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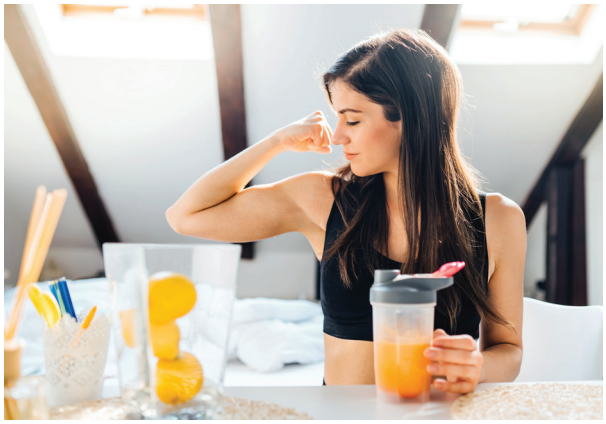
Is There Any Link Between Vaccines and Heart Attacks?

(especially the COVID-19 Vaccine and Booster)



As with most vaccines, you may experience various side effects with the COVID-19 vaccine. The most common side effect is some soreness or some redness at the site of the injection.

You may have also heard about heart-related side effects and wondered if this is a cause for concern.

While there's no credible evidence that the COVID-19 vaccine increases the risk of heart attack, it can lead to heart inflammation in some people. However, this effect is typically mild and goes away with treatment.

It's also important to keep in mind that, according to *research*, the rate of heart inflammation (myocarditis) from the vaccine seems to occur at a much lower rate than heart inflammation caused by COVID-19 infection.

Keep reading to learn more about whether the vaccine is safe for people with heart conditions and whether the COVID-19 vaccine increases your risk of a heart attack.

Does the COVID-19 vaccine increase the risk of a heart attack?

There is not presently any conclusive evidence that the *COVID-19 vaccine* increases your risk of a *heart attack*.

These concerns initially came about due to an *abstract* in the journal Circulation, which is published by the American Heart Association.

This abstract presented a short summary of preliminary research that had not yet been peer reviewed by other scientists.

What did the abstract say?

Researchers used something called the Protein Unstable Lesion Signature (PULS) Cardiac Test in 566 people visiting a cardiac clinic. All of these individuals had recently received the second dose of one of the mRNA COVID-19 vaccines (*Pfizer-BioNTech* or *Moderna*).

The PULS Cardiac Test claims to predict heart attack risk over a 5-year period by measuring nine different markers in a blood sample. After the marker levels are determined, a score is generated. A higher PULS score may indicate an increased heart attack risk.

In the individuals that were tested, three of the nine markers had increased following the vaccination. These markers were related with *inflammation*. The increase boosted the PULS score by a predicted 11% compared to pre-vaccination levels.

What happened next?

Following the publication of this abstract, some outlets reported that, due to the increase in PULS score, the mRNA COVID-19 vaccines increased the risk of heart attack.

The American Heart Association released an *expression of concern* about the abstract shortly afterward. In it, they noted that the abstract may not be reliable due to several errors, no statistical analysis, and a lack of data directly linking the findings to heart attack risk.

In response to these concerns, the authors of the abstract *revised* it to more understandably state that their findings are observational and have not been tested for significance in further experiments.

Vaccination usually raises inflammation levels temporarily as your body generates a response to the vaccine. Because of this, it is natural to see increases in some markers of inflammation. However, these cannot currently be directly tied to heart attack risk.

Summary:

There is presently no evidence that the COVID-19 vaccine increases your heart attack risk.

Some observations have found an increase in certain markers of inflammation after the vaccination. Nevertheless, it remains to be determined how exactly these findings may affect heart attack risk, if at all.

Is the COVID-19 vaccine safe for people with heart conditions?

The vaccine is *safe* for people with heart conditions.

Clinical trials have been done to determine the safety and effectiveness of each of the vaccines in use in the United States. These trials included both healthy individuals and those with various underlying health conditions, including heart conditions.

In fact, the vaccination is actually vital if you have a heart condition. This is because individuals with heart conditions are at an increased risk of experiencing serious illness if they get *COVID-19*.

According to the *Centers for Disease Control and Prevention (CDC)*, the only people who shouldn't receive a COVID-19 vaccine are individuals who:

- **have experienced an intense allergic reaction which is called *anaphylaxis*, to a previous dose of the COVID-19 vaccine or to one of its ingredients**
- **have a known allergy to an ingredient in the COVID-19 vaccine**
- **developed thrombosis with thrombocytopenia syndrome (TTS), which is a severe blood clotting condition, as a result of a vaccination with the *Johnson and Johnson COVID-19 vaccine* (these persons should choose an mRNA vaccine instead)**

What's known about the link between myocarditis and the vaccine?

