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The Truth About Vaccine-Induced Myocarditis - Part 2

by Rav Arora JULY 15, 2022

Since the publication of my first major essay "The Truth about Vaccine-induced Myocarditis," my critics (such as Mark Cuban) have vigorously attacked it as "misinformation." Meanwhile, the mainstream media and the public health establishment have turned a blind eye to what I view as one of the gravest harms ever done to a generation of young and healthy people.

Contrary to popular perception, over the past couple of months more robust scientific evidence has emerged confirming the known risk of vaccine-induced myocarditis, making any reflexive dismissal and governmental coercion more unethical and, dare I say, criminal than ever before.

As has been long-established, the greatest known risk associated with mRNA COVID-19 vaccines is myocarditis (swelling of the heart muscle). This risk predominantly affects men under the age of 40. According to an Oxford paper from December, this demographic has higher rates of vaccine-induced myocarditis than myocarditis from COVID-19 (specifically from Moderna doses 1 and 2 and Pfizer doses 2 and 3).

A recent paper published in the European Journal of Clinical Investigation synthesizes the current body of research on the cardiac risk of vaccinating children and young adults. The authors conducted a rigorous risk-benefit analysis of child vaccination using data on comorbidities, myocarditis, infection, and hospitalization rates in children. They found COVID-19 vaccination to be favorable (the benefits outweigh the risks) in only a select few demographics.

For girls (ages 12–17), double-vaccination is generally favorable in those who are nonimmune and have a comorbidity. Girls with natural immunity and girls without immunity who don't have an underlying health condition are at greater risk than benefit from double-vaccination. Note: the first scenario of nonimmune girls is increasingly nonexistent. A recent study showed 75 percent of kids have had COVID-19 infection. Now onto the risk-benefit profile for boys with varying health factors.

According to the paper, the only case in which the benefits of vaccination outweigh the risks in young males is the following:

1) No history of prior COVID-19 infection.
2) One vaccine dose.

For boys who aren't in both of these categories, vaccination is uniformly more dangerous.

As the authors write: "In boys with prior infection and no comorbidities, even one dose carried more risk than benefit according to international estimates. In the setting of omicron, one dose may be protective in nonimmune children, but dose two does not appear to confer additional benefit at a population level."

As study author Dr. Tracy Høeg further expanded on Twitter:

"If vaccines don't reliably preventing transmission & there is not significant detectable benefit against severe disease at population level for 5-11 year olds + some risk & if benefits of vaccination have not been demonstrated in previously infected, child mandates are not rational or ethical."

Most broadly, this exhaustive risk-benefit analysis highlights the importance of individualized vaccine decisions. The all-or-nothing approach of the Centers for Disease Control and Prevention (CDC) and Canadian public health authorities has muddied the waters and created a crisis of institutional trust and integrity.

When one even dares to explore the motives and profit incentives motivating these unscientific pushes to uniformly vaccinate all children, one is derailed as a right-wing conspiracy theorist. Such has been the fate for renowned left-leaning podcasters such as Russell Brand and Joe Rogan.

Even more damning than Dr. Høeg and colleagues' analysis of existing research is a new large-scale Nordic study published in April evaluating the risk of post-vaccination myocarditis in 23 million Scandinavian residents. Researchers studied the risk of myocarditis and pericarditis in the 28-day risk period after administration of the vaccine.

As expected, males aged 16 to 24 have the highest rates of vaccine-induced myocarditis. The authors' findings are stunning. First, the authors established a 13.7 per million rate of infection-induced myocarditis.

Below is a summary (pdf) of vaccine-induced myocarditis rates for various doses (approximately):

Post Pfizer dose one: 1 in 66,000

Post Pfizer dose two: 1 in 18,000

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Post Moderna dose one: 1 in 58,000

Post Moderna dose two: 1 in 5,400

As an example, for every roughly 5,400 second doses of the Moderna vaccine given, one male (in the age range 16–24) will suffer from vaccine-induced myocarditis. One million second doses of the second Moderna shot alone yields 200 vaccine-injured young men. Given the immeasurably low risk of serious COVID-19 disease in healthy men of that age category, this is a relatively high risk compared to a modest reward at best.

Notice even a single dose of the vaccine poses a higher threat of myocarditis than COVID-19 does. The average risk of vaccine-induced myocarditis from the second dose is more than eight times higher than that from infection.
It gets worse.

The study also finds vaccine-induced myocarditis to be a higher risk than COVID-induced myocarditis in men aged 25–39 for two doses of Moderna or Moderna-Pfizer combination.

For several months, the media and public health bureaucrats have been peddling dangerous misinformation about COVID-19 posing a higher risk to young men than the vaccine. Instead of examining individualized risk-benefit ratios, they look at the aggregate data and find a general benefit to justify their "everyone should get vaccinated!" campaign. A few of umpteen examples:

CNBC: "Myocarditis risk higher after Covid infection than Pfizer or Moderna vaccination, CDC finds"

Reuters: "Higher risk of heart complications from COVID-19 than vaccines -study"

CNN: "Pediatric cardiologists explain myocarditis and why your teen should still get a Covid-19 vaccine"

The Conversation: "Myocarditis: COVID-19 is a much bigger risk to the heart than vaccination"

Real Victims

While the data on vaccine-induced myocarditis is compelling, it doesn't capture stories of real human lives victimized by a profit-driven system that forces individuals into compliance, regardless of risk.

I spoke to one such 38-year-old South Asian law enforcement member (who I will name "Desh") in my city.

"My life plans have completely changed. I was going to get married, buy a new house, move cities. It's all on hold now as I recover," he said.
As a healthy male with a strict exercise regimen (and prior infection), Desh didn't personally feel inclined to get the vaccine. However, working at a government agency he was mandated to get it. Losing his job was not even an option to consider.

Against his will, he got his first dose of the Pfizer vaccine (which has significantly lower rates of myocarditis) on Oct. 29. That night he experienced intense heart palpitations, but they entirely subsided by the next day. He didn't think of linking it to the vaccine.
Thirty days later Desh got his second dose with no immediate side effects.

Then on the night of Dec. 11 he came within an hour or so of dying from heart failure.

Heart palpitations suddenly took over him when he was lying in bed, and he got up to vomit several times, making him think the cause was food poisoning or some common respiratory illness like the flu. However, he started to have a hard time breathing, only being able to take shallow breaths. Being naturally quite resilient and "never having called 911 in [his] life," he was inclined to just bear the pain.
Thankfully, his girlfriend called 911 and an ambulance arrived.

When the paramedic measured his heart rate and it said 210 beats per minute (his baseline being 150), the paramedic couldn't believe that he was still alive. They had to then shock his heart with a defibrillator into a normal rhythm. Compounded by all the anxiety from the situation and the worsening pain in his chest, he was convinced he was about to die.

"I thought I'm never going to see my girlfriend and family again," he said. "Scariest time of my life."

A few hours after arriving at the hospital, his doctor said, "You're really lucky. If you had waited any longer, you would've died."
Fortunately, the hospital he was at had a specialized cardiology unit that was able to swiftly diagnose and treat his life-threatening condition. The doctor definitively diagnosed him with **vaccine-induced myocarditis** causing **high-risk arrhythmia, ventricular tachycardia,** and **cardiac myopathy.**

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In layman's terms, Desh developed a dangerously abnormal and erratic heart rhythm that made it very difficult for his heart chambers to pump oxygenated blood to the rest of his body.

After spending six days in the ICU and being prescribed five separate medications for his heart, doctors said he couldn't drive for 60 days or return to normal physical activity and work for several months.

Five months since this near-death experience, Desh is still recovering from vaccine-induced myocarditis. As someone for whom exercising at the gym was a regular activity, he says it has taken a massive toll on his mental health.

"Working out of the gym helped clear my mind and establish discipline in my life," he said. "I can't jog, go for a hike, play tennis, or do any of the things for both my mind and body."

His condition is improving and he plans on returning to work in September, but only in a modified office role unlike his previous position at the law enforcement agency.

Perhaps **the most damning insight** from this young man's story is the alarming frequency at which others like him have suffered. The doctor at the hospital said he was his **third** vaccine-induced myocarditis patient in a month-and-a-half; meanwhile, his cardiologist said he was his fourth patient at his clinic in recent weeks.

Three vaccine-induced myocarditis patients in (roughly) 60 days in a single hospital—out of 139 total major hospitals in British Columbia—suggests this problem is prevalent enough to warrant not only an end to draconian government mandates but also the halt of the administration of the vaccine in young healthy men (until more studies are conducted).

Other countries have taken much more scientifically informed vaccine measures. The Moderna vaccine—associated with much higher rates of myocarditis—was suspended in Finland, Denmark, Sweden, and Iceland for use in young people.

The young man I interviewed mentioned the story of his close friend's male relative who suddenly collapsed and died from heart failure while feeding his infant child. A week-and-a-half prior he had taken his second vaccine dose.

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While feeling incredible gratitude for his family and health, Desh's indignancy at a system that forced him into submission can't be exaggerated. "I'm living with the consequences of what the government made me do, not what I chose to do," he said.

"If you don't get the vaccine, you're an outlaw," he added. "And you must be vanished to some other place in society."

Even more concerning, his prompt vaccine-induced myocarditis diagnosis may be highly unusual due to perverse hospital incentives.

"One of my friends who is a doctor at another hospital says clear vaccine-induced myocarditis cases are rarely attributed to the vaccine," he said. "Often these patients have to fight with doctors to get a proper diagnosis. I'm not sure what's exactly going on, but there are some incentives in place to prevent the vaccine from looking dangerous in any way."

