How to Spot and Treat a Heart Attack

Analysis by Dr. Joseph Mercola

April 03, 2024

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STORY AT-A-GLANCE

- In the U.S., a heart attack occurs every 40 seconds, impacting approximately 805,000 people annually
- A heart attack, also known as a myocardial infarction, occurs when blood flow to the heart becomes suddenly blocked
- A cardiac arrest occurs due to a malfunction in the heart that causes it to stop beating; this results in loss of consciousness and absence of a pulse
- While common heart attack symptoms include chest pain, lightheadedness and shortness of breath, nausea, vomiting, dizziness and anxiety can also occur, especially in women
- Both a heart attack and cardiac arrest are life-threatening conditions that need emergency medical attention; if the person is unresponsive, use an automated external defibrillator (AED) if available or begin cardiopulmonary resuscitation (CPR) or chest compressions immediately

In the U.S., a heart attack occurs every 40 seconds, impacting approximately 805,000 people annually. Among them, 605,000 experience their first heart attack. Further, in about 1 in 5 cases, the heart attack is "silent," meaning heart damage has occurred, but the person isn't aware of it.[1]

Knowing the symptoms of a heart attack — and the related but different cardiac arrest — is important so you can get emergency medical care without delay.

What Is a Heart Attack — and What Are the Symptoms?

A heart attack, also known as a myocardial infarction, occurs when blood flow to the heart becomes suddenly blocked. Without enough oxygen, the heart muscle becomes damaged and may begin to die, which is why restoring blood flow quickly is essential.

Most often, there's a complete or partial blockage in an artery near the heart that causes the heart attack. Coronary heart disease, which involves plaque building up in the arteries, is often a contributing factor. The plaque buildup can narrow the arteries, blocking blood flow. Common symptoms of a heart attack include:[2]

- Chest pain, including feelings of pressure, squeezing or fullness
- Feeling lightheaded or weak
- Pain in the jaw, neck or back
- Pain in arms or shoulders
- Shortness of breath

These symptoms may come and go and can vary in intensity. Low levels of oxygen in the blood, known as hypoxemia, can also occur, as can pulmonary edema, which is fluid accumulation in the lungs. If the heart is unable to supply blood to the body, a sudden drop in blood pressure, or cardiogenic shock, can also occur.[3]

Men and Women May Experience Different Heart Attack Symptoms

Keep in mind that not every heart attack comes along with the "textbook" symptoms of chest pain or shortness of breath. Women are more likely to experience unconventional heart attack symptoms such as fatigue and nausea, in contrast to men who commonly manifest classic signs, including chest pain. This may be why, despite a greater incidence of heart attacks in men compared to women, females have an elevated one-year mortality rate post-attack.[4]

Researchers with Nova Southeastern University in Florida conducted a systematic review of 74 studies examining differences in heart attack symptoms among women and men, revealing certain parallels. Both genders commonly reported chest pain and chest tightness or pressure as prevalent symptoms upon hospital arrival, as indicated in the findings published in Cureus.[5]

However, men reported chest pain as their primary symptom 13% to 15% more frequently than women and displayed a higher propensity for experiencing burning or pricking pain and sweating. Shared symptoms among both genders included chest, arm or jaw pain with sensations of dullness, heaviness, tightness or crushing. Women, on the other hand, were prone to atypical symptoms, including nausea, vomiting, dizziness and fear of death.

Noteworthy variations were observed in the location of pain, with women more frequently experiencing discomfort in the jaw, neck, upper back, left arm, left shoulder, left hand and abdomen. Additionally, women exhibited a broader spectrum of symptoms, with a higher prevalence. In comparison to men, women aged 18 to 55 reported 10% more symptoms during a heart attack, while those aged 75 and above had 17% more symptoms.

Further, some people experience subtle symptoms in the days and weeks leading up to a heart attack. In some cases, symptoms may begin a year in advance. Known as prodromal symptoms, these occur more often in females than males and include, in order of prevalence:[6]

- Feeling tired or with unusual fatigue
- Sleep disturbance
- Anxiety
- Shortness of breath
- Arm, back or chest pain

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What Is Cardiac Arrest?

