PLAIN LANGUAGE SUMMARY

# The Human Body as a SARS-CoV-2 Spike Protein Factory:

## What the Science Now Tells Us About COVID-19 Vaccines and Your Heart

A plain language summary of the peer-reviewed systematic review by:

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" For Discovery and Better Understanding "

## What is this document?

A group of scientists spent months gathering and reading hundreds of published medical studies — research from universities, hospitals, and government health agencies around the world. This document explains what they found, in plain language, without medical jargon.

The full scientific review, written for other scientists, is freely available at:

Full review, summary, and free PDF download:
https://matriksbiotek.com/publications/file/465

This plain language summary covers the same findings but uses everyday language so that anyone — whether or not they have a medical background — can understand what the science is showing.

## The basic question

The COVID-19 vaccines made by Pfizer and Moderna work differently from every vaccine ever made before. Instead of injecting a protein directly into your arm, they inject a set of genetic instructions. Your own body then reads those instructions and makes the protein itself — inside your own cells.

That protein is called the spike protein. It comes from the surface of the COVID-19 virus. Your immune system is supposed to recognise it, build defences against it, and then the spike protein should disappear.

The central question this research asks is: does the spike protein actually disappear quickly — or does it stay in the body much longer than expected, and if so, what does it do while it is there?

## Finding 1: The spike protein stays much longer than expected

Before the vaccines were approved, health authorities said the spike protein would clear from the body within a few days to a few weeks. Independent scientists have since looked more carefully — and found something very different.

| 187 | 60 | 30 | 4 |
|---|---|---|---|
| days spike protein was detected in blood (approx 6 months) | days spike was still being produced in lymph nodes | days — spike-producing material found in heart tissue | months — spike found in tiny particles circulating in blood |

To put this simply: when you receive one of these vaccines, your body begins making spike protein. Scientific measurements show this spike protein — or instructions to make it — can still be found in your blood, glands, and even heart tissue for months after the injection. This was not expected, and it was not tested before the vaccines were given to billions of people.

Imagine a factory that was supposed to run for a few days but keeps running for six months. The factory is your body. The product is spike protein. Nobody measured how long the factory would keep running before it was turned on.

## Finding 2: The spike protein is not harmless to blood vessels

Several independent research teams — from Harvard, the University of Glasgow, McGill University in Canada, and the National University of Mexico, among others — tested what happens when spike protein comes into contact with the cells lining your blood vessels. These cells are called endothelial cells. They line every artery, vein, and capillary in your body, including the arteries of your heart.

What they found was consistent across all laboratories: spike protein, on its own — without any live virus — damages these cells.

Here is what happens, step by step:

- The spike protein attaches to a protective molecule on the surface of blood vessel cells called ACE2. ACE2 normally helps keep blood pressure balanced and blood vessels relaxed. When spike protein grabs ACE2 and pulls it inside the cell, this protection is lost.
- Without enough ACE2 working, blood vessels become more inflamed and constricted. The body produces more of a chemical called angiotensin II, which causes the vessel walls to become stiff and prone to damage.
- The spike protein also switches on an alarm system inside endothelial cells — called NF-κB — that causes the cells to produce inflammatory chemicals and sticky proteins on their surface. These sticky proteins (VCAM-1 and ICAM-1) are the biological equivalent of velcro — they cause white blood cells and cholesterol-carrying particles floating in the blood to stick to the vessel wall.
- Stuck white blood cells absorb cholesterol and turn into what scientists call foam cells — the fatty deposits that are the very first stage of artery disease (atherosclerosis).

In plain terms: the spike protein causes your blood vessel walls to become inflamed and sticky. Fatty deposits begin to build up. This is the starting point of artery disease — the condition that leads to heart attacks and strokes.

