

Plain Language Clinical Study Summary

This summary reports the results of only one study. Researchers must look at the results of many types of studies to understand if a study vaccine works, how it works, and if it is safe to prescribe to patients. The results of this study might be different than the results of other studies that the researchers review.

Sponsor: Pfizer Inc.

Vaccine(s) Studied: Influenza Modified RNA (modRNA) Vaccine
(PF-07252220)

Protocol Number: C4781013

Dates of Study: 23 May 2024 to 05 February 2025

Title of this Study: A Study About Modified RNA Vaccines Against Influenza in
Healthy Adults

[A Study to Evaluate the Safety, Tolerability, and
Immunogenicity of Modified RNA Vaccines Against
Influenza in Healthy Adults]

Date(s) of this Report: 27 September 2025

– Thank You –



If you participated in this study, Pfizer, the Sponsor, would like to thank you for your participation.

This summary will describe the study results. Do you have any questions about the study or the results? If so, please contact the doctor or staff at your study site.



Why was this study done?

What is influenza?

Influenza is also known as the flu. It is caused by a virus that infects the respiratory system. This includes the nose, throat, and lungs. Symptoms include runny or stuffy nose, sore throat, cough, headache, fever, chills, and muscle pain or body aches. Many people with influenza will have mild illness. Some people can become seriously ill and may die.

What is a vaccine?

A vaccine can help prevent an infection or a disease. It works by helping the body make antibodies that are used to fight off germs such as the influenza virus. One of the ways to potentially help prevent influenza is to be vaccinated with an influenza vaccine.

Antibodies are proteins that fight germs to help prevent disease. After a person gets a vaccine, the body's response includes making antibodies. This is called an antibody response and is part of the immune response, the body's defense against germs.

What is an influenza vaccine?

An influenza vaccine is a kind of vaccine that helps make an antibody response against influenza. There are different types of influenza vaccines. The vaccines in this study contain modified ribonucleic acid (mRNA). Ribonucleic acid (RNA) is present in all living cells and helps the cell make proteins. When a person gets an mRNA vaccine, the mRNA in the vaccine tells their cells to make the vaccine protein. This helps the body to make antibodies for that protein.

There are 3 types of influenza virus that can infect humans. These are called groups or types A, B, and C. Of these, influenza A and B viruses cause most seasonal influenza disease in humans. Within these 2 main groups, there are

different strains or types of the virus. This is because the influenza virus can mutate (change) some of the proteins it makes.

Influenza viruses can change 2 proteins that are important for how the virus works. These proteins are called hemagglutinin (HA) and neuraminidase (NA). An influenza vaccine helps the body recognize HA or NA so the body can make antibodies to them. The types or strains of influenza that commonly infect people change from year to year. An influenza vaccine from a previous year may not work on the new strain if the HA or NA proteins in the new strain have changed.

Each year, the World Health Organization (WHO) tries to predict what influenza types are likely to be most common that year. The vaccines are then made to target these or similar types.

What vaccines were tested in this study?

The investigational vaccines used in this study were:

- “Trivalent” (3-part) influenza mRNA vaccines (tIRV) that target the HA and/or NA from 3 different seasonal types of influenza A and B. Eight (8) different tIRV vaccine formulations (types) were used, called tIRV1, tIRV2, tIRV3, tIRV4, tIRV5, tIRV6, tIRV7, and tIRV8.
- “Quadrivalent” (4-part) influenza mRNA vaccines (qIRV) that target the HA from 4 different seasonal types of influenza A and B. Three (3) different qIRV vaccine formulations were used, called qIRV1, qIRV2, and qIRV3.

These were all injectable study vaccines, in varying doses, and were not approved for use outside of the study at the time of this study.

What was the purpose of this study?

The main purpose of this study was to look at the safety and tolerability of the study influenza vaccines in healthy adult participants of different ages. The study was done as 3 separate substudies:



- Substudy A compared 3 different formulations of tIRV to a licensed influenza vaccine called Flucelvax (also called QIV1), and to qIRV1. Participants were aged 18 to 64 years.
 - Substudy B compared 2 different formulations of tIRV to licensed influenza vaccines Fluzone HD (QIV2) and Fluad (QIV3), and to qIRV2. Participants were aged 65 years or older.
 - Substudy C compared 6 different formulations of tIRV to Fluzone HD and Fluad, and to qIRV3. Participants were aged 65 years or older.
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Researchers wanted to know:

- **Did participants have any local reactions (any injection site redness, swelling, or pain) within 7 days after vaccination?**
 - **Did participants have any systemic events (any fever, tiredness, headache, vomiting, loose stools (diarrhea), chills, new or worsened muscle pain, or new or worsened joint pain) within 7 days after vaccination?**
 - **Did participants have any medical problems within 4 weeks after vaccination?**
 - **Did participants have any medical problems that they needed to see a doctor for, within 6 months after vaccination?**
 - **Did participants have any newly diagnosed chronic medical conditions within 6 months after vaccination?**
 - **Did participants have any serious medical problems within 6 months after vaccination?**
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Researchers also checked the participants' levels of antibodies before and after vaccination in this study, to measure the immune response produced by the body after getting the vaccine.

Results of participants' immune response to the study vaccines are not included in this report because that was not the main focus of the study. These results may be found at the links on the last page of this report.

What happened during the study?

How was the study done?

First, researchers checked each participant to make sure they were able to join the study. This is known as screening.

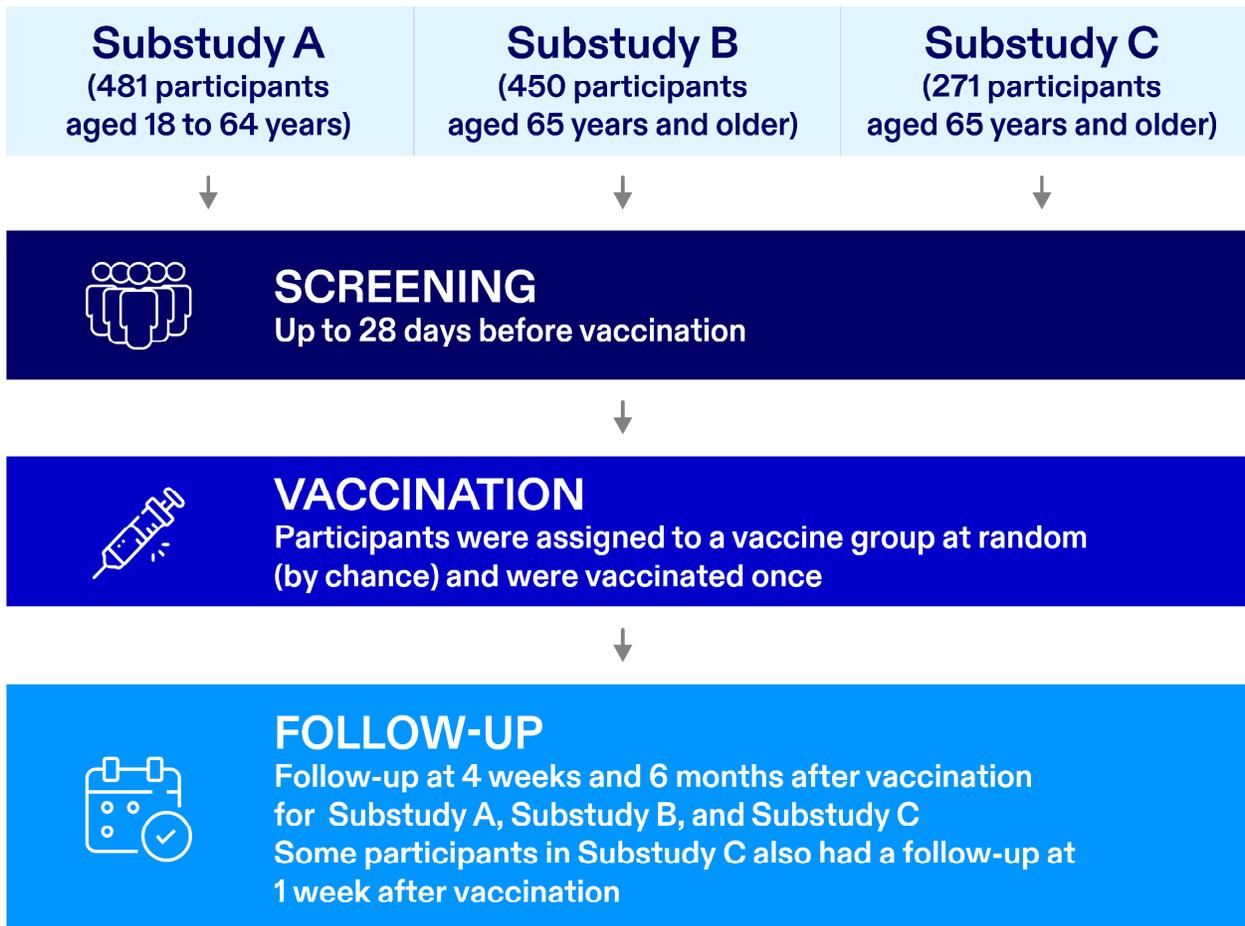
Participants could only join 1 of Substudy A, Substudy B, or Substudy C.