When learning about such agonizing tragedies it is important to remain sober-minded and grounded in rationality. Otherwise, the abhorrent actions of one police officer result in "abolish the police" or isolated school shootings result in "take away all the guns."

A careful-cost benefit analysis must be conducted to make the best decision. This is why — despite umpteen horrifying car accidents every year — our society depends on individual car transportation. It's a net positive.

However, in the case of Desh — and tens of millions of young healthy men (and women) around the world — the benefits of vaccination are slim, especially given the prevalence of natural immunity.

As Stanford Public Health Policy professor Dr. Jay Bhattacharya said about Desh's vaccine injury in an email interview:

Every medicine and even vaccine can cause side effects, and it's sad to learn the story of this young man and what he has gone through. The story is doubly sad because — given his young age and otherwise good health — the marginal benefit to him from vaccination was small. The mandate violated his right to informed consent by coercing him into taking a treatment he didn't want or truly need.

Tragic stories of such vaccine injuries do not warrant a total suspension of vaccine administration, but they repudiate the one-size-fits-all "vaccines are safe and effective" religious dogma.

The risk-reward proposition for vaccinating a healthy 35-year-old man is very different from a 65-year-old diabetic with multiple comorbidities. Yet the mandates and coercive propaganda campaigns fail to make such distinctions.

The overzealous push to vaccinate everyone has reached such preposterous heights that everyone "5 and older" **should** get boosted (no warning labels):

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Desh's near-death vaccine story illustrates the grave blind-spots of our public health authorities dictated by the Canadian Liberal government. While the federal government announced the suspension of the originally unconstitutional, draconian vaccine mandates last week, the damage has already been done.

Millions of young men have gotten double-vaccinated without the requisite medical information and acknowledgement of risks. Given the 1 in 2,000 myocarditis risk ratio in young males, 1 million administrations of the vaccine alone have likely resulted in around 500 cases of myocarditis. Indeed, a small fraction, but when compared with the near-zero serious risk of Covid in this age group, it is a medical disaster. What does Justin Trudeau have to say for Desh and others suffering from vaccine injuries?

Will the public health authorities own the grave harm they've committed?

The government is directly complicit in inflicting severe cardiac damage on citizens like Desh — not to mention a host of other side effects. A national apology ought to be made to even attempt to make amends.

Canada's overzealous vaccination campaign has gotten sickeningly propagandistic. The government has devoted $600,000 to paying "online influencers" to promote vaccines (as if the most vulnerable, geriatric populations are spending time on TikTok). Meanwhile, a few days hardly go by without exposure to government-sponsored advertisements on YouTube and Twitter to vaccinate children "to prevent severe disease." Vaccines have not been carefully tested and distributed as a vital and life-saving preventive measure for those at risk, but as a perverse pledge of citizenship and virtue for everyone regardless of their age, health, and other risk factors.

Over the past 12 months, those who opted out of this experimental citizenship test have been stripped of their ability to work and contribute to our plunging economy, exercise at a gym, travel freely within their own country, and socially and financially thrive in our society.
And many of those who complied are now facing life-deranging side effects with unknown future health ramifications.
Such are the consequences when the state rules over your body — a monstrous precedent that has been set over the course of the Covid pandemic.

So much for the "true, north, strong and free" liberal democracy.

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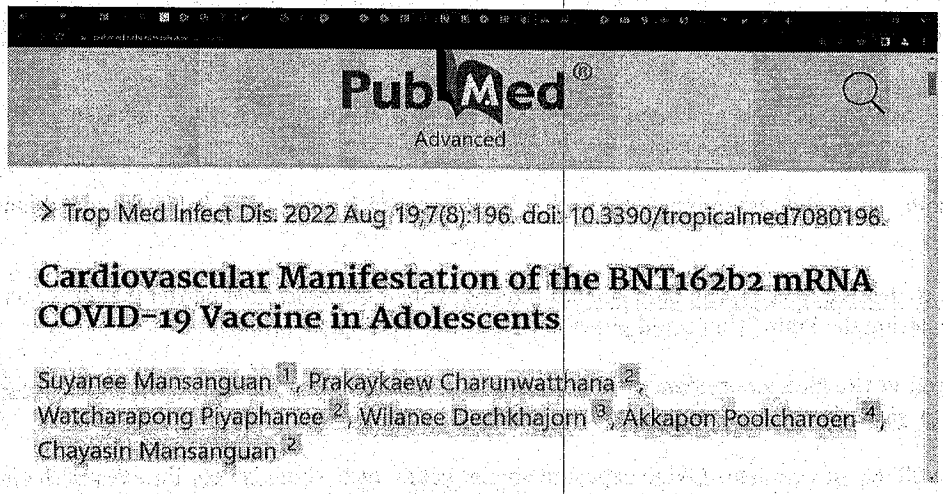
Remember this powerful Thai study (Mansanguan et al.) in adolescents as to the devastation of the COVID mRNA technology injections in Thai teens: 'Cardiovascular Manifestation of the Pfizer BNT162b2

mRNA COVID-19 Vaccine in Adolescents'; n=301, most common cardiovascular signs, symptoms: tachycardia (7.6%) shortness of breath (6.6%), palpitation (4.3%), chest pain (4.3%) hypertension (3.9%)

DR. PAUL ALEXANDER JULY 27, 2023


PubMed® Advanced

> Trop Med Infect Dis. 2022 Aug 19;7(8):196. doi: 10.3390/tropicalmed7080196.

Cardiovascular Manifestation of the BNT162b2 mRNA COVID-19 Vaccine in Adolescents

Suyanee Mansanguan [1], Prakaykaew Charunwatthana [2], Watcharapong Piyaphanee [2], Wilanee Dechkhajorn [3], Akkapon Poolcharoen [4], Chayasin Mansanguan [2]

https://pubmed.ncbi.nlm.nih.gov/36006288/

'cohort study enrolled students aged 13-18 years from two schools, who received the second dose of the Pfizer BNT162b2 mRNA COVID-19 vaccine.

Data including demographics, symptoms, vital signs, ECG, echocardiography, and cardiac enzymes were collected at baseline, Day 3, Day 7, and Day 14 (optional) using case record forms.

enrolled 314 participants; of these, 13 participants were lost to follow-up, leaving 301 participants for analysis.
The most common cardiovascular signs and symptoms were tachycardia (7.64%), shortness of breath (6.64%), palpitation (4.32%), chest pain (4.32%), and hypertension (3.99%). One participant could have more than one sign and/or symptom. Seven participants (2.33%) exhibited at least one elevated cardiac biomarker or positive lab assessments.

Cardiovascular manifestations were found in 29.24% of patients, ranging from tachycardia or palpitation to myopericarditis.

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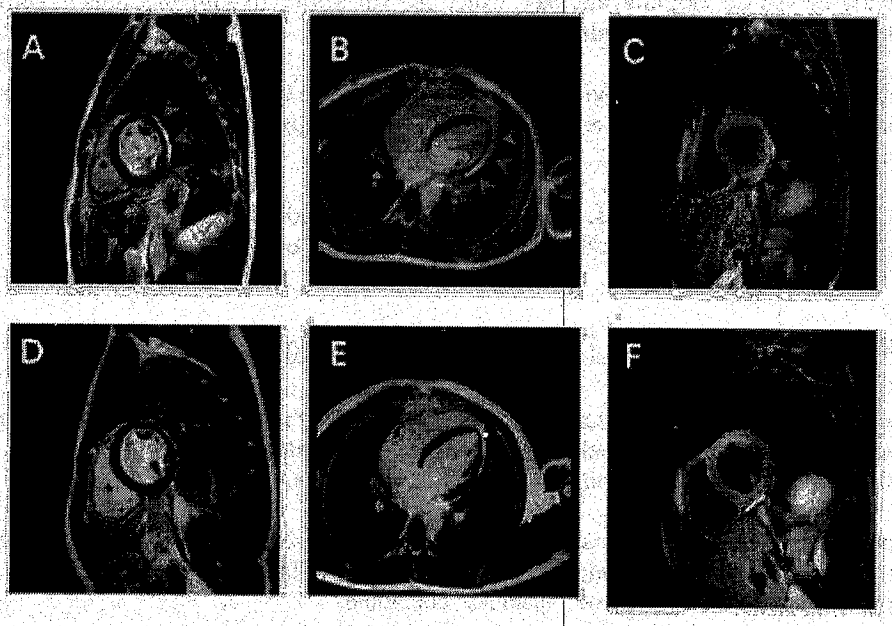

Figure 2. (**A–F**) cMRI illustrating LGE in a patient with subacute myopericarditis at the time of diagnosis (**A–C**) and 5 months post-diagnosis (**D–F**). cMRI, cardiac magnetic resonance imaging; LGE, late gadolinium enhancement.

Table 2. Presentation with myopericarditis, subclinical myocarditis, and pericarditis after second dose vaccination.