Both myocarditis and pericarditis have *been reported* after getting the COVID-19 vaccine. *Myocarditis* is inflammation of the heart muscle. *Pericarditis* is the inflammation of the sac surrounding the heart.

According to the *CDC*, myocarditis and pericarditis are more likely to happen:

- **in adolescent or young adult males**
- **after vaccination with an mRNA COVID-19 vaccine such as Pfizer-BioNTech or Moderna**

- **following the second vaccine dose**
- **within a week of vaccination**

A *study* published in the journal Circulation looked at 139 adolescents and young adults with suspected myocarditis after COVID-19 vaccination. It found that most cases of myocarditis were mild and went away quick with treatment.

Overall, this side effect is rare. A *cohort study* published in the British Medical Journal estimated that only 1.7 out of 100,000 people go on to develop myocarditis or pericarditis within 28 days of getting their COVID-19 vaccine.

You actually have a greater risk of developing myocarditis from COVID-19 than from the vaccine.

A *study* in the journal Nature Medicine estimated that 40 myocarditis events per 1 million people happen following a positive *COVID-19 test*, compared with ten per 1 million people following the second dose of the Moderna vaccine.

Can COVID-19 cause heart-related issues?

COVID-19 doesn't just affect the lungs and respiratory tract. Contracting the novel coronavirus can also lead to a variety of *heart*-and blood-related issues as well, such as:

- **damage to the heart muscle**
- *arrhythmia*
- *blood clots*, **that can cause complications like** *heart attack*, *stroke*, *pulmonary embolism*, **and** *deep vein thrombosis*
- *heart failure*
- *cardiomyopathy*
- **myocarditis and pericarditis**

A *2021 Cochrane review* probed 220 studies that reported heart-related issues due to COVID-19. It found that the most common heart issues associated with COVID-19 were arrhythmias, blood clots, and heart failure.

Other effects of COVID-19

COVID-19 can affect many different organs and tissues in your body. For example, COVID-19 can also affect your:

- **lungs, potentially leading to** *pneumonia*, *lung damage*, **and** *acute respiratory distress syndrome (ARDS)*
- **nervous system, causing** *headache*, *loss of smell and taste*, *dizziness*, *nerve pain*, **and** *seizures*
- **kidneys, causing** *kidney damage*
- **liver, leading to liver damage**
- **pancreas, causing pancreatic damage**
- **digestive tract, leading to** *symptoms* **such as nausea, vomiting, diarrhea, and abdominal pain**
- **eyes, causing** *conjunctivitis*
- **skin, leading to** *rashes* **or "***COVID toes***"**

Some people may also experience lingering symptoms in the weeks and months after recovering. This is often named as *long COVID* and may include, but isn't limited to:

- *shortness of breath*
- **fatigue and** *brain fog*

Long COVID is not uncommon. A *systematic review and meta-analysis* published in Scientific Reports assessed 15 studies on the long-term effects of COVID-19, including a total of 47,910 people. Researchers estimated that 80% of these people had one or more long-term symptoms.

Should you get the vaccine if you have heart problems?

Older adults and people with certain health conditions are at increased risks of becoming seriously ill due to COVID-19. According to the *CDC*, the increasing heart problems increase your risk of severe disease from COVID-19:

- *coronary artery disease*
- **heart failure and cardiomyopathy**
- *high blood pressure*

A *study* published in Heart reviewed 51 studies, including 48,317 people with COVID-19. It found that *cardiovascular disease*, *high blood pressure*, and *diabetes* were akin with a higher risk of severe disease or death due to COVID-19 across all age groups.

The American Heart Association has put out a *statement* urging all individuals with any cardiovascular risk factors to receive their COVID-19 vaccine. This also includes people who've previously experienced a heart attack or stroke.

If you get vaccinated for COVID-19, it can protect you from becoming sick with COVID-19. Should you get the virus, it can help lower your risk of hospitalization, a serious illness, or death.

The bottom line

There is not any dependable evidence that the COVID-19 vaccine can cause heart attacks. This notion is based on a misinterpretation of preliminary research findings. Overall, further research into this topic is needed.

It's true that in rare cases, the COVID-19 vaccine can lead to myocarditis and pericarditis. However, the risk of these conditions is actually higher after contracting COVID-19 than after receiving the COVID-19 vaccine.

COVID-19 itself can possibly cause serious heart-related issues. Additionally, individuals with heart conditions are at an heightened possibility of serious illness or death due to COVID-19. That's why it's important to get vaccinated if you have a heart condition.

The COVID-19 vaccine is not harmful for people with heart conditions. If you any have concerns about receiving the COVID-19 vaccine, have a conversation with your doctor or cardiologist. They can help answer any questions you have about the vaccine and your heart condition.