In Substudy A and Substudy B, participants were enrolled all at once into the different treatment groups. In Substudy C, the enrollment of participants into different groups happened with pauses in between. This was to allow researchers to more closely monitor the effects of the vaccines for Substudy C.

All participants in each substudy got 1 dose of their assigned study vaccine. How participants were assigned to their study vaccine in each substudy is described in the next section.

Figure 1 shows how the study was done in all the substudies.

Figure 1. What happened in Substudy A, Substudy B, and Substudy C?



Researchers checked if participants had any local reactions or systemic events within 7 days after vaccination.

- **Local reactions** are the body's response at the injection site (the spot in the arm where the study vaccine was injected). These can include injection site redness, swelling, or pain.
- **Systemic events** are symptoms that affect the whole body or specific parts of the body like the head or joints. These can include fever, tiredness, headache, vomiting, diarrhea, chills, new or worsened muscle pain, or new or worsened joint pain.

Participants recorded any local reactions or systemic events within 7 days after vaccination in an electronic diary (e-diary), or in a smartphone app. Researchers checked the participants' overall health during the study and asked them how they were feeling.

All participants had follow-up checks at the study site 4 weeks and 6 months after vaccination. Some participants in Substudy C had an additional follow-up check 1 week after vaccination.

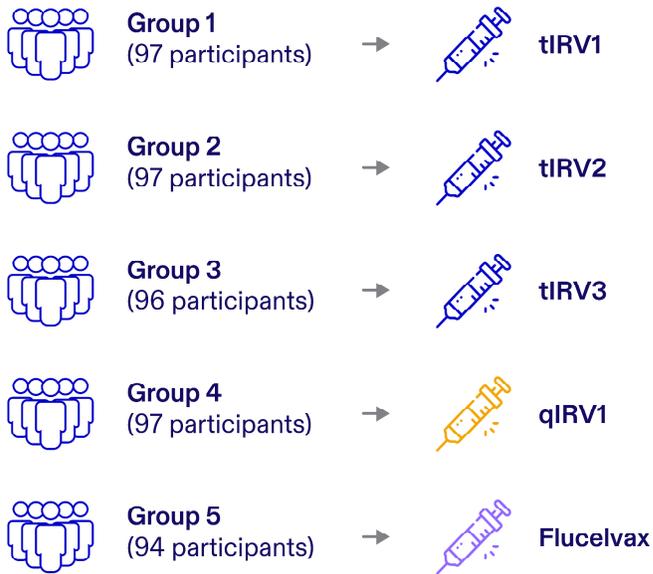
Researchers also took samples of blood from participants during the study.

Vaccinations

Researchers used a computer program to assign participants to vaccine groups by chance. This is known as “randomization”. The study participants and researchers did not know who took which vaccine. This is known as being “blinded”. The Sponsor did know who took which vaccine, this is known as being “unblinded”.

Figure 2 shows the vaccine groups in Substudy A. Figure 3 shows the vaccine groups in Substudy B. Figure 4 shows the vaccine groups in Substudy C.

Figure 2. Vaccines given in Substudy A

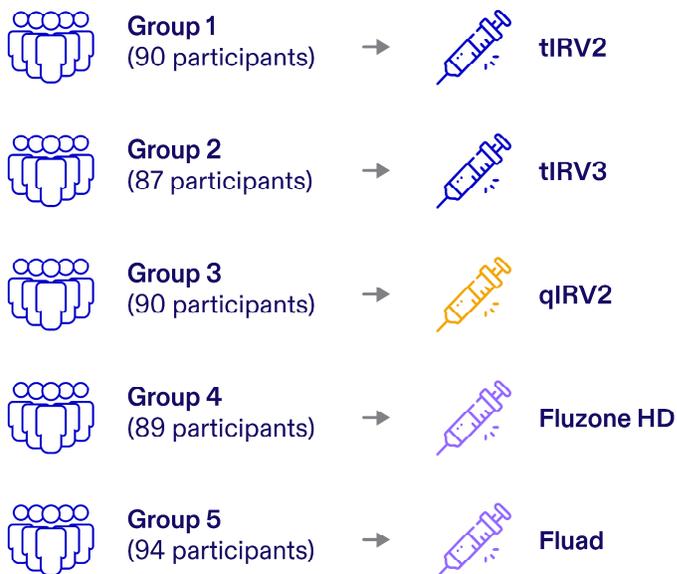


tIRV1, tIRV2, tIRV3 = vaccine formulations that can target 3 different types of flu virus

