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# Nearly 1 in 3 COVID-19 Vaccine Recipients Suffered Neurological Side Effects: Study

The people included in the study suffered from headaches, tremors, muscle spasms, insomnia, sleepiness, vertigo, and difficulty in concentration.



A health care worker prepares a dose Pfizer/BioNTech COVID-19 vaccine at The Michener Institute, in Toronto, Canada, on Dec. 14, 2020. (Carlos Osorio/AFP via Getty Images)





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Almost a third of individuals who received a COVID-19 vaccine suffered from neurological complications including tremors, insomnia, and muscle spasms, according to a recent study published in the journal [Vaccines](#).

The study analyzed 19,096 people who received COVID-19 vaccines in Italy in July 2021, out of which 15,368 had taken the Pfizer vaccine, 2,077 had taken the Moderna version, and 1,651 took the AstraZeneca version.

While both Pfizer and Moderna are mRNA vaccines, AstraZeneca, being an adenovirus vaccine, uses a different mechanism to trigger the immune response.

The study found that about 31.2 percent of vaccinated individuals developed post-vaccination neurological complications, particularly among those injected with the AstraZeneca jab. Different vaccines had a different “neurological risk profile.”

The neurological risk profile of the AstraZeneca vaccine included headaches, tremors, muscle spasms, insomnia, and tinnitus, while the risk profile of the Moderna vaccine included sleepiness, vertigo, diplopia (double vision), paresthesia (a feeling of numbness or itching on the skin), taste and smell alterations, and dysphonia (hoarseness or loss of normal voice). None of the subjects were hospitalized or died.

As to Pfizer vaccines, researchers found “an increased risk” of cognitive fog or difficulty in concentration.

## AstraZeneca Risks

More than 53 percent of individuals who took an AstraZeneca shot suffered from headaches, which usually lasted for one day. Over 13

percent developed tremors, which typically reverted after a day as well.

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Insomnia was reported among 5.8 percent of AstraZeneca recipients. However, the study notes that researchers were unsure whether the individuals actually developed insomnia or had a “misperception of their sleep quality due to vaccination stress.”

Tinnitus was reported by 2.7 percent of the people who took AstraZeneca shots. Tinnitus is a condition in which an individual hears ringing or other noises which are not caused by an external sound.

All these health complications had a higher risk of occurring after taking the first dose of the vaccine.

The study speculated that complications related to the AstraZeneca vaccine are attributable to two factors. “Firstly, the nature of the vaccine, which is a modified adenovirus vector that results in significant and persistent systemic immune activation; secondly, individual vulnerability related to a predisposing biology.”

## Moderna and Pfizer Risks

Sleepiness was found in 39.7 percent of those who took Moderna jabs, with the condition usually lasting for a week. It suggested that there “could be a strict relationship between the development of sleepiness and immune responses to vaccine/infection.”

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The study cited a “fascinating hypothesis” which suggests that influenza vaccines may lead to “the selective immune-mediated destruction of orexin-producing neurons, which is T-cell-mediated neuronal damage, thus triggering narcolepsy.”



A medical assistant holds a tray of syringes filled with doses of Moderna COVID-19 vaccine at a vaccination site in Los Angeles on Feb. 16, 2021. (Apu Gomes/AFP via Getty Images)

Narcolepsy is a condition in which the brain is unable to control the ability to sleep or stay awake.

“Considering that the same can occur for COVID-19 vaccines, future investigations monitoring the new-onset hypersomnia findings in vulnerable individuals are urgently needed.”

Hypersomnia is the inability to stay awake and alert during the daytime, even though the person may have had plenty of sleep during the night.

About 15.9 percent of people who received Moderna shots had vertigo a sensation which makes the individual feel that they or

verage, a sensation which makes the individual feel that they or their surrounding environment is moving or spinning. It typically lasted for a day.

Paresthesia—a feeling of numbness or itching on the skin for no apparent reason—was [reported](#) in 14.5 percent of Moderna vaccine recipients, which went away after a day.

Among the people who received a Moderna jab, 2.7 percent reported diplopia, also known as double vision, which also lasted for about a day. “Symptomatic people showed an increased risk to develop diplopia after the second dose, as if a reactivation of the immune response was necessary to trigger diplopia.”

Meanwhile, about 6.4 percent of Pfizer vaccine recipients reported suffering from cognitive fog, with the condition usually reversing in a week.

“Brain fog is a type of cognitive impairment that presents as a ‘foggy brain state’, including a lack of intellectual clarity, difficulty with concentration, mental fatigue and anxiety,” the study said.

“Hypotheses including systemic inflammation crossing the blood–brain barrier, neuroinflammation after viral infection leads and microglial activation are emerging as explanations of this phenomenon in COVID-19 patients. An alternative speculation is that symptomatic people may have a subclinical cognitive dysfunction before vaccination, and that vaccination is a trigger.”