Variable	Value
Presenting symptoms and signs—Number/total number (%)	
Chest pain	3/7 (42.86)
Chest discomfort	3/7 (42.86)
Pericardial effusion	3/7 (42.86)
Fever	4/7 (57.14)
Headache	2/7 (28.57)
Palpitation	1/7 (14.29)
Dyspnea	1/7 (14.29)
Vital signs on day of symptoms (Mean ± SD)	
Temperature—°C	36.4 ± 0.4

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Dyspnea	1/7 (14.29)
Vital signs on day of symptoms (Mean ± SD)	
Temperature—°C	36.4 ± 0.4
Blood pressure—mmHg	
Systolic	114.9 ± 10.9
Diastolic	70.7 ± 7.8
Heart rate—beats/min	92.71 ± 21.3
Shock-Number/total number (%)	0/7 (0)
Electrocardiographic findings—Number/total number (%)	
Normal sinus rhythm	1/7 (14.29)
Sinus rhythm with sinus arrhythmia	2/7 (28.57)
Diffuse ST elevation with PR depression	1/7 (14.29)
Sinus arrhythmia with PAC	1/7 (14.29)
Sinus tachycardia	1/7 (14.29)
Junctional escape rhythm	1/7 (14.29)
Laboratory values	
Elevated troponin-T	5/7 (71.43)

Diffuse ST elevation with PR depression	1/7 (14.29)
Sinus arrhythmia with PAC	1/7 (14.29)
Sinus tachycardia	1/7 (14.29)
Junctional escape rhythm	1/7 (14.29)
Laboratory values	
Elevated troponin-T	5/7 (71.43)
Clinical course	
Arrhythmia	4/7 (57.14)
ICU admission	1/7 (14.29)
Need for inotrope or vasopressor	0/7 (0)
Death	0/7 (0)
Treatment and hospital course	
Ibuprofen (NSAIDs)	3/7 (42.86)

Data are reported as percentage (%) and means ± standard deviations. °C, degree Celsius; NSAIDs, nonsteroidal anti-inflammatory drugs; PAC, premature atrial contraction.

Myopericarditis was confirmed in one patient after vaccination.

Two patients had suspected pericarditis and four patients had suspected subclinical myocarditis.

In conclusion, Cardiovascular manifestation in adolescents after Pfizer BNT162b2 mRNA COVID-19 vaccination included tachycardia, palpitation, and myopericarditis.'

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Heart-Scarring Observed In Children Months After COVID-19 Vaccination: Study

AUG 08, 2023 Zachary Steiber

Some children who experienced heart inflammation after COVID-19 vaccination had scarring on their hearts months later, a new long-term study found.

Researchers followed a group of 40 patients aged 12 to 18 for up to one year after the children were diagnosed with myocarditis, or heart inflammation, following vaccination with one of the messenger RNA shots from Pfizer or Moderna. They performed a series of tests, including echocardiograms.

Cardiac magnetic resonance imaging, or cardiac MRIs, was performed on 39 of the 40 patients. Abnormal results came in for 26 of those who were imaged, including 19 who had late gadolinium enhancement, or signs of scarring.

The patients with abnormal results returned for follow-up cardiac MRIs at least five months after the initial tests and 15, or 58 percent, had residual late gadolinium enhancement (LGE). The one patient without an initial scan also had mild late gadolinium enhancement when scanned during a follow-up visit.

"**Persistence of LGE in a significant subset of patients with up to 1 year of follow-up was observed,**" Dr. Yiu-fai Cheung, with Hong Kong Children's Hospital, and the other researchers wrote.

They said that the implications of the persistence remain unclear, but that given it is an indicator of subclinical heart dysfunction and scarring, "there exists a potential long-term effect on exercise capacity and cardiac functional reserve during stress."

The study was published by Circulation. Authors reported no funding or disclosures.
Dr. Peter McCullough, an American cardiologist and president of the McCullough Foundation, said that **the new data is consistent with what cardiologists are seeing in clinical practice.**

"Serious cases of COVID-19 vaccine induced myocarditis are not resolved by cardiac MRI at one year of followup in the majority of cases. At some point, we must assume that late gadolinium enhancement represents a scar or permanent damage," Dr. McCullough, who was not involved in the research, told The Epoch Times via email.

"COVID-19 vaccines should be pulled from the market immediately until further notice. Large scale research programs should be commissioned immediately on subclinical and clinical COVID-19 vaccine induced myocarditis with initial aims at risk stratification and mitigation for cardiac arrest," he added.

Dr. Anish Koka, another American cardiologist who was not involved in the study, said that the persistent LGE signifies a scar that replaced the initially inflamed heart muscle.

"**The good news is that the amount of scar is small. The bad news is that there is scar,**" Dr. Koka wrote on X, formerly known as Twitter.

Dr. Koka said that the level of scarring indicates there would likely not be a long-term impact, but that even small levels of scarring could be a foundation for future arrhythmias, with exercise serving as a trigger.

"All these kids (even those without scar) would need exercise stress tests at 6 months to attempt to prognosticate this," Dr. Koka said.

Pfizer and Moderna did not respond to requests for comment on the study on myocarditis, a known side effect of both of the companies' COVID-19 vaccines.

More Evidence

Myocarditis after COVID-19 vaccination was first detected in early 2021, and an increasing number of studies have undercut claims from officials in the United States that the heart inflammation is mild and resolves without treatment.

A study from the U.S. Centers for Disease Control and Prevention (CDC), published in 2022, reported that **among patients with follow-up cardiac MRIs, 54 percent had at least one abnormal finding, such as scarring.**

The study relied on surveys from health care providers who examined the patients.

The providers later told the CDC that five to 13 months after the initial diagnosis, 14 percent of patients were still not cleared for all physical activity, and that multiple patients still had abnormal cardiac MRI findings. And in a separate set of surveys, many patients reported experiencing one or more symptoms beyond one year. *Read more here...*

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Teenagers Who Seemed to Recover From Vaccine-Induced Myocarditis Relapse Months Later

by Daily Sceptic August 9th 2023

Two teenage boys who suffered heart inflammation following Pfizer's Covid jabs and then seemed to recover had relapses months later, Italian researchers have reported. Alex Berenson has more.

Both teenagers showed evidence of new heart damage from the recurrences, including high levels of proteins from injured cardiac muscle. Scans showed one boy had new lesions in his heart wall, and he needed nearly two weeks of hospitalisation. The researchers could not determine why the boys suffered the relapses, which came eight to 12 months after the initial myocarditis episodes. They called for tighter monitoring of anyone diagnosed with mRNA-caused myocarditis – and more research to determine if young people who suffered it might face severe future complications.

Published in late May in the journal *Vaccine: X*, the paper appears to be the first case report showing mRNA jabs can cause recurring myocarditis, or inflammation of the heart. But public health authorities and the media, which since 2021 have played down cardiac side effects from mRNA shots, have ignored it.

Elsewhere, a study by a team from Yale Medical School published in *Science* has found evidence that vaccine-induced heart inflammation arises from a general immune system reaction to the mRNA vaccine rather than something specific to the spike protein produced by the Covid vaccines.

This may mean that people who suffer an inflammatory response in the heart have naturally more reactive immune systems, at least in terms of vulnerability to heart inflammation.

MIT health data expert Professor Retsef Levi wrote on Twitter that the study shows that vaccine-induced myocarditis is likely driven by the mRNA platform itself and not the spike protein specific to the Covid vaccines. The study also adds to the evidence of "sustained heart scarring and abnormalities", underlining that "vaccine-induced myocarditis is not mild", he said.
Excellent Science Immunology study is very bad news to the mRNA/nanolipids platform!

Showing that vaccine-induced myocarditis is likely driven by the platform & not antigen specific (i.e., spike protein)!

Implying that future mRNA-based vaccines/drugs would have same risk!... pic.twitter.com/Z5tiNWiz89
— Retsef Levi (@RetsefL) August 8, 2023

Stop Press: Former Tory and now Reclaim MP Andrew Bridgen has written to the Prime Minister to alert him to the new Swiss study showing heart damage at a rate of up to one in 35 following mRNA vaccination, calling on him to recall Parliament to review the latest scientific data and halt the booster programme.
Letter to Rishi Sunak with all the evidence sent yesterday.

Awaiting a reply. @RishiSunak @Conservatives pic.twitter.com/ZKAYPUIqMb
— Andrew Bridgen (@ABridgen)

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Cytokinopathy with aberrant cytotoxic lymphocytes and profibrotic myeloid response in SARS-CoV-2 mRNA vaccine–associated myocarditis

ANIS BARMADA, ET. AL.

SCIENCE IMMUNOLOGY
5 May 2023
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DOI: 10.1126/sciimmunol.adh3455

Immunopathology signatures in myocarditis

Myocarditis and/or pericarditis are rare adverse cardiac events observed after SARS-CoV-2 mRNA vaccination with a predilection for adolescent and young adult males. To investigate the pathogenesis of myopericarditis in this setting, Barmada and Klein *et al.* used unbiased immune profiling techniques to search for immune signatures that distinguished patients who developed myopericarditis from healthy vaccinated controls. Immune events associated with myopericarditis included elevated systemic levels of cytokines, an increased frequency of activated T and NK cells, and induction of inflammatory monocytes with profibrotic features. Neither immune targeting of cardiac autoantigens nor enhanced clonal expansion of B and T lymphocytes was detected. These findings provide deeper insights into the chain of events that can rarely lead to myopericarditis in the mRNA vaccine setting. —IRW

Abstract

Rare immune-mediated cardiac tissue inflammation can occur after vaccination, including after SARS-CoV-2 mRNA vaccines. However, the underlying immune cellular and molecular mechanisms driving this pathology remain poorly understood. Here, we investigated a cohort of patients who developed myocarditis and/or pericarditis with elevated troponin, B-type natriuretic peptide, and C-reactive protein levels as well as cardiac imaging abnormalities shortly after SARS-CoV-2 mRNA vaccination. Contrary to early hypotheses, patients did not demonstrate features of hypersensitivity myocarditis, nor did they have exaggerated SARS-CoV-2–specific or neutralizing antibody responses consistent with a hyperimmune humoral mechanism. We additionally found no evidence of cardiac-targeted autoantibodies. Instead, unbiased systematic immune serum profiling revealed elevations in circulating interleukins (IL-1β, IL-1RA, and IL-15), chemokines (CCL4, CXCL1, and CXCL10), and matrix metalloproteases (MMP1, MMP8, MMP9, and TIMP1). Subsequent deep immune profiling using single-cell RNA and repertoire sequencing of peripheral blood mononuclear cells during acute disease revealed expansion of activated $CXCR3^+$ cytotoxic T cells and NK cells, both phenotypically resembling cytokine-driven killer cells. In addition, patients displayed signatures of inflammatory and profibrotic $CCR2^+ CD163^+$ monocytes, coupled with elevated serum-soluble CD163, that may be linked to the late gadolinium enhancement on cardiac MRI, which can persist for months after vaccination. Together, our results demonstrate up-regulation in inflammatory cytokines and corresponding lymphocytes with tissue-damaging capabilities, suggesting a cytokine-dependent pathology, which may further be accompanied by

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myeloid cell–associated cardiac fibrosis. These findings likely rule out some previously proposed mechanisms of mRNA vaccine--associated myopericarditis and point to new ones with relevance to vaccine development and clinical care.