Cardiac arrest occurs suddenly due to a malfunction in the heart that causes it to stop beating. Some cases of cardiac arrest have no symptoms. In other instances, the following symptoms may occur prior to the event:[7]

Fatigue
Dizziness
Shortness of breath
Nausea
Chest pain
Heart palpitations (fast or pounding heart beat)
Loss of consciousness

While blood loss, lack of oxygen and high levels of potassium and magnesium — which can cause arrhythmia, or irregular heartbeat — can lead to cardiac arrest, there are three primary causes:[8]

1. **Arrhythmia —** An electrical signal in the heart may lead to an irregular heartbeat known as ventricular fibrillation, which is the No. 1 cause of cardiac arrest. It describes a heartbeat so rapid that the heart trembles instead of pumping blood.
2. **Cardiomyopathy (enlarged heart) —** This leads to abnormal heart contractions.
3. **Coronary artery disease —** If coronary arteries become blocked by plaque, it restricts blood flow to the heart. Left untreated, this may lead to heart failure or arrhythmia, which can trigger cardiac arrest.

While cardiac arrest often occurs without warning or a known underlying cause, there are certain risk factors known to increase the risk, which include:[9]

Alcohol or drug abuse
Family history of heart disease or cardiac arrest
Heart disease
High blood pressure
Low potassium or magnesium
Obesity
Smoking

What's the Difference Between Heart Attack and Cardiac Arrest?

Unlike a heart attack, which occurs due to obstructed blood flow to the heart — typically with the heart maintaining its rhythm — a cardiac arrest results in loss of consciousness and absence of a pulse.[10] As noted by the American Heart Association (AHA), "A heart attack is a 'circulation' problem and sudden cardiac arrest is an 'electrical' problem."[11]

The most immediate and recognizable difference is that a heart attack sufferer remains conscious with a beating heart, whereas an individual experiencing sudden cardiac arrest loses consciousness and lacks a detectable heartbeat. While a heart attack disrupts the heart muscle's oxygen supply, cardiac arrest interferes with its electrical impulses.

During a heart attack, reduced blood flow may deprive part of the heart of oxygen, yet other segments of the muscle continue contracting.

Conversely, physical ailments such as cardiomyopathy, heart failure or arrhythmias affect the heart's electrical system during cardiac arrest. Notably, experiencing a heart attack heightens the risk of sudden cardiac arrest due to the impact on the heart's electrical system caused by oxygen deprivation.[12] In essence, insufficient oxygen supply to the heart muscle during a heart attack impairs its electrical impulses, potentially precipitating cardiac arrest.

What to Do in the Event of a Heart Attack or Cardiac Arrest

Both a heart attack and cardiac arrest are life-threatening conditions that need emergency medical attention. Call 911 and get to an emergency room as soon as possible. If you have access to an automated external defibrillator (AED), it should be immediately used to assist a person in cardiac arrest, in which the person is unresponsive and not breathing.

AEDs are required in certain public spaces in many U.S. states, including schools, athletic facilities, casinos and public golf courses.[13] When emergency medical personnel arrive to help a person in cardiac arrest, they will use a defibrillator immediately. After the shock is delivered, begin cardiopulmonary resuscitation (CPR) or chest compressions immediately, continuing for two minutes before checking to see if another shock is needed.

If you don't have access to an AED, CPR or chest compressions should be given to the person in cardiac arrest while you wait for emergency personnel. For people with health care experience or those proficient in CPR, AHA advocates for traditional CPR, involving chest compressions and mouth-to-mouth breathing, in a 30-to-2 ratio — 30 compressions followed by two breaths, repeating this sequence.

But for the general populace, AHA recommends and emphasizes the efficacy of hands-only CPR, also known as compression-only CPR. The gist is to push hard and fast in the center of the chest.[14] Acting fast is crucial, as each minute that CPR is delayed, the person's chance of survival goes down by 10%.[15] So doing something, even if it isn't perfect, is usually better than doing nothing. Fortunately, hands-only CPR is straightforward and involves the following steps:[16]

- Perform chest compressions at a rate of 100 to 120 per minute. This is about the same beat as the song "Stayin' Alive," which is 100 beats per minute[17]
- The compressions must be done with enough force, to a depth of about 2 inches for an average adult[18]
- Don't stop; minimize interruptions in chest compressions
- Avoid leaning on the patient between compressions

Sadly, about 90% of people who experience cardiac arrest outside of a hospital setting die. However, if CPR is administered immediately, the person's chance of survival can double or triple.[19]

Methylene Blue and Melatonin — Two Must-Haves in Case of Heart Attack

I recommend having methylene blue — the precursor molecule for hydroxychloroquine and chloroquine — and melatonin readily available at home in case of a heart attack. While sudden death is the most common symptom of heart disease, surviving individuals face the serious threat of reperfusion injury, where cellular dysfunction and death may worsen following the restoration of blood flow.