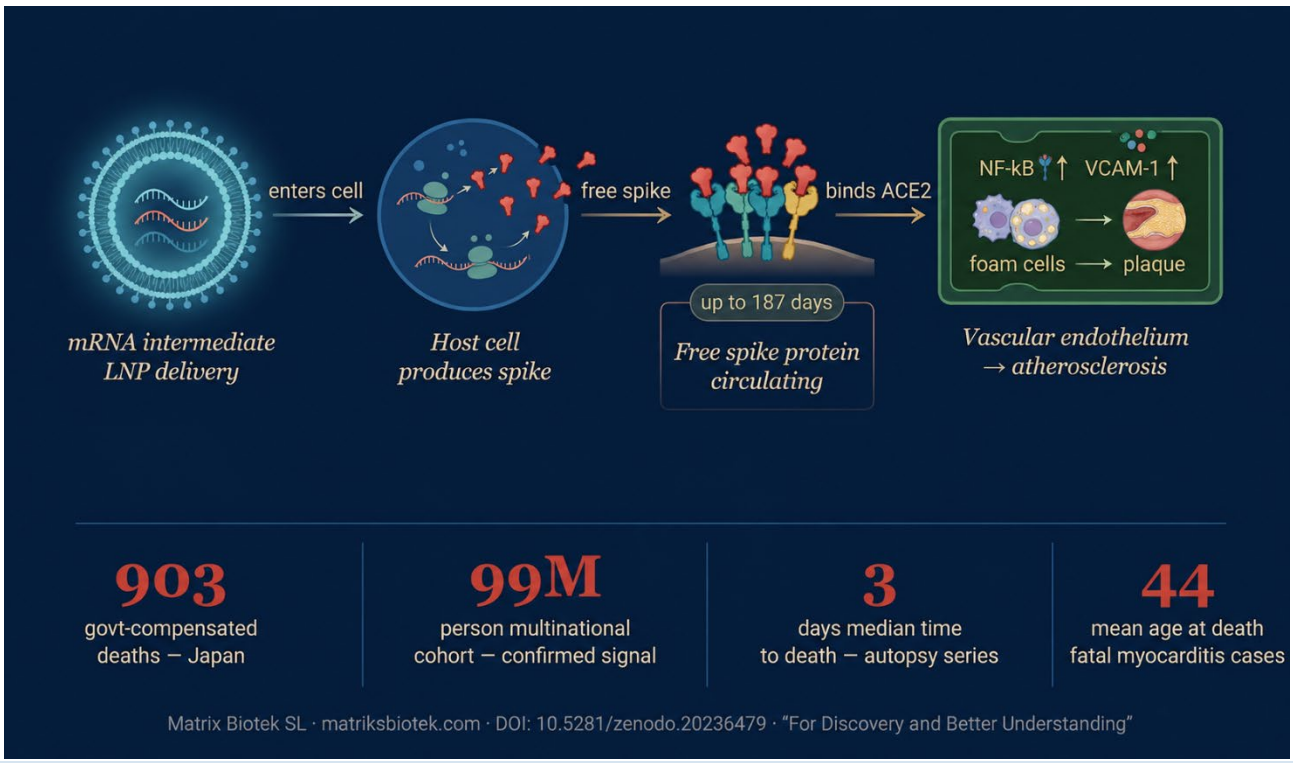



Fig. What happens and what happened

## Finding 3: Your immune system stops clearing the spike protein after repeated doses

When you receive the first two doses of the mRNA intermediate, your immune system produces antibodies — proteins that recognise and grab onto the spike protein to remove it from your system. This is working as intended.

However, after a third dose (booster), something unexpected happens. Scientists discovered that the type of antibody your immune system produces changes. Instead of making antibodies that actively clear spike protein from the blood, your body begins making a different kind — called IgG4.

IgG4 antibodies are unusual. They can still attach to the spike protein, but they cannot remove it from the body. They do not trigger the immune cleanup process. They do not activate the system that destroys foreign material. They are, in effect, holding the spike protein without doing anything about it — and actively blocking the other antibodies that could.

This means that with every booster dose, your immune system becomes progressively less able to clear the spike protein it is simultaneously producing. Free spike protein — not attached to any antibody that would remove it — circulates in the blood, where it encounters and damages your blood vessel walls continuously.

Think of it this way: your immune system used to have an active security team that removed the spike protein. After repeated doses, that security team has been replaced by security guards who can see the spike protein but cannot remove it — and are blocking the guards who could.

## Finding 4: An additional amplification mechanism — mast cells and histamine

The research also identified a second pathway that amplifies the damage to blood vessels. Your body contains cells called mast cells, which are found throughout your blood vessel walls, heart, and surrounding tissues. Mast cells are part of your immune system and normally release substances to fight infection.

Spike protein directly triggers mast cells to release their contents — including a well-known chemical called histamine. Most people know histamine as the substance that causes allergic reactions: itching, swelling, and redness. But histamine also has an effect on blood vessel walls.

Histamine switches on the same NF-κB alarm system in blood vessel cells that spike protein activates directly. The result is the same: more sticky proteins on the vessel wall, more fatty deposits, more inflammation. Spike protein is therefore driving blood vessel damage through two simultaneous pathways at once — directly, and via histamine.

Additionally, some people produce anti-spike IgE antibodies following administration. IgE is the antibody type associated with allergies. When IgE is bound to mast cells and then encounters spike protein again — from a booster dose or from prolonged spike protein circulation — it triggers an even more powerful and rapid mast cell response. People with anti-spike IgE may therefore be experiencing a more intense, self-reinforcing inflammatory cycle with each subsequent spike protein exposure.