INTRODUCTION

Vaccination against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is one of the most effective public health interventions in combating the ongoing coronavirus disease 2019 (COVID-19) pandemic. The SARS-CoV-2 spike mRNA vaccines have been found to be safe in international studies involving hundreds of thousands of individuals (*1–4*), although very rare cases of adverse events have been subsequently reported (*5*, *6*). One such adverse event is inflammation of the heart—namely, myocarditis, pericarditis, or a combination of the two (myopericarditis) (*7–12*). SARS-CoV-2 vaccine–associated myopericarditis has been reported to occur most frequently in adolescent and young adult males during the first week after the second dose of an mRNA vaccine (BNT162b2 or mRNA-1273) (*2*, *5*, *13*, *14*), although it can also occur across demographic groups after a single or third (booster) dose of mRNA vaccination or after non–mRNA-based vaccines (*5*, *15–19*). Various estimates of myopericarditis risk after vaccination have been reported (*2*, *7*, *14*, *17*, *20–23*), with most recent reports estimating an incidence of 0 to 35.9 and 0 to 10.9 cases per 100,000 for males and females, respectively, across age groups and mRNA vaccine cohorts (*24*). A study of vaccine-associated myopericarditis incidence from our own health care network (Yale New Haven Hospital) between January and May 2021 identified eight cases from 24,673 individuals aged 16 to 25 (0.3%) given two doses of mRNA vaccine (*25*).

Given the difficulties associated with studying such rare cases, the etiology of vaccine-associated myopericarditis remains largely unknown. A mechanistic understanding of the underlying pathology and associated immune alterations, as well as potential long-term effects, is needed and will likely have broad significance with the rapidly expanding clinical applications of effective mRNA-based vaccine modalities (*26–28*). Early hypotheses to explain mRNA vaccine–associated myopericarditis speculated that the SARS-CoV-2 spike protein, which may be detectable in the blood (*29*) and sparsely on cardiomyocytes (*30*) of patients in some studies, may induce cardiac-targeted autoantibodies through molecular mimicry, although this has so far not been supported by other reports (*31*, *32*). Alternative hypotheses suggested that hypersensitivity myocarditis may instead explain the pathology, primarily based on clinical presentation, rapid recovery, and marked increase in incidence after second doses of mRNA vaccines (*11*, *33*). However, early case reports and cardiac biopsies from small numbers of patients were largely inconsistent with such a pathology (*9*, *34–36*). Biopsy reports showed an inflammatory infiltrate predominantly composed of macrophages and T lymphocytes, although scattered eosinophils, B cells, and plasma cells were additionally noted in some reports (*37*). Autoimmune myocarditis driven by T helper type 17 (T_H17) responses is another possible mechanism (*38*, *39*), although no evidence supporting such a pathology was found in the limited number of patients profiled to date (*32*, *40*). Other arguments proposed aberrant immune reactivity, both innate and adaptive, triggered by the mRNA and/or lipid nanoparticles (LNPs) (*13*, *41*, *42*). Further, recent studies in two patients implicated a role for various inflammatory cytokines as well as natural killer (NK) and T lymphocytes (*32*, *40*). Each of these proposed mechanisms can be influenced by age, sex, and genetic background, leading to increased incidence in certain subpopulations (*13*). To better understand the underlying pathology in SARS-CoV-2 LNP-mRNA vaccine–associated myopericarditis, we conducted a

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Vaccine: X
Volume 14, August 2023, 100318

Relapsing myocarditis following initial recovery of post COVID-19 vaccination in two adolescent males – Case reports

Donato Amodio, et. al.

https://doi.org/10.1016/j.jvacx.2023.100318

Abstract

Whilst there has been significant public health benefits associated with global use of COVID-19 spike protein vaccines, potential serious adverse events following immunization have been reported. Acute myocarditis is a rare complication of COVID19 vaccines and often it is self-limiting. We describe two cases experiencing recurrent myocarditis following mRNA COVID-19 vaccine despite a prior episode with full clinical recovery. Between September 2021-September 2022 we observed two male adolescents with recurrent myocarditis related to mRNA-based-COVID19 vaccine. During the first episode both patients presented with fever and chest pain few days after their second dose of BNT162b2 mRNA Covid-19 Vaccine (Comirnaty®). The blood exams showed increased cardiac enzymes. In addition, complete viral panel was run, showing HHV7 positivity in a single case. The left ventricular ejection fraction (LVEF) was normal at echocardiogram but cardiac magnetic resonance scanning (CMR) was consistent with myocarditis. They were treated with supportive treatment with full recovery. The 6 months follow-up demonstrated good clinical conditions with normal cardiological findings. The CMR showed persistent lesions in left ventricle 's wall with LGE. After some months the patients presented at emergency department with fever and chest pain and increased cardiac enzymes. No decreased LVEF was observed. The CMR showed new focal areas of edema in the first case report and stable lesions in the second one. They reached full recovery with normalization of cardiac enzymes after few days. These case reports outline the need of strict follow-up in patients with CMR consistent with myocarditis after mRNA-based-COVID19 vaccine. More efforts are necessary to depict the underlying mechanisms of myocarditis after SARS-CoV2 vaccination to understand the risk of relapsing and the long-term sequelae.

Introduction

Safe and effective COVID-19 vaccines are powerful tools for ensuring public health and controlling the SARS-CoV-2 infection.
Both BNT162b2 mRNA vaccine (Comirnaty®) and mRNA-1273 vaccine (Spikevax®) are licensed for use in children and adolescents by the age of 6 months.
Whilst there has been significant public health benefits associated with global use of COVID-19 spike protein vaccines, potential serious adverse events following immunization (AEFI) have been reported. Among them, pericarditis and myocarditis represent rare complications mostly reported in adolescents and young adults, especially in male gender following the diverse COVID vaccines available, but mostly in association with both mRNA vaccines: BNT162b2 and mRNA-1273 [1].

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Dr. Peter McCullough Reveals: Myocarditis Rates Are So High That He's Seeing Two Cases PER DAY! (Video)

August 2023

https://rumble.com/v3agi0p--dr.-peter-mccullough-reveals-myocarditis-rates-are-so-high-that-hes-seeing.html

15-1

Whistleblower Who Disclosed Myocarditis Spike In Military After COVID Vaccine Rollout Goes Public

AUG 29, 2023 J.M. Phelps

A service member who earlier this year blew the whistle and disclosed data from a Pentagon medical database showing a spike in the rate of myocarditis in the military in 2021, after the rollout of COVID-19 vaccines, is going public.
The whistleblower is active-duty Navy Medical Service Corps officer Lt. Ted Macie. He has also revealed new data showing a substantial rise in accidents, assaults, self-harm, and suicide attempts in the military in 2021, compared to the average from 2016 to 2021.

This includes a 147 percent increase in intentional self-harm incidents among service members, and an 828 percent increase in injuries from assaults.

Lt. Macie told The Epoch Times that he began "keeping an eye on" a defense medical database when another whistleblower alerted him to a rise in health-related incidents in the winter of 2021/2022.

The Defense Medical Epidemiology Database (DMED) is a depository of all diagnoses—recorded using International Classification of Diseases (ICD) codes—when an active service member is seen on- or off-base by a military or civilian provider. The database does not include any personally identifiable information of service members.

In January, Lt. Macie and his wife traveled to Washington with a report of the data he collected from DMED.

It showed that **diagnoses of myocarditis, a form of heart inflammation, jumped 130.5 percent in 2021 when compared to the average from the years 2016 to 2020**. Myocarditis is a serious condition that can lead to death.

All four of the COVID-19 vaccines authorized in the United States can cause myocarditis, according to U.S. officials. COVID-19 can also cause myocarditis, though some experts say the data on that front is weaker.

U.S. Defense Secretary Lloyd Austin mandated the vaccines in 2021, a requirement that remained in place until Congress forced its withdrawal in late 2022.

The data also showed spikes in diagnoses of pulmonary embolism (41.2 percent), blood clots in the lungs, ovarian dysfunction (38.2 percent), and "complications and ill-defined descriptions of heart disease" (37.7 percent).

DMED Data

Lt. Macie downloaded the data almost a year after the Pentagon said it fixed a data corruption issue with the DMED.