Methylene blue administration can significantly mitigate tissue damage; however, proper dosage is crucial to avoid overdose. Use a microspoon for precise measurement, as discussed in my interview with Francisco Gonzalez-Lima, Ph.D., an expert on methylene blue.

For nonacute, longer-term treatments, including dementia prevention and treatment, post-stroke care, cognitive enhancement and overall health optimization, low doses of 0.5 milligram (mg) to 1 mg per kilogram of body weight are recommended.

Additionally, keep melatonin on hand in a 10 mg sublingual dose. This potent antioxidant can minimize reperfusion injury if taken immediately after a heart attack or stroke. Administer methylene blue within minutes of the cardiac event as well to meet the critical time threshold, underscoring the importance of keeping these items in your emergency medical kit.[20]

Heart Attack Treatment, Recovery and Prevention

Once you are in the hospital, doctors will work to stabilize your condition by providing oxygen and medications to dissolve blood clots. Interventions to help restore blood flow, including coronary angioplasty and coronary artery bypass, may also be needed. Many people not only survive heart attacks but go on to live long, healthy lives post-attack.

Cardiac rehabilitation is often recommended and involves a supervised program of physical activity, dietary changes and stress relief. For many, normal activities can be resumed within a few weeks of the event. Keep in mind that once you've had a heart attack, your risk of another increases.

This is why lifestyle changes are so important, not only for building a healthy heart, but for keeping it that way. This includes eating right, avoiding excess linoleic acid from seed oils, exercising, dealing with stress and getting proper sleep. For instance, women with low fitness levels have a higher risk of dying from any cause, including cardiac arrest.[21] While cardiac arrest often occurs unexpectedly, leading an ongoing heart-healthy lifestyle is the best approach to prevention.

With that in mind, many conditions, including heart disease, appear to be rooted in mitochondrial dysfunction.[22]

Ubiquinol — the reduced, electron-rich form of coenzyme Q10 (CoQ10) that your body produces naturally — plays an important role in the electron transport chain of your mitochondria, where it facilitates the conversion of energy substrates and oxygen into the biological energy (adenosine triphosphate, or ATP) needed by your cells for life, repair and regeneration.

If you don't get enough of this important compound, your heart health could suffer, as CoQ10 is a key player in heart health. In fact, 75% of ischemic heart disease patients have low levels of CoQ10.[23]

Depending on your age and health status, supplementation may be necessary to keep your CoQ10 levels high enough for optimal health. Young people are able to use CoQ10 supplements quite well, but older people do better with ubiquinol, as it's more readily absorbed.

The suggested dose is usually between 30 mg to 100 mg per day if you're healthy, or 60 to 1,200 mg daily if you're sick or have underlying health conditions.[24] If you have an active lifestyle, exercise a lot or are under a lot of stress, you may want to increase your dose to 200 to 300 mg per day. If you take a statin drug, you need at least 100 mg to 200 mg of ubiquinol or CoQ10 per day, or more. Ideally, you'll want to work with your physician to determine your ideal dose.

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Guillermou
Joined On 4/7/2015 8:47:48 AM
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Years before developing diabetes, people with insulin resistance could be more likely to develop abnormal heart rhythms, which can put them at higher risk of sudden death, according to research we funded and presented today at the British Cardiovascular Society conference . www.bhf.org.uk/what-we-do/news-from-the-bhf/news-archive/2021/june/ins.. death (2021).--- Insulin resistance is a cause of a series of metabolic disorders called metabolic syndrome. Most people with heart disease are resistant to insulin, which leads to the same target—elevated blood sugar, increased triglycerides, reduced HDL, elevated inflammation (CRP and homocysteine), oxidized cholesterol, increased risk blood clotting, high blood pressure, which result in an increased risk of heart attack, stroke and diabetes.

Insulin resistance (IR) is implicated in atherosclerosis through numerous pathophysiologies, causing a variety of problems from stroke and kidney failure to congestive heart failure (CHF) and myocardial infarction (MI). Insulin resistance is unable to exert its maximal effects on target tissues, including skeletal muscles, liver, and adipose tissue.