qIRV1 = vaccine formulation that can target 4 different types of flu virus

Flucelvax = licenced flu vaccine that can target 4 different types of flu virus

Figure 3. Vaccines given in Substudy B

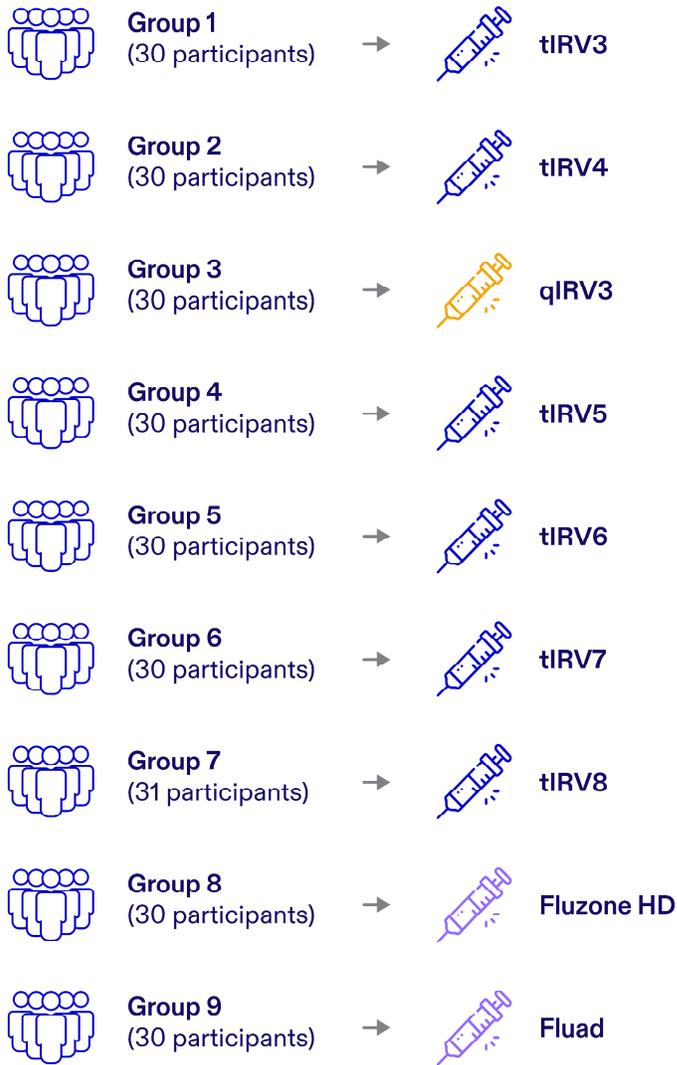


tIRV2, tIRV3 = vaccine formulations that can target 3 different types of flu virus

qIRV2 = vaccine formulation that can target 4 different types of flu virus

Fluzone HD, Flud = licenced flu vaccines that can target 4 different types of flu virus

Figure 4. Vaccines given in Substudy C



tIRV3, tIRV4, tIRV5, tIRV6, tIRV7, tIRV8 = vaccine formulations that can target 3 different types of flu virus

qIRV3 = vaccine formulation that can target 4 different types of flu virus

Fluzone HD, Fluad = licenced flu vaccine that can target 4 different types of flu virus

Where did this study take place?

The Sponsor ran this study at 30 locations in the United States.

When did this study take place?

It began 23 May 2024 and ended 05 February 2025.

Who participated in this study?

The substudies included healthy adult participants. Table 1 below shows the participants who took part in each substudy and what happened to them.