In 2022, other military whistleblowers reported shocking spikes in disease rates after the introduction of the COVID-19 vaccine. But the Pentagon responded that those figures were not correct because some diagnoses in the years 2016 to 2020 had not been counted, an issue stemming from "corrupt" data.

After the Pentagon said the issue was corrected, Lt. Macie and others—including First Lt. Mark Bashaw, a preventive medicine officer in the Army, Navy Lt. Billy Mosley, Army Surgeon Lt. Col. Theresa Long, and Army doctor Maj. Samuel Sigoloff—noticed that there were still concerning signs of increases in diagnoses, such as myocarditis and pulmonary embolism.

Since word spread that Lt. Macie was the only active-duty member at his command who didn't receive the COVID-19 vaccine, and was actively suing the secretary of defense, Lt. **Macie said people began to come to him in confidence telling him about adverse reactions**, which they were convinced were "from the shot," he said. "These anecdotal, but compelling personal injuries, were a motivator to get things on the right track."

After verifying Lt. Macie's report with the Senate Subcommittee on Investigations, Sen. Ron Johnson (R-Wis.), the top Republican on that panel, sent a letter (pdf) to Mr. Austin in March asking the Pentagon to confirm Lt. Macie's data.
Lt. Macie had suspected the Pentagon would not respond, based on his experience of previous requests made within the department going unfulfilled.

15-2

"In the event our suspicions were correct, I kept additional data to reveal as soon as the data we brought [to Washington] was confirmed, or after being ignored for some time," he said.

"Much to my surprise," said Lt. Macie, the Pentagon, in a July reply (pdf) to Mr. Johnson's letter, confirmed that his data was accurate.

In the Pentagon's response, Gilbert Cisneros Jr., undersecretary of defense for personnel and readiness, pointed to data on the rate of cases per 100,000 person-years, a way to measure risk across a certain period of time. For almost all the conditions that showed an increase in cases in 2021, he stated, the new case rate was higher for service members with a prior COVID-19 infection than for those with a prior COVID-19 vaccination.

"**This suggests that it was more likely to be [COVID-19] infection and not COVID-19 vaccination that was the cause,**" Mr. Cisneros stated.

Lt. Macie said he plans to bring the additional data he kept "up my chain of command with the aim of a resolution and validation for injured service members, but I'm not holding my breath."

Lt. Macie has also brought this new data to the office of Rep. Matt Gaetz (R-Fla.), hoping to get the attention of the House Armed Services Committee, a panel Mr. Gaetz sits on. Lt. Macie is not aware of what Mr. Gaetz and his staff will do, but the lawmaker's office acknowledged in June that "they will take a look," he said. The Epoch Times has reached out to Mr. Gaetz's office for comment.

Rise in Accidents, Self-Harm

According to his research, health-related incidents in 2021 rose substantially above the five-year average from 2016 to 2020. "As some may expect," he said, "internal injuries like myocarditis (130 percent), tinnitus (42 percent), and cerebral infarction (stroke) (43.5 percent) are on the rise."

But it was Macie's wife who became curious, asking about other types of injuries.

"What about external cause morbidities, like burns, accidents, self-inflicted harm, and injuries that are not expected to be associated with the COVID shot?" he said.

With the new data he discovered, the following incidents exhibited increases in 2021 above the five-year average: exposure to forces of nature (773 percent), water transport accidents (7,400 percent), land transport vehicle (526 percent), suicide attempts (33 percent), assault (828 percent), slipping, tripping, stumble and falls (471 percent), and intentional self-harm (147 percent). **Some of these not only increased in 2021 but continued to rise in 2022.** The Epoch Times has viewed screenshots of this data from the DMED.

Historically, if the Pentagon noticed a trend in certain areas like abuse and suicide, he said, the department would hold a safety stand-down—a military-wide mandatory training and review where all commands require one hundred percent participation." "**What will higher-ranking general officers, the Surgeon General, Defense Health Agency, and Joint Chiefs do when they receive word that ICD codes/injuries for these incidents are on the rise?**" said Lt. Macie.

"Soon, we'll see if the same people who claim that the service member is their top priority actually show that through their action," he added.

According to Lt. Macie, there are a few possibilities concerning the new data collected.

"**If the data is correct, and is confirmed by [the Pentagon], more than just a stand-down needs to happen.** Rising problems like self-harm, suicide attempts, accidents, and assault must be addressed immediately, not just the mess of [vaccine] injuries." He noted that the Pentagon may, for a second time, reply saying the data is incorrect, even though the department previously said they've resolved the data corruption issues in the system to prevent future errors. But such a reply would raise even more questions going to the integrity of the database and whether there is a cover-up at play, he projected.

Lt. Macie hopes that Congress will press the Pentagon for answers concerning this new data.
But if lawmakers fail to do this, "the people need to step up to hold our government accountable."
Lt. Macie emphasized that his views do not reflect those of the Department of Defense or the Department of the Navy. The Pentagon didn't return inquiries by The Epoch Times seeking an explanation for the rise in external cause morbidities.

16-1

'I Regurgitated the Party Line' – Cardiologist Regrets Pushing Vax After 'Undeniable' Rise in Heart Conditions.

September 6, 2023 JACK MONTGOMERY

Famed cardiologist Dr. Anish Koka has expressed his regret at "regurgitating the party line" on mRNA vaccines being "safe and effective" for young people, vowing he would never behave the same way in a similar situation.

Koka, a cardiologist with degrees from Penn State and Temple University trained at Jefferson Health, said he "certainly saw an increase" in heart conditions at his Philadelphia clinic after mRNA vaccines were rolled out en masse, "...like many of us in the cardiology community did."

"It's undeniable," he stressed.

Koka was especially regretful about his personal role in propagandizing for the vaccines: "Me running around saying it's 'safe and effective,' and giving it to 17-year-olds, given that most of the patients that were in the vaccine studies weren't 17-years-old — I wasn't technically correct."

"I wasn't correct at all in saying it was safe and effective because there weren't enough people in that group to say that," he lamented, emphasizing that he "would not give it to low-risk people again. That was a mistake on my part."

Koka is particularly concerned by a Thai study that found an alarming number of cardiac injuries among minor teens given the Pfizer vaccine, particularly as the Moderna vaccine "has been shown to have myocarditis rates 3-4x Pfizer."

"This study tells you if you roll this vaccine out to millions and millions and of 13 to 18-year-olds, you're going to have a significant number of clinical myocarditis cases," he warned.

"This is a very cardioactive vaccine."

17-1

A Deeper Dive Into The Role Of Spike Protein In Myocarditis And Blood Clotting After COVID-19 Vaccination

SEP 08, 2023 Allison Kruig, MPH and Dr. Ram Durlseti

In this series, "Promise or Peril: Alarming COVID-19 mRNA Vaccine Issues," we explore how the introduction of mRNA technology lacked an adequate regulatory framework, setting the stage for serious adverse events and other concerns related to inadequate safety testing of lipid nanoparticles, spike protein, and residual DNA- and lipid-related impurities, as well as truncated/modified mRNA species.

Previously: In Part 1, we introduced how the U.S. Food and Drug Administration (FDA) relaxed the rules for mRNA vaccines compared to mRNA therapies and discussed the available data regarding LNP distribution throughout the body based on animal testing, the fact that human testing was not done, and the lack of mRNA or spike protein biodistribution data. In Parts 2 and 3, we explored how the LNPs are constructed and how they behave in the body and affect health.

Now we turn to another problem—the cargo contained in the LNP capsules: the mRNA and its encoded spike protein. We introduce the inflammatory response to the spike protein and one of its subunit proteins and how they may contribute to serious adverse events such as myocarditis and blood clotting.

Rochelle Walensky, former director of the U.S. Centers for Disease Control and Prevention (CDC), stated on "Good Morning America" in June 2021 that myocarditis cases are "really quite rare ... minor, self-limited, they generally resolve with rest and standard medications." However, this assertion was made based on a preliminary review of 300 cases and before conducting long-term follow-up.

A study published on Aug. 1 followed 40 adolescents in Hong Kong for up to a year. Follow-up testing performed in 26 patients with initial abnormal findings revealed that **58 percent of those with vaccine-associated myocarditis had persistent heart muscle scarring.** The authors concluded: "There exists a potential long-term effect on exercise capacity and cardiac functional reserve during stress."

This series demonstrates how exposure to the spike protein results in downstream cardiovascular issues. Given that vaccination causes the body to produce more spike protein, it is clear that additional research was needed to understand the health impacts of vaccination prior to licensure.

Summary of Key Facts

- The SARS-CoV-2 spike protein and its S1 subunit have known impacts on the cardiovascular system, such as an increased risk of blood clotting.
- The vaccine-induced spike protein and its S1 subunit have been found in the blood following vaccination.
- In lab studies, the spike protein activates white blood cells and may trigger an inflammatory response or clotting.
- Free spike protein was found in the blood of adolescents and young adults with post-mRNA vaccine myocarditis but not in healthy control subjects without myocarditis.
- The S1 subunit can interact with ACE2, platelets, and fibrin and may be what leads to an inflammatory response driving serious adverse events, including clots, myocarditis, and neurological problems.
- As discussed in Part 3, lipid nanoparticles (LNPs) act as adjuvants, stimulating the immune system. This innate immune response peaks within six hours of vaccination and returns to baseline by about day nine, temporally corresponding to the onset of myocarditis, which typically occurs within the first seven days following mRNA COVID-19 vaccination.
- Studies have not been done to evaluate how vaccination affects those who have already been infected with SARS-CoV-2.
- The spike protein was implicated in small vessel microclots during COVID-19 illness; thus, postvaccination cardiovascular effects should have been anticipated.