## Females Highly Affected

The study found that females faced an “increased risk of developing neurological complications” following COVID-19 vaccination. “Our findings are in line with those of a recent study that revealed that several factors, including the female sex, were associated with greater odds of adverse effects,” it said.

The researchers suggested that greater female susceptibility to the vaccines’ neurological complications may be due to “genetic and hormonal factors.”

Females have two X chromosomes while males have one X chromosome and one Y chromosome. As the X chromosome “contains the most prominent immune-related genes in the human genome,” it can also cause “stronger inflammatory immune responses,” the study said.



A COVID-19 vaccination hub at Central Falls High School in Central Falls, R.I., on Feb. 13, 2021. (Joseph Prezioso/AFP via Getty Images)

Moreover, a primary female sex steroid called estradiol triggers a specific immunity process to produce “antibodies against infections.”

The study also raised concerns about comorbidities. In medical parlance, comorbidity describes the existence of more than one disease or condition in a body at the same time, which may or may not interact with one another.

“The evidence that immune system dysfunctions (allergies/immunodeficiency disorders) are frequently reported in our symptomatic group is more than a chance occurrence,” researchers said.

Comorbidities were present in 47.6 percent of the AstraZeneca vaccine recipients, 38.8 percent of those who took Moderna jabs, and 41.5 percent of individuals who received Pfizer shots, the study said.

In the AstraZeneca group, both allergies and non-neurological diseases were reported. “A history of antitumoral and anticoagulant drugs was more frequent in this population,” the study said.

Among Moderna and Pfizer recipients, allergies were “more frequently” observed. While some people who took Moderna had a prior history of neurological diseases and transfusions as well as previous COVID-19 infection, those who received Pfizer vaccines had a history of immunodeficiency disorders.

Even though the study detailed neurological complications arising from COVID-19 vaccination, it admitted to certain limitations.

“Firstly, our results should be interpreted with caution because of a possible overestimation of neurological events resulting from the self-reported symptoms,” it said.

“Secondly, we evaluated the risks associated with the first and second doses of the vaccine; however, the data concerning the second dose were limited, thus representing a potential bias in the study.”

While admitting its limitations, the study concluded that “clinicians should be aware that several neurological complications may commonly occur after COVID-19 vaccines.”

“Caution should be used when administering COVID-19 vaccines to vulnerable people, such as to those who suffer from allergies,” the study stated. “We strongly believe that our findings are relevant for public health regarding the safety of vaccines in a large cohort.”

The Epoch Times reached out to Moderna, Pfizer, and AstraZeneca for comment.

## Additional Neurological Findings

Cardiologist Dr. Peter McCullough [wrote about the study](#) discussing neurological effects following COVID shots in an article on Substack.

“A shocking 31.2 percent of respondents to this large dataset sustained neurologic injury after two injections with verified data in health registries,” he wrote. “Most of the risk estimates indicate the safety profile is unacceptable. It is alarming that all neurological societies to date still recommend COVID-19 vaccines and none have issued safety warnings on the products.”

Dr. McCullough explained that an excess risk of 20 percent or greater is considered "clinically important."

Multiple other studies have found evidence of COVID-19 vaccines being linked to neurological complications. Back in October 2021, a [study](#) published in the Neurological Sciences journal stated that the “most devastating neurological post-vaccination complication is cerebral venous sinus thrombosis (CVST).”

CVST occurs when a blood clot develops in the venous sinuses of the brain. This blocks the blood from draining out of the brain, eventually resulting in the blood leaking into brain tissues and forming a hemorrhage, according to Johns Hopkins Medicine.

The study found that CVST was “frequently reported in females of childbearing age,” generally among those who took an adenovector vaccine. Individuals who received mRNA vaccination were reported to have Bell’s palsy, in which facial muscles weaken or enter into paralysis.

A November 2022 study in [Current Neurology and Neuroscience Reports](#) made similar findings, stating that there is “a greater than expected occurrence of severe neurological adverse events.”

Dr. McCullough [cited this study](#) in an article the following month.

“Because the vaccines contain lipid nanoparticles loaded with genetic material that code for the damaging Spike protein, each patient faces a Russian Roulette of whether or not the nervous



system will be hemodynamically showered with the damaging vaccine particles,” he wrote.

Despite studies suggesting the risk of medical complications, some experts continue to advise people to get COVID-19 jabs. According to John Hopkins Medicine, both Pfizer and Moderna are “highly effective in preventing serious disease, hospitalization, and death from COVID-19.”

It recommended people to get a COVID-19 shot as “we believe that their benefits outweigh their risks,” Johns Hopkins Medicine said.

According to a position [statement](#) from the American Academy of Neurology (AAN) issued in 2021, the organization recommended COVID-19 vaccine mandates for health care employees and supported vaccinations for children under the age of 12.



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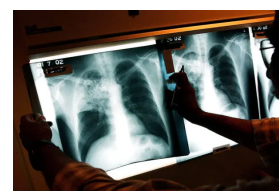
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