Table 1. Number of participants who took part in the study			
	Substudy A	Substudy B	Substudy C
Number of men	194	207	126
Number of women	285	243	145
Age range	18 to 64 years	65 to 91 years	65 to 88 years
Started the study	481 participants	450 participants	271 participants
Got the study vaccine	479 out of 481 participants (99.6%)	450 out of 450 participants (100%)	271 out of 271 participants (100%)
Finished the study	455 out of 481 participants (94.6%)	446 out of 450 participants (99.1%)	264 out of 271 participants (97.4%)
Did not finish the study after they got the vaccine	24 out of 481 participants (5.0%)	4 out of 450 participants (0.9%)	7 out of 271 participants (2.6%)

For participants who did not finish each substudy, their reasons for not finishing were:

- Substudy A: they could not be contacted for a check-up, they did not want to continue with the study, or they no longer met the conditions for taking part in the study.
- Substudy B: they had a medical problem, they could not be contacted for a check-up, or another unspecified reason.
- Substudy C: they did not want to continue with the study, or they could not be contacted for a check-up.

How long did the study last?

Study participants were in the study for about 6 months. The entire study took about 8 months to complete.

When the study ended in February 2025, the Sponsor began reviewing the information collected. The Sponsor then created a report of the results. This is a summary of that report.

What were the results of the study?

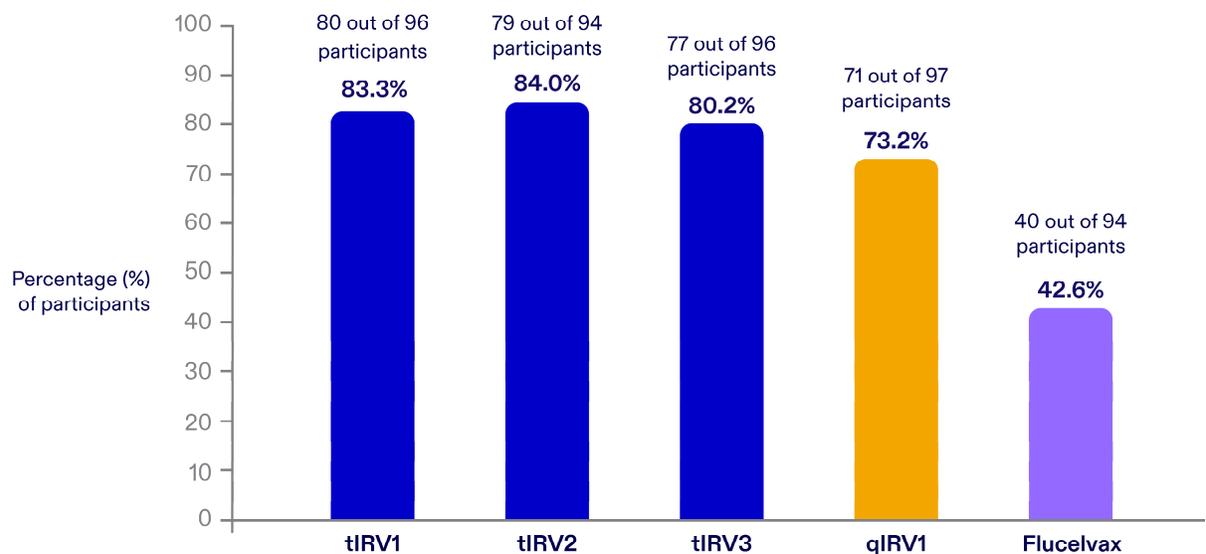
Did participants have any local reactions (any injection site redness, swelling, or pain) within 7 days after vaccination?

To answer this question, researchers checked how many participants recorded any local reactions (such as injection site redness, swelling, or pain) on their e-diary or in a smartphone app. Then, researchers calculated the percentage of participants with local reactions.

Substudy A:

Figure 5 below shows that a higher percentage of participants reported local reactions in the 3 tIRV groups (80.2% to 84.0%) and the qIRV group (73.2%) than in the Flucelvax group (42.6%), within 7 days after vaccination in Substudy A.

Figure 5. Percentage of participants with any local reactions within 7 days after vaccination in Substudy A