17-2

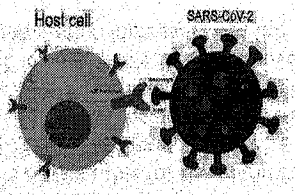
- **The first deadline for FDA-mandated post-authorization safety studies has passed, yet to the best of our knowledge, the full report has not been made available to the public.**

The spike protein protrudes from the SARS-CoV-2 virus like a crown of sticky handles. The job of the spike protein is to grab onto the ACE2 receptor so the virus can enter the cell. The ACE2 receptor is found in many human cells in the lungs, kidneys, gut, heart, and the lining of the blood vessels.

Spike protein is comprised of two parts: the S1 and S2 subunits. The S1 subunit protein sits at the tip of the spike protein and is responsible for attaching to the ACE2 receptor. Once bound to the receptor, the spike protein changes shape to allow the virus to enter. Having accessed the inside of the cell, the SARS-CoV-2 virus uses the cell's own protein manufacturing process to make new viral proteins.

Effective vaccines select recognizable antigens that induce a robust immune response. The spike protein was chosen for the mRNA COVID-19 vaccine because it is responsible for attaching to cells and gaining entry. However, research suggests that the spike protein and its S1 subunit may also be responsible for cardiovascular complications following both infection and vaccination.

The S2 subunit may also interfere with tumor suppression, potentially explaining why COVID-19 can be more severe for cancer patients.



Research shows that the spike protein is found in the blood following COVID-19 infection and vaccination. The spike protein modifies blood clotting and can stimulate an overactive immune response. A better understanding of these findings and the specific roles the spike protein and its S1 subunit play will help us determine who is most at risk for severe disease or vaccine adverse events.

Cardiovascular Effects of Spike Protein Following Infection

Although the studies are small, the spike protein has been found in the blood and clots of severely ill COVID-19 patients. The clinical evidence suggests a fingerprint of the spike protein's cardiovascular effects.

In a study of 41 patients published in Frontiers in Immunology, 30.4 percent of the 23 hospitalized were found to have significant levels of spike protein in their circulation. None of the remaining 18 uninfected or mildly ill individuals had circulating spike protein.

A small case-control study detected the spike protein in clots retrieved from COVID-19 patients with acute ischemic stroke and myocardial infarction.

Another study detected the S1 subunit in the plasma of 64 percent of COVID-19-positive patients, and S1 levels were significantly associated with disease severity. The nucleocapsid (N) protein, a marker for COVID-19 infection, was also detected. The authors speculated that the presence of S1 and N in plasma suggests that virus fragments enter the bloodstream, potentially due to tissue damage.

The exact chain of events is not fully understood. Still, laboratory, clinical, and biopsy findings offer converging evidence suggesting a role for the spike protein and its S1 subunit in blood clotting and heart injury.

17-3

Blood Clots Associated With Spike S1 Subunit

In laboratory experiments like those performed in the Frontiers in Immunology study, the spike protein S1 subunit causes a chain reaction that sets up the right conditions for clots to form. In this chain reaction, the S1 protein binds to the ACE2 receptor on the cells lining the blood vessels. Binding to ACE2 then activates immune cells. This domino effect can also stimulate platelet binding, increasing clotting risk. Platelets are essential clotting agents that stop blood loss following injury by clumping together. The authors further noted that in vitro, "our group recently documented that exposing sera from severe COVID-19 patients to endothelial cells induced platelet aggregation."

In other words, the S1 subunit is of interest because, in vitro (in a test tube), it appears to cause changes to clotting mechanisms. If the S1 subunit can affect clotting agents like fibrin, complement 3, and prothrombin, this may be a mechanism through which SARS-CoV-2 can cause cardiovascular complications. Clotting causes changes in blood flow, potentially leading to thrombosis, stroke, and heart attack.

Atypical Blood Clots

Providing blood thinners to decrease the risk of clot formation did not appear to reduce the clotting risk in COVID-19 inpatients or outpatients. This may be because the clots formed after exposure to the S1 subunit may not be typical blood clots. Three findings suggest that the S1 subunit is important to clotting risk.

1. Clots Resist Normal Breakdown

First, when the S1 subunit was added to healthy blood in the lab, it created dense, fibrous clot deposits. These fibrous "amyloid" clots formed even when blood taken from healthy people was exposed to the S1 subunit. The S1 subunit appears to be associated with clotting resistant to fibrinolysis—the normal breakdown of clots necessary to restore blood flow after injury. These amyloid clots are shown in Figure 1 below.

Amyloid clots occur when a protein is damaged and begins to fold abnormally on itself. When these abnormal amyloid proteins accumulate in the body, they can interfere with normal function.

Figure 1. Amyloid Clots Formed in Response to Spike Protein S1

2. S1 Subunit Can Induce Amyloid Substances

Second, these dense clots may be caused by certain protein segments on the S1 subunit. The spike protein has seven protein segments (peptides) that can induce fibrous (amyloid) substances. While the fully intact spike protein (S1 and S2 subunits attached to form the full spike) did not form this amyloid, the S1 subunit did. This finding is interesting because it suggests that the subunits of the spike protein may have unique effects on cells.

3. Spike Blocks Other Clot-Inhibiting Proteins

Third, spike protein can outcompete other proteins, which prevent clots from forming. In another laboratory experiment designed to understand how this process plays out, scientists found that the spike protein blocks proteins important to breaking down clots.

In summary, the in vitro (laboratory-based) research suggests that the spike protein subunit S1 can induce clot formation and impair clot dissolution. While we do not know precisely how this translates to processes in the body, Epoch Times' Jan Jekielek explored clotting and the role of spike protein with pathologist Dr. Ryan Cole on June 3 and Dr. Paul Marik on May 23. In the interview, Dr. Cole explained that the spike protein persists in the body longer, inflames tissues wherever it lands, and acts as an irritant or toxin in the body.

Spike Protein Found in COVID-19-Vaccinated Myocarditis Patients

Studies of COVID-19-vaccinated patients diagnosed with myocarditis found spike protein in the patients' blood and heart muscles but not in those without myocarditis.

Found in Blood

The full-length spike protein has been found in the blood of vaccinated adolescents with myocarditis but not in the blood of those without myocarditis.

17-4

It is unclear why the spike protein was circulating freely or unbound by antibodies. The adolescents who developed myocarditis had similar immune markers to those who did not develop myocarditis. In other words, the group with myocarditis did not appear to have any immune problems.

Rather, these adolescents may have had an overactive natural immune response. Strong natural ("innate") immunity helps the body fight off disease without any prior exposure. However, the first responders (inflammatory cytokines) can sometimes be exuberant. If the innate immune response overreacts, it may trigger myocarditis.

Found in Heart Muscle

The spike protein coded by mRNA has also been found in heart muscle cells. An endomyocardial (heart muscle) biopsy study was conducted among 15 patients with myocarditis following vaccination. No other viral infection could be found that might have caused the myocarditis.

The investigators found SARS-CoV-2 spike protein in nine of the 15 patients. Immune cells (CD4+ T) were also detected in the biopsy samples. These observations suggest an inflammatory reaction to the spike protein. The authors concluded: "Although a causal relationship between vaccination and the occurrence of myocardial inflammation cannot be established based on the findings, the cardiac detection of spike protein, the CD4+ T-cell-dominated inflammation, and the close temporal relationship argue for a vaccine-triggered autoimmune reaction."

A 2022 modeling study also suggests that the spike protein can cause an autoimmune response by mimicking human molecules, causing antibodies to bind to "self" proteins.

Spike S1 Detected in the Blood of Vaccinated Adults

Another study found that 11 of 13 adults vaccinated with Moderna's mRNA-1273 had the S1 subunit in their blood as early as one day after vaccination.

Plasma was collected from 13 participants at various times during the first month after each dose. The antigens S1 and spike were measured to estimate the amount of mRNA translation into protein products.

After the first 100-microgram dose, S1 antigen was detected in the plasma of 11 participants. In contrast, the spike antigen was detected in three of 13 participants. The S1 antigen peak was detected on average five days after vaccination. Again, the timing of this peak for S1 seems to add to the clues suggesting an autoimmune response in the week after vaccination.

mRNA Detected in the Blood and Lymph Nodes After Vaccination

Vaccine mRNA, which encodes the spike protein and its S1 subunit, also persists in the blood and lymph nodes. Following vaccination, spike-encoded mRNA has been found in the blood for 15 days and in lymph nodes for up to 60 days. Spike-laden exosomes have been found circulating in the blood for up to four months. This finding is important because it refutes the CDC's claim that the mRNA is so fragile that it dissolves quickly at the injection site (see Figure 2a in Part 1).

The lymph nodes continue creating better-fitting antibodies after any viral infection. This is a critical way that our bodies prepare for new variants naturally. However, persistently high levels of vaccine-induced mRNA and spike protein may not be helpful when the immune system is asked to respond to future variants. In other words, if the immune system is tasked with continuing to pump out antibodies to a previous variant, it may be less nimble when asked to create a high-quality antibody for a new variant.

Inadequate Clinical Trials Leave Unresolved Questions

Given what we know about the harmful effects of the SARS-CoV-2 virus, we should not have assumed that the vaccine-encoded spike protein would be harmless.