This alteration of insulin signaling pathways results in the development of cardiometabolic disorders, including obesity, dyslipidemia, low-grade inflammation, endothelial dysfunction, and hypertension, all of which are predisposing factors to atherosclerosis, cardiovascular disease, and stroke. . www.ncbi.nlm.nih.gov/.../PMC10069006 (2023).— bjmas.org/.../543 (2023).-- assets.cureus.com/uploads/review_article/pdf/217920/20240124-3320-e3md.. (2023).--

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Guillermou
Joined On 4/7/2015 8:47:48 AM
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There are a variety of causes of chest pain, ranging from benign to life-threatening. Cardiovascular diseases (CVDs), most of which can cause chest pain, especially coronary artery disease, affect more than 18.2 million adults in the US and are the leading cause of death for both men and women. The triglyceride and glucose ratio (TyG) was positively related to a higher incidence of chest pain. Furthermore, the TyG index was associated with all-cause mortality not only in participants with chest pain but also in those without chest pain. cardiab.biomedcentral.com/.../s12933-024-02209-y (2024).--- www.thelancet.com/.../PIIS2666-7568 (22)00247-1/fulltext (2023).-- Cardiometabolic index (CMI) is a novel indicator to predict the risk of obesity-related cardiovascular diseases.

BMI was calculated as the ratio of triglycerides to high-density lipoprotein cholesterol waist-to-height ratio. CMI is related to insulin resistance (IR), impaired fasting glucose, and type 2 diabetes mellitus. www.frontiersin.org/journals/endocrinology/articles/10.3389/fendo.2024.. (2024).--- www.ncbi.nlm.nih.gov/.../PMC9246614 (2023).-- Insulin resistance (IR) contributes more significantly to cardiovascular disease morbidity and non-fatal myocardial infarction in women than in men. link.springer.com/.../s12933-023-02093-y (2024).--

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DrLizbeth
Joined On 5/13/2022 6:55:56 AM
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If having symptoms of an acute MI (chest pain, shortness of breath), call 911 tell them you are having a heart attack and chew 4 baby (81mg) of aspirin (if no allergy). (Always have baby ASA immediately available.) DO NOT drive yourself to the ER. When my brother called me (he was alone at home) describing his symptoms I had to insist he call 911; he thought he could drive to the ER. He had 98% thrombotic occlusion of the LAD. This occurred a couple months after his 3rd Pfizer shot. He got a stent and was on the road to recovery in Cardiac Rehab when he developed pericarditis with a. fib and had to be hospitalized for treatment. None of his doctors wanted to talk about the Covid vax as the cause.

Reply | Mark as Spam | Posted On 4/3/2024 6:23:32 AM

Like | Dislike

Dailyuser
Joined On 3/18/2024 5:57:16 PM
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I just want to make you aware that antibiotics can cause Heart Attacks as 16 years ago I had salmonella from peanut butter recall, was on antibiotics for over a month and ended up having a light Heart attack and had no blockage ! Doctor said only thing he could think what caused it was the antibiotics!

Reply | Mark as Spam | Posted On 4/4/2024 6:52:31 AM

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BicycleBoy
Joined On 6/26/2007 12:32:23 AM
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One must be careful using CPR on older (80yrs+) people who are frail.

Reply | Mark as Spam | Posted On 4/3/2024 11:23:07 AM

Like | Dislike

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cov8983
Joined On 5/31/2021 3:22:50 PM
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How much melatonin would you take? The article says ' keep melatonin on hand in a 10 mg sublingual dose" but how much do you take?

Reply | Mark as Spam | Posted On 4/3/2024 10:53:38 AM

Like | Dislike

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geodevosyahoo.com
Joined On 7/30/2014 3:14:03 PM
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The article said 10mg melatonin

Mark as Spam | Posted On 4/3/2024 9:34:51 PM

Like | Dislike

11357
Joined On 8/18/2008 5:10:43 PM
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There is another symptom that is rare. It is is a burning sensation in your lungs. My husband was having a heart attack but he had good color, no sweating, no pain anywhere except the burning sensation in his lungs. The EMTs said his EKG was fine. I don't think they believed he was having a heart attack. They got him to the hospital and he was in the ER for 4.5 minutes when he went into cardiac death. They did CPR for 4 minutes then paddled him twice to get him back. He had 2 complete blockages and had 2 stents put in. The cardiologist who was in the ER with him said if he had been in the ambulance when his heart stopped he would have died.

I took the EMTs over 20 minutes to put him in the ambulance and over 20 minutes to get him to the hospital. I am so lucky his heart held out that long. Part of the reason it took so long to get him out of the house was because one of the men was writing down all of the vitamins and supplements he took. That information is not worth waiting for. I could have called all that information in. I wish emergency personnel where more aware of rare symptoms.