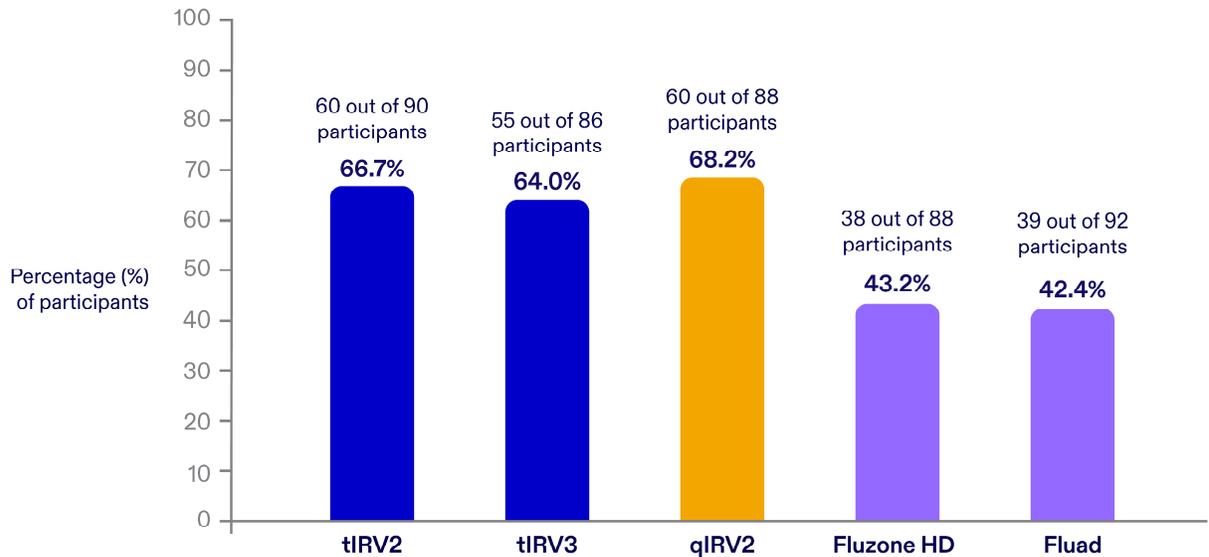


The most reported local reaction within 7 days after vaccination was pain at the injection site.

Substudy B

Figure 6 below shows that a higher percentage of participants reported local reactions in the tIRV groups (66.7% and 64.0%) and the qIRV group (68.2%) than in the Fluzone HD (43.2%) and Fludac (42.4%) groups within 7 days after vaccination in Substudy B.

Figure 6. Percentage of participants with any local reactions within 7 days after vaccination in Substudy B

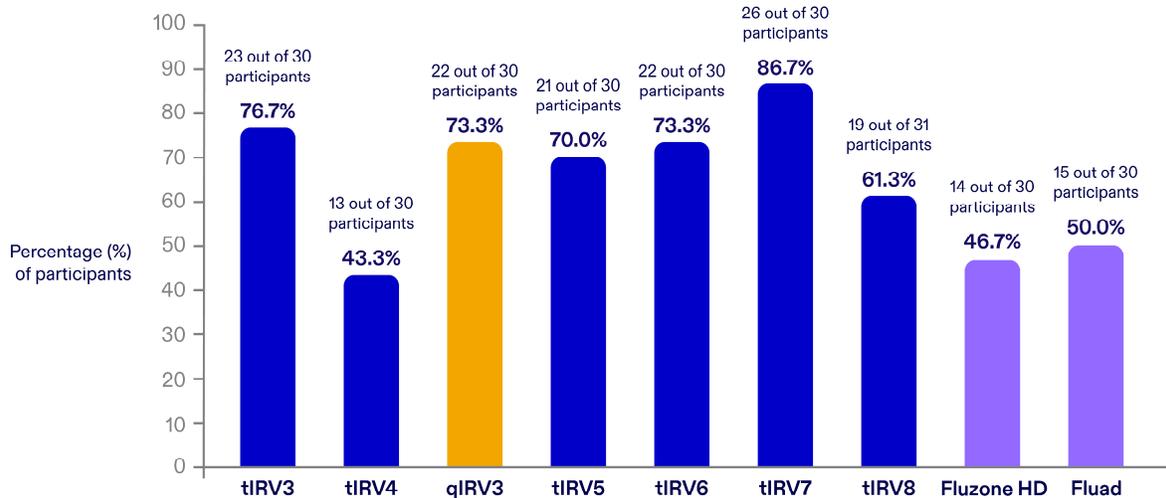


The most reported local reaction within 7 days after vaccination was pain at the injection site.

Substudy C

Figure 7 below shows that a higher percentage of participants reported local reactions in most of the tIRV and qIRV groups (61.3% to 86.7%) compared to the Fluzone HD (46.7%) and Flud (50.0%) groups, within 7 days after vaccination in Substudy C. There was an exception in the tIRV4 group, where participants reported the lowest percentage of local reactions (43.3%) of all the groups within 7 days after vaccination.

Figure 7. Percentage of participants with any local reactions within 7 days after vaccination in Substudy C



The most reported local reaction within 7 days after vaccination was pain at the injection site.