17-5

And, given what we know about clotting issues following COVID-19 infection, future studies should test whether the S1 subunit produced in response to vaccination can also cause clotting issues via the same pathway. These studies should include both lab experiments and human observations.

In addition, we do not know the relative amounts of free spike protein in circulation following infection versus vaccination.

In the case of the COVID-19 vaccines, the active ingredient was not studied prior to authorization. The manufacturers used mRNA that encodes for a substitute protein **(luciferase)** to test the safety and biodistribution of the mRNA vaccines.

Pfizer submitted animal biodistribution data to regulatory agencies using the surrogate RNA encoding for **luciferase**, as discussed in Part 1 of this series.

However, these studies were inadequate in describing how mRNA, the spike protein, its S1 subunit, and the LNP carrier would affect the human body.

In this article, we described laboratory findings showing clotting associated with the S1 subunit. Studies like these reinforce why thorough preclinical studies are so crucial. The studies conducted by pharmaceutical companies were not sufficient to address these questions.

We had very little information about how people would respond to vaccination depending on age, sex, immune status, overall health, or history of prior SARS-CoV-2 infection. The original clinical trials did not enroll enough people who had already recovered from COVID-19; they were not designed to provide an understanding of how prior infection would affect a person's response to vaccination.

Required Pfizer Post-Authorization Safety Study Unavailable to Public

Pre-authorization studies were clearly inadequate. Post-authorization, the FDA has only acknowledged that passive surveillance is insufficient to establish safety. The agency responded to adverse event reports by requiring Pfizer to conduct additional studies, with the first monitoring report due October 2022.

On page 6 of the approval letter, the FDA acknowledges this fact (see Figure 2 below):

"We have determined that an analysis of spontaneous postmarketing adverse events reported under section 505(k)(1) of the FDCA will not be sufficient to assess known serious risks of myocarditis and pericarditis and identify an unexpected serious risk of subclinical myocarditis.
"Furthermore, the pharmacovigilance system that the FDA is required to maintain under section 505(k)(3) of the FDCA is not sufficient to assess these serious risks. Therefore, based on appropriate scientific data, we have determined that you are required to conduct the following studies. ..."

Has the FDA received the monitoring report from Pfizer, which was due by Oct. 31, 2022? The next report, the interim report, will be due in October.

17-6

Figure 2. FDA Postmarketing Safety Study Requirements

POSTMARKETING REQUIREMENTS UNDER SECTION 505(o)

Section 505(o) of the Federal Food, Drug, and Cosmetic Act (FDCA) authorizes FDA to require holders of approved drug and biological product applications to conduct postmarketing studies and clinical trials for certain purposes. If FDA makes certain findings required by the statute (section 505(o)(3)(A), 21 U.S.C. 355(o)(3)(A)),

We have determined that an analysis of spontaneous postmarketing adverse events reported under section 505(k)(1) of the FDCA will not be sufficient to assess known serious risks of myocarditis and pericarditis and identify an unexpected serious risk of subclinical myocarditis.

Furthermore, the pharmacovigilance system that FDA is required to maintain under section 505(k)(3) of the FDCA is not sufficient to assess these serious risks.

Therefore, based on appropriate scientific data, we have determined that you are required to conduct the following studies:

4. Study C4591009, entitled "A Non-Interventional Post-Approval Safety Study of the Pfizer-BioNTech COVID-19 mRNA Vaccine in the United States," to evaluate the occurrence of myocarditis and pericarditis following administration of COMIRNATY.

   We acknowledge the timetable you submitted on August 21, 2021, which states that you will conduct this study according to the following schedule:

   Final Protocol Submission: August 31, 2021

   Monitoring Report Submission: October 31, 2022

   Interim Report Submission: October 31, 2023

   Study Completion: June 30, 2025

   Final Report Submission: October 31, 2025

FDA BLA Approval Letter, Aug. 23, 2021. (U.S. Food and Drug Administration)

Read Part 1: FDA Overhaul Needed for New Vaccines and mRNA Therapies

Read Part 2: Health Implications of Poor COVID-19 mRNA Testing: Miscarriage, Vision Loss, Immunotoxicity

Read Part 3: Pulling Back the Curtain: mRNA Lipid Nanoparticle Design Created Potential for Clotting and Triggering Immune Overdrive

Next: In Part 5, we will discuss the mRNA manufacturing issues affecting contamination with double-stranded DNA and the potential for genome integration.

For all references, click here.

18-1

Dr. Peter McCullough: 'The Spike Protein Is a Killer, Rips Through Hearts" (Video) – July 2023

https://rumble.com/v2xf7bi-dr.-peter-mccullough-the-spike-protein-is-a-killer-rips-through-hearts.html

19-1

Bombshell Report: Over 500 Excess Heart Deaths a WEEK in England Since COVID-19 Began

Jamie White June 24 2023

Paper downplays risks posed by the experimental COVID vaccines and instead blames the country's overburdened healthcare system as a contributing factor to the excess cardiovascular-related deaths.

Over 500 excess deaths a week involving heart diseases have been documented since the onset of the COVID-19 pandemic, according to the British Heart Foundation (BHF).

The BHF's **report**, based on data from the Office for Health Improvement and Disparities, found that there's been a total of 96,540 excess deaths involving cardiovascular conditions like heart attacks and strokes since February 2020.

"It is deeply troubling that so many more people with cardiovascular disease have lost their lives over the past three years," BHF Chief Executive Dr. Charmaine Griffiths **said** Thursday.

"For years now, it has been clear that we are firmly in the grip of a heart and stroke care emergency. If little changes, we could continue to see a sustained rise in death rates from cardiovascular conditions that undoes decades of scientific progress to **reduce the number of people who die of a heart attack** or stroke."

"There is no time to waste – Government must take control of this crisis to give heart patients and their loved ones hope of a better and healthier future," she added.

The paper also cited a separate study outlining how those who were infected with COVID before the vaccine rollout were five times more likely to die in the 18 months after infection.

Consultant cardiologist Dr. Sonya Babu-Narayan highlighted how COVID-19 deaths have been steadily falling while cardiovascular deaths keep rising.

"Covid-19 no longer fully explains the significant numbers of excess deaths involving cardiovascular disease," she claimed. "Other major factors are likely contributing, including the extreme and unrelenting pressure on the NHS over the last few years."

But notably, the BHF report downplayed the risks posed by the experimental COVID mRNA injections, claiming myocarditis cases have been "rare."

"COVID-19 vaccine associated myocarditis has been rare, more common in young men after a second vaccine dose, and fortunately shows a favourable clinical course in the vast majority of those affected," the study claimed.

"The benefits of receiving COVID-19 vaccines in reducing severe outcomes from COVID-19 infection in people living with cardiovascular disease greatly outweigh the risk of extremely rare side effects," it stated.

Read the BHF report: https://www.scribd.com/document/655156253/Excess-Deaths-Involving-Cvd-in-England-an-Anlysis-and-Explainer#download&from_embed

20-1

Heart Disease Risk Skyrockets 13,200% Following Covid Injections, CDC Admits

Ethan Huff, Natural News June 22, 2023

The top two public health agencies in the United States conducted a joint study showing that the risk of developing autoimmune heart disease among the "fully vaccinated" for the Wuhan coronavirus (Covid-19) is a shocking 13,200 percent higher than it is among the unvaccinated.

The U.S. Centers for Disease Control and Prevention (CDC) and the U.S. Food and Drug Administration (FDA) discovered that compared to the background risk in the general population, the risk of myocarditis is 133 times greater in those who took the mRNA injections from either Pfizer-BioNTech or Moderna.

Researchers from several top universities and hospitals across America contributed to the study, which was published in the *Journal of the American Medical Association* (JAMA).

Using data from the government-run Vaccine Adverse Event Reporting System (VAERS), the CDC and the FDA identified 1,626 cases of myocarditis, which were cross-checked to ensure the results comply with the CDC's official definition of myocarditis.

Based on this, researchers determined that the most high-risk mRNA jab is the one produced by Pfizer-BioNTech, meaning this one is the most dangerous in terms of potential health effects.

The Pfizer jabs, according to the data provided to VAERS, caused 105.9 cases of myocarditis per million doses after the second injection in the male 16- and 17-year-old age and sex demographic. In the 12-15 age group for males, there were 70.7 cases of myocarditis per million doses following the second shot.

The 18-24 male age group had the highest risk at 52.4 cases per million for Pfizer and 56.3 cases per million for Moderna. The median time to symptom onset was just two days for both jabs.

Since VAERS only captures around 1% of vaccine damage, what is the TRUE risk of autoimmune heart disease following covid injection?

As previous studies have found, the vast majority of covid jab-related heart problems, around 82 percent, occur in males. In the vast majority of cases, around 96 percent, those who became inflicted with myocarditis had to be hospitalized, and in most cases were treated with non-steroidal anti-inflammatory drugs (NSAIDs).

By the time of discharge, 87 percent of those hospitalized saw symptom resolution, at least initially. There is no telling what these people might suffer as the years go by, especially into older age. Among the most commonly reported symptoms are:

- chest pain, pressure, or discomfort (89 percent)
- shortness of breath (30 percent)
- abnormal ECG results (72 percent)
- abnormal cardiac MRI findings (72 percent)

Recognizing the strong and undeniable link between covid jabs and heart disease, the CDC has commenced an active surveillance program for adolescents and young adults to monitor their progress following these post-injection heart-related incidents.

20-2

Since the jabs have only been out since late December 2020, and really only started to get into people's bodies well into 2021, there is still no long-term data to evaluate concerning the long-term impact of covid jab-related heart disease.

