premature heart disease-related death from happening to you, take note of other common symptoms of this deadly condition:

- 1. Chest pain or discomfort.** This is the most common symptom when having a heart attack. Some people may experience a sudden sharp pain, while some may feel just a mild pain. This may last for a couple of minutes or up to a few hours.
- 2. Upper body discomfort.** You may feel distress or uneasiness in your arms, back, shoulder, neck, jaw, or in the upper part of your stomach.
- 3. Shortness of breath.** Some people may experience this symptom only, or it may happen alongside chest pain.
- 4. Cold sweat, nausea, vomiting, and sudden dizziness.** These symptoms are more common among women.
- 5. Unusual tiredness.** You may feel weary for unknown reasons, and sometimes it will last for days.

Older people who may experience one or more of these symptoms usually just shrug these off, thinking that these are just signs of aging. However, if you experience one or more of these symptoms, have someone call an ambulance immediately.

How to Prevent a Heart Attack

Most cardiovascular diseases are preventable. I recommend these lifestyle practices to help you avoid a heart attack or any heart disease:

1. Eat a healthy diet.

A heart-healthy diet does not mean entirely avoiding fats and cholesterol. As opposed to popular belief, saturated fats and "large, fluffy" low-density lipoprotein (LDL) are actually good for your body since they are your body's natural source for energy.

You also have to avoid consumption of processed foods, refined carbs, sugar (especially fructose), and trans fats since they help increase "small" LDL, which contributes to plaque buildup.

I recommend the following healthy diet strategies:

- Focus on fresh and organic, whole foods
- Limit fructose consumption to 25 grams each day. If you have diabetes, hypertension, or if you're insulin resistant, keep your fructose level below 15 grams per day
- Avoid artificial sweeteners
- Remove gluten and other allergenic foods from your meals
- Include naturally fermented foods in your diet like dairy and cultured vegetables
- Balance your omega-3 to omega-6 fat ratio by eating wild-caught Alaskan salmon or taking a krill oil supplement
- Always drink pure water
- Eat high-quality saturated and monounsaturated fats from pasture-raised animals and krill oil
- Consume high-quality protein from organically raised animals

Eating healthy may not be enough to keep safe from a heart attack – remember, it's also important to observe how often you eat. That being said, I recommend intermittent fasting that limits your daily eating to an eight-hour window.

It helps your body reprogram itself and remember how to burn fat for energy.

2. Exercise regularly.

It is essential that while you are loading up on healthy foods, you are also spending at least 2.5 hours per week doing exercises. I recommend doing high intensity interval exercise, as it offers many benefits not only for your heart but also for your general health and overall wellness. But be sure that you rest after each session to achieve best results.

3. Quit smoking.

The US Centers for Disease Control and Prevention (CDC) has included quitting smoking as a measure to prevent cardiovascular diseases, which may lead to a heart attack. Smoking causes your blood vessels to narrow and thicken. It also causes blood clots to form that may lead to blood flow blockage to your heart.

4. Avoid alcohol consumption.

Alcohol is high in empty calories and actually makes you fat. Drinking alcohol stops your body from burning fats and calories. As a result, the food that you just ate becomes stored fat. Alcohol also damages your prefrontal cortex, which promotes impulsive eating. In order to maintain optimal health, I suggest eradicating all forms of alcohol from your lifestyle.

5. Sit as little as possible.

Long hours of sitting have detrimental effects on your health such as a 50 percent increased risk of lung cancer and 90 percent increased risk of type 2 diabetes. To maintain an active lifestyle at home or even at work, I recommend walking 7,000 to 10,000 steps each day. Using a fitness tracker like Jawbone's Up3 also helps track all your activities for the whole day.

6. Optimize your vitamin D levels.

It is essential that you have your vitamin D levels tested annually as a deficiency of this vitamin increases your risk for a heart attack by 50 percent. In order to get its health benefits, you must maintain a level of 40 ng/ml or 5,000-6,000 IUs per day. I highly recommend sun exposure as your best source of vitamin D, although some foods and vitamin D3 supplements are considered to be good sources as well.

7. Try grounding/Earthing.

Walking bare foot transfers free electrons, which are potent antioxidants, from the earth to your body. Grounding also reduces inflammation throughout your body, as it thins your blood and fills you with negatively charged ions.

8. Free yourself from stress.

A study published in *mBio* showed that when you're stressed, your body releases norepinephrine. This hormone causes the dispersal of bacterial biofilms that result in plaque rupture.

I highly recommend doing Emotional Freedom Technique (EFT) in managing your stress. EFT is an energy psychology tool that helps reset your body's reaction in times of stress. This can reduce your risk of developing chronic illnesses.

Keeping your heart healthy undeniably makes your life more enjoyable and fruitful. Remember these wholesome, commonsense strategies so you can avoid a heart attack and keep your cardiovascular system performing at its best.