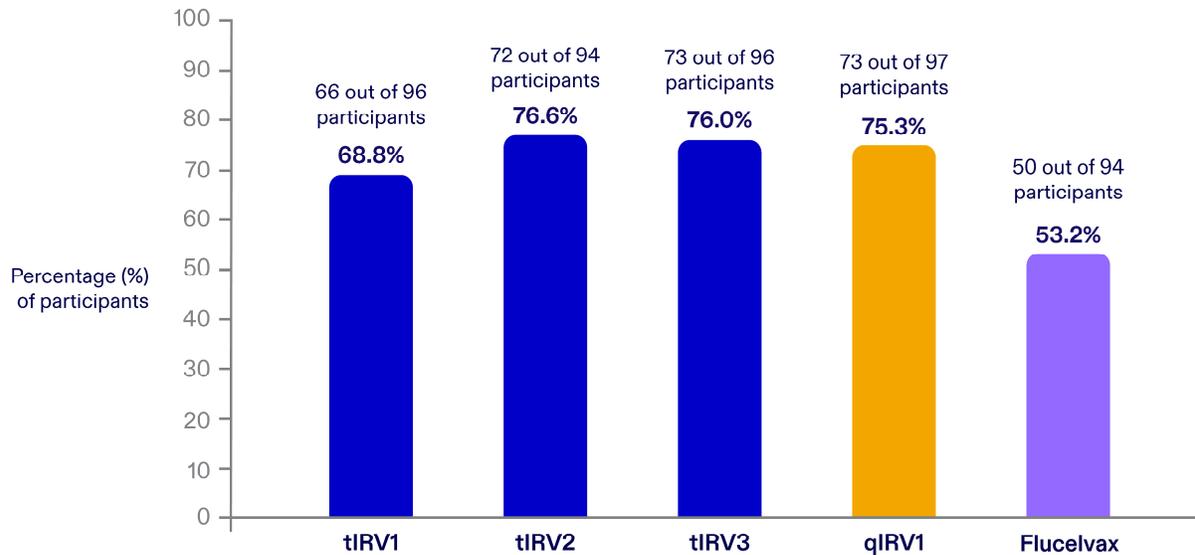
Did participants have any systemic events (any fever, tiredness, headache, vomiting, diarrhea, chills, new or worsened muscle pain, or new or worsened joint pain) within 7 days after vaccination?

Researchers checked how many participants recorded any systemic events on their e-diary or in a smartphone app. Then, researchers calculated the percentage of participants with systemic events.

Substudy A

Figure 8 below shows that a higher percentage of participants reported systemic events in the tIRV and qIRV groups (68.8% to 76.6%) than in the Flucelvax group (53.2%), within 7 days after vaccination in Substudy A.

Figure 8. Percentage of participants with any systemic events within 7 days after vaccination in Substudy A

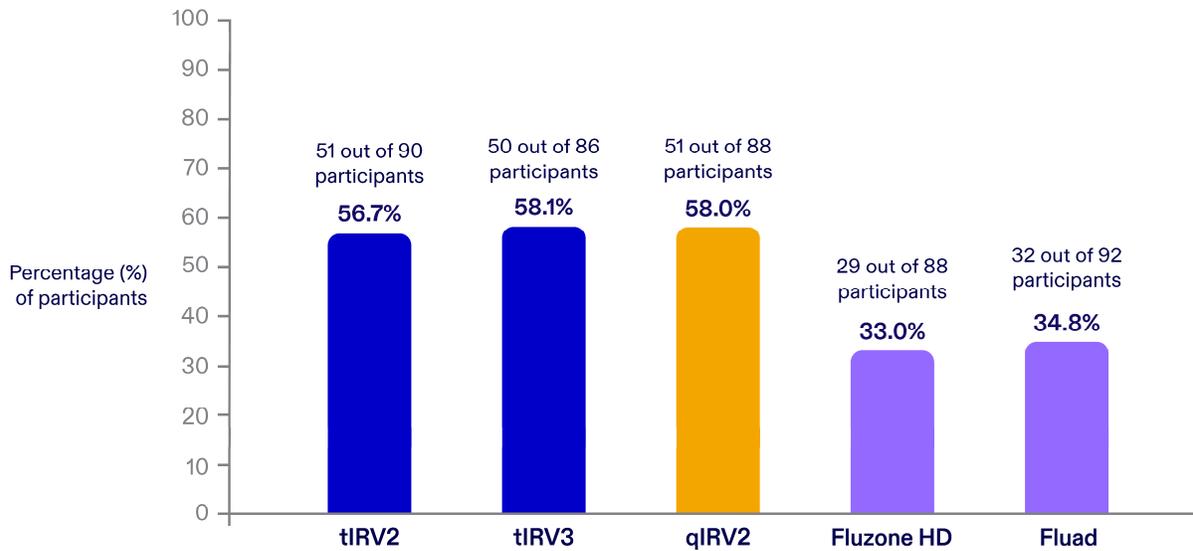


The most common systemic events within 7 days after vaccination were fatigue and headache.