The American Heart Association (AHA) and the American College of Cardiology (ACC) are both advising that people with myocarditis refrain from competitive sports for three to six months, otherwise they could *die suddenly* on the field.

Only after normal ECG and other test results start to appear should a person afflicted with covid jab-related heart disease even think about resuming strenuous exercise.

By the way, VAERS only captures as little as one percent of all vaccine-related injuries and deaths. So as shocking as these figures and percentages are, one must multiply them by a *lot* in order to gain a more accurate picture of the injury and death tolls from these injections.

21-1

URGENT: Italian researchers find Covid vaccine myocarditis relapses in teenage boys following apparently complete initial recovery

ALEX BERENSON AUG 8, 2023

The mRNA shots are the gift that keeps on giving. At best, we may be monitoring a lot of teens and young adults for heart damage for a long, long time.

Two teenage boys who suffered heart inflammation following Pfizer's Covid jabs and then seemed to recover had relapses months later, Italian researchers have reported.

Both teenagers showed evidence of new heart damage from the recurrences, including high levels of proteins from injured cardiac muscle. Scans showed one boy had new lesions in his heart wall, and he needed nearly two weeks of hospitalization.

The researchers could not determine why the boys suffered the relapses, which came 8 to 12 months after the initial myocarditis episodes. They called for tighter monitoring of anyone diagnosed with mRNA-caused myocarditis - and more research to determine if young people who suffered it might face severe future complications.

Published in late May in the journal Vaccine: X, the paper appears to be the first case report showing mRNA jabs can cause recurring myocarditis, or inflammation of the heart. But public health authorities and the media, which since 2021 have played down cardiac side effects from mRNA shots, have ignored it.

Myocarditis has many causes, including viral infection and mRNA Covid vaccination.

It is often diagnosed when people go to emergency rooms with chest pain but can also occur without symptoms, causing people to have cardiac damage that is clear on heart scans or in blood tests but does not cause pain or fever.

Studies have shown myocarditis requiring hospitalization may occur in as many as 1 in 3,000 teenage boys or young adult men who receive a Covid jab, with the highest risk after the second dose. Many studies show Moderna's shot, which has more mRNA than Pfizer's, has a higher risk.

The underlying reason that the mRNAs cause myocarditis - and why it seems to affect young men more than anyone else - remains a mystery.

Researchers have proposed many different mechanisms, including direct damage from the spike protein the mRNA shots cause the body to make, immune system antibodies that mistakenly attack heart tissue instead of the spikes, or a more generalized immune system overresponse. So far they have not settled on a definite answer.

(Relapsing myocarditis. That's not good, right?)

In 2021 and 2022, public health experts and schools and universities - particularly in the United States - pushed mRNA Covid shots on teenagers and young adults at essentially no risk from Covid.
As the connection between the mRNAs and myocarditis became more clear, they downplayed its risks, calling it mild and tranisent.

But studies from South Korea, Qatar, and the Tokyo medical examiner's office have proved that mRNA myocarditis can kill and has led to dozens of sudden deaths of young adults in those countries. The link to the deaths was generally discovered only after autopsies or medical record reviews of deaths within days or weeks of vaccinations.
The United States and most other mRNA vaccine countries have not conducted similar reviews, so the total post-jab myocarditis death toll remains a mystery.

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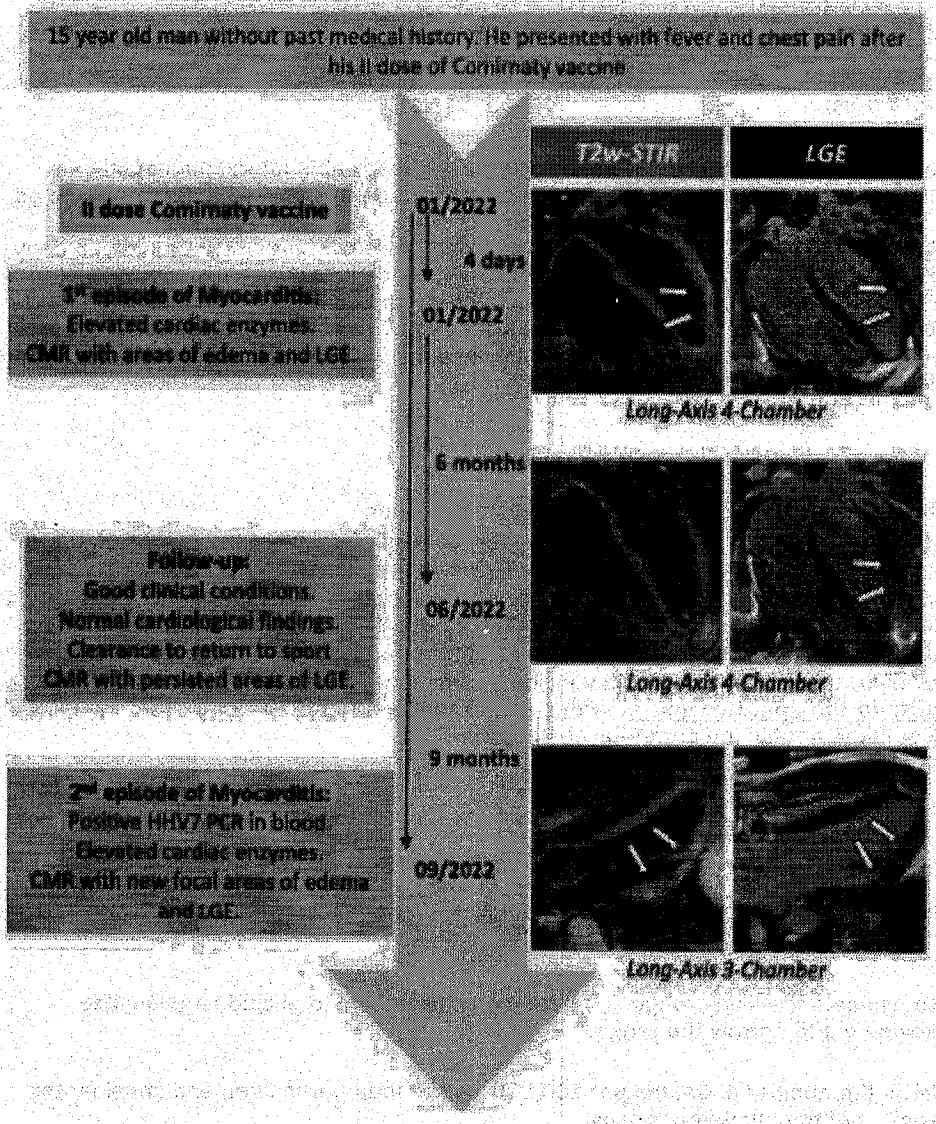
(Everything was fine. Until it wasn't.)

21-2



Another mystery is the long-term prognosis of teenagers and young adults who have suffered either mild or more severe post-jab myocarditis.

Some studies have shown changes in heart function up to a year later, but cardiologists disagree about whether the scarring visible on scans is severe enough to have meaningful long-term impact.

But the heart cannot regrow muscle after injury.

Any damage it suffers is effectively permanent, which is why the possibility that the mRNAs might cause repeated episodes of inflammation or scarring is so worrisome.

22-1

Vaccine 3000x Higher Than CDC Admits, Study Finds

Jamie White July 26th 2023

"Vaccination-associated elevation of markers of myocardial injury" found in 3% of study participants.

CDC's 2022 study concluded less than 1 out of 100,000 people were found with the same injury markers.

A disturbing study out of Switzerland found that the incidence of cardiac-related injuries following the COVID jab was 3000x higher than U.S. government figures.

The small peer-reviewed **study** spearheaded by the Department of Cardiology and Cardiovascular Research Institute in Basel found that out of the 777 participants — all medical professionals at the median age of 37 who received the Moderna COVID mRNA vaccine — nearly 3% of the subjects had elevated cardiac enzymes just 3 days after taking the shot, indicating heart muscle damage.

"Our findings confirmed the study hypothesis. mRNA-1273 booster vaccination-associated elevation of markers of myocardial injury occurred in about one out of 35 persons (2.8%), a greater incidence than estimated in meta-analyses of hospitalized cases with myocarditis (estimated incidence 0.0035%) after the second vaccination," the researchers wrote.

"However, further studies are needed to assess the impact of mRNA vaccine-associated myocardial injury on the long-term risk of cardiac arrhythmias and heart failure."

The other 0.3% indicated "probable myocarditis" making the total who indicated markers of vaccine-induced myocardial injury 3%.

"No definitive case of myocarditis was found. However, the two participants (both women) with vaccine-associated myocardial injury and chest pain met the Brighton Collaboration case definition Level 2, indicating probable myocarditis in those patients," the researchers stated.

Though this study found nobody was diagnosed with myocarditis outright, the myocardial injury rate of 3% is still extremely alarming, given that millions of doses of the experimental vaccine were distributed globally.

A much larger **CDC study** from 2022 *citing Moderna's own methodology* concluded that the vaccine-induced myocardial injury rate was approximately 0.001%, or 0.95 out of 100,000 people.

In other words, the myocarditis complication rate found in the Swiss study was **3000x higher** than what the CDC reported.

The Swiss study also found that the myocarditis complication rate was higher among women, but was more serious among the men.

Will the CDC address this massive disparity in heart-related vaccine safety results?

Retire nurse educator Dr. John Campbell broke down this study in great detail on Wednesday:
https://www.youtube.com/watch?v=cd_RTf_ForA&t=109s

33-1