# Finding 5: People have died — and the numbers are documented

This section is the most serious part of this summary. The research reviewed official government data, peer-reviewed autopsy studies, and large international population studies. Here is what they show:

## Japan — Government Compensation Data

The Japanese government runs a formal legal process that reviews claims of harm following vaccination. Families must provide evidence, and government officials decide whether the vaccine caused the harm. This is a higher standard of proof than simply reporting a side effect.

As of November 2024, the Japanese government had approved:

| 903 | 8,432 |
|---|---|
| deaths officially compensated as caused by the product | injuries officially compensated as caused by the product |

To understand how significant this is: these numbers exceed the total number of deaths and injuries compensated for all other vaccines combined over the previous 47 years of Japan's vaccine compensation programme. A 14-year-old girl is among the fatal cases.

## Autopsy evidence — confirmed at post-mortem examination

A systematic review published in the European Society of Cardiology's peer-reviewed journal — ESC Heart Failure — examined every published autopsy report of people who died following COVID-19 mRNA intermediate administration and had heart inflammation confirmed at post-mortem examination.

| 28 | 44 | 3 | 93% |
|---|---|---|---|
| confirmed deaths from mRNA intermediate heart inflammation | years — mean age at death | days — median time from vaccination to death | of cases showed heart as the sole organ affected |

The median time from administration to death was three days. Half of these people died within three days of receiving the vaccine. Their mean age was 44 years.

### The largest vaccine safety study ever conducted — 99 million people

A multinational research network called the Global Vaccine Data Network studied data from 99 million people who received COVID-19 vaccines across 10 research centres in 8 countries. This is the largest vaccine safety study ever conducted. It was published in the peer-reviewed journal Vaccine in 2024.

The study confirmed that myocarditis (inflammation of the heart muscle) and pericarditis (inflammation of the sac around the heart) occur at higher rates than expected following mRNA intermediate administration — across multiple doses, in multiple countries, in multiple age groups.

> These are not fringe claims. They are findings from official government administrative processes, peer-reviewed autopsy studies published in cardiology journals, and the largest vaccine safety dataset ever assembled. They converge on the same conclusion.

## The fundamental issue

All vaccines that came before the Pfizer and Moderna COVID-19 products worked in the same basic way: a protein or a weakened version of a virus was injected into your arm, your immune system responded to it, and the protein was cleared from your body within hours to days.

The Pfizer and Moderna products work completely differently. They are, in biological terms, genetic instructions — not vaccines in the traditional sense. Your body reads those instructions and manufactures the spike protein inside your own cells. Your body becomes the factory.

The critical scientific issue is this: nobody properly tested how long that factory would keep running before giving these injections to 5.7 billion people. The pre-approval testing was done mostly in mice, over short time periods. The data now available from human studies — spike protein circulating for 6 months, persisting in heart tissue, producing IgG4 tolerance after boosters — was not known, and was not required to be tested, before the vaccines were authorised.

> People — including young, healthy people with no prior heart conditions — died from a biological process that the regulatory system did not model, did not

measure, and did not require to be understood before these products were given to more than half the world's population. Whether this was an honest scientific failure under pressure, a regulatory mistake, or something more deliberate is a question that demands independent investigation.

## What should happen now?

This research is not against vaccines in general. The argument is simple: every medical product — whether a painkiller, a cancer drug, or a vaccine — must be held to the same standard of safety investigation. The evidence reviewed in this systematic review shows that this standard was not met for COVID-19 mRNA products with respect to cardiovascular safety.

The research proposes that the scientific community now urgently needs:

- Long-term studies that measure anti-spike protein and spike protein levels in people's blood at regular intervals (3, 6, 12, and 24 months after administration) alongside measurements of blood vessel inflammation markers and heart artery scans (CT angiography).
- A standardised programme requiring that all sudden cardiac deaths in recipients within two years be examined by autopsy with specific tests for spike protein in the heart and blood vessels.
- Validated research tools — laboratory tests and imaging protocols — that allow scientists and clinicians to monitor the health of blood vessels in recipient populations over time.
- Full transparency of all post-administration safety data held by governments and vaccine manufacturers, made available to independent researchers.

## An important note on balance

COVID-19 infection itself — the disease caused by the actual virus — is also harmful to the heart and blood vessels. For many people, particularly the elderly and those with underlying health conditions, the risk from COVID-19 infection was genuinely severe. During the acute period of the pandemic, many millions of people benefited from these products.

This scientific review does not deny that. What it argues is that the cardiovascular harms documented here — real, peer-reviewed, government-confirmed — were not adequately investigated before mass administration and must now be investigated with the same rigour applied to any other medicine that has been shown to cause harm in a subset of recipients.

Science is not anti-vaccination. Science is pro-evidence. The evidence is now here. The investigation must follow.

## Where to find the full scientific review

The complete peer-reviewed systematic review — written for scientists, with all 42 references, detailed methods, and full evidence — is freely available at no cost:

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