Reply | Mark as Spam | Posted On 4/3/2024 10:48:38 AM

Like | Dislike

Merkphan
Joined On 12/25/2023 6:12:58 AM
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"High levels of potassium and magnesium can cause arrhythmia"?? I didn't know that. I take potassium and magnesium every day. Hope I'm not getting too much.

Reply | Mark as Spam | Posted On 4/3/2024 10:12:12 AM

Like | Dislike

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cov8983
Joined On 5/31/2021 3:22:50 PM
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Just get ur levels checked

Mark as Spam | Posted On 4/3/2024 2:14:09 PM

Like | Dislike

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sco3869
Joined On 3/2/2017 8:01:52 AM
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I buy 1% liquid MB, so that each drop is 0.5mg. The chronic dose is 0.5mg to 1mg per kg. In Dr Mercola's interview with Francisco Gonzalez-Lima he suggests the acute dose is 3mg to 4mg per kg. That's at the 46 minute mark: www.bitchute.com/.../XVV4SKQztfmf

Reply | Mark as Spam | Posted On 4/3/2024 4:10:17 AM

Like | Dislike

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mvn3764
Joined On 1/31/2017 9:15:19 AM
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Is the methylene blue administered orally at home immediately after resuscitation or at the hospital by IV.

Reply | Mark as Spam | Posted On 4/3/2024 5:17:49 AM

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dolittlemo02
Joined On 6/16/2023 8:36:03 AM
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Master herbalist Dr Christopher says to use cayenne if you know you are having a heart attack. From experience I have. I mixed about 1/4 teaspoon in water and chugged it down. It stops it in its tracks. Dr Christopher says to use a teaspoon of cayenne in hot water. I didn't dare do that much.

Reply | Mark as Spam | Posted On 4/3/2024 8:42:43 AM

Like | Dislike

Jeanne77
Joined On 10/13/2010 11:36:03 AM
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I also learned this Cayenne pepper method from Barbara O'Neill. She said she had stopped someone's heart attack using this.

Mark as Spam | Posted On 4/3/2024 10:12:11 AM

Like | Dislike

Nadege36
Joined On 5/23/2013 7:28:10 PM
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Thank you for that info. Are you talking about food cayenne as in pepper flakes or do you mean supplements?

Mark as Spam | Posted On 4/3/2024 12:15:58 PM

Like | Dislike

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wor9463
Joined On 12/19/2016 1:50:24 PM
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Cayenne is also recommended in the book, "Left for Dead" by *** Quinn - a great resource with information on how to take cayenne, the effects, benefits, etc. It helps with circulation and improves heart health as well as improving quite a number of other health problems. He also includes other herbs for the heart. Note that there are differences in cayenne - from 2,000 heat units to at least 150,000. Those who haven't taken cayenne might start with low amounts and gradually increase the amount/heat. Your body will become accustomed to it and you will be able to take more in both quantity and heat units over time. *** Quinn references a book "Capsicum" by a Dr. John Christopher.

Mark as Spam | Posted On 4/3/2024 12:44:55 PM

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wor9463
Joined On 12/19/2016 1:50:24 PM
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Also, *** Quinn said that 1. Dr. Christopher recommended the African Birdseye Cayenne, which has 130,000 to 150,000 heat units 2. Cayenne for cooking ranges from 2,000 to 5,000 heat units, 3. Most cayenne in health food stores has 40,000 heat units. So, be sure to check the labels.

Mark as Spam | Posted On 4/3/2024 1:21:08 PM

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Narmacil
Joined On 11/2/2023 10:15:14 AM
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What about drinking DMSO? I've read a lot about it's ability to dissolve blood clots, even reversing a stroke in progress. Doctors Stanley Jacob, James R. Walker, Morton Walker, Archie H. Scott, Gabriela Segura write very favorably about it. I use it on pulled muscles for much faster healing.

Reply | Mark as Spam | Posted On 4/3/2024 11:28:10 AM

Like | Dislike

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msdmark
Joined On 3/6/2012 9:53:37 AM
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Where does one buy mb?

Reply | Mark as Spam | Posted On 4/3/2024 7:28:05 AM

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candigirltoo
Joined On 11/29/2008 11:58:28 PM
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CTZL seems to be a reputable brand.

Mark as Spam | Posted On 4/3/2024 10:07:40 AM

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