Substudy B

Figure 9 below shows that a higher percentage of participants reported systemic events in the tIRV2 and tIRV3 groups (56.7% and 58.1%) and the qIRV2 group (58.0%) than in the Fluzone HD (33.0%) and Fludac (34.8%) groups, within 7 days after vaccination in Substudy B.

Figure 9. Percentage of participants with any systemic events within 7 days after vaccination in Substudy B

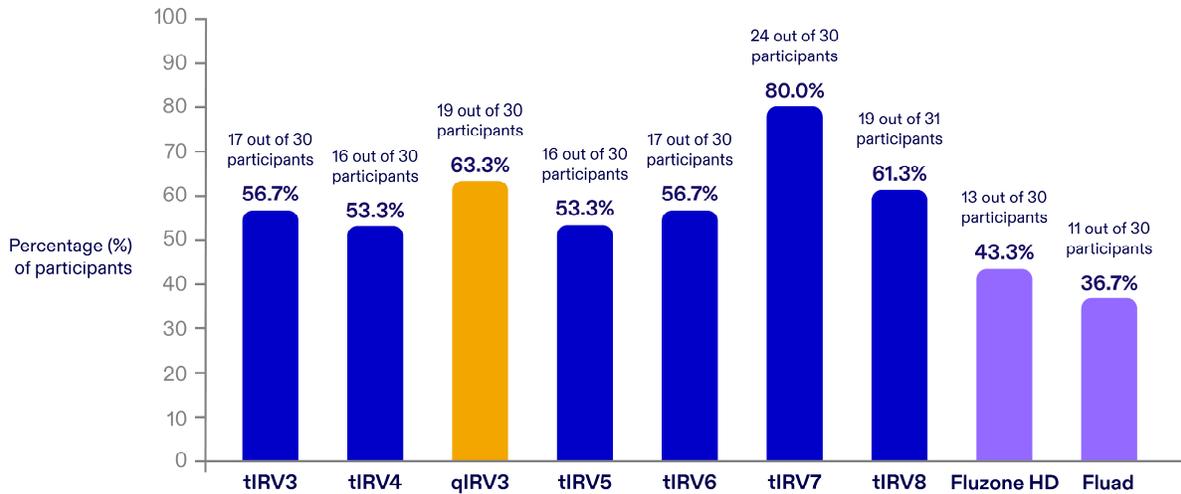


The most common systemic events within 7 days after vaccination were fatigue and headache.

Substudy C

Figure 10 below shows that a higher percentage of participants reported systemic events in the tIRV and qIRV groups (53.3% to 80.0%) than in the Fluzone HD (43.3%) and Fluad (36.7%) groups, within 7 days after vaccination in Substudy C.

Figure 10. Percentage of participants with any systemic events within 7 days after vaccination in Substudy C



The most reported systemic events within 7 days after vaccination were fatigue and headache.

This does not mean that everyone in this study had these results. This is a summary of just some of the main results of this study. Other studies may have different results.

What medical problems did participants have during the study?

The researchers recorded any medical problems the participants had during the study. Participants could have had medical problems for reasons not related to the study (for example, caused by an underlying disease or by chance). Or, medical problems could also have been caused by a study vaccine or by another vaccine or medicine the participant was taking. Sometimes the cause of a medical problem is unknown. By comparing medical problems across many treatment groups in many studies, doctors try to understand what effects a study vaccine might have on a participant.

Did participants have any medical problems within 4 weeks after vaccination?

- Figure 11 shows that 3.1% to 8.3% of participants across the 5 groups in Substudy A had medical problems within 4 weeks after vaccination.
- Figure 12 shows that 4.3% to 8.9% of participants across the 5 groups in Substudy B had medical problems within 4 weeks after vaccination.
- Figure 13 shows that 0.0% to 10.0% of participants across the 9 groups in Substudy C had medical problems within 4 weeks after vaccination.

Figure 11. Percentage of participants who had medical problems within 4 weeks after vaccination in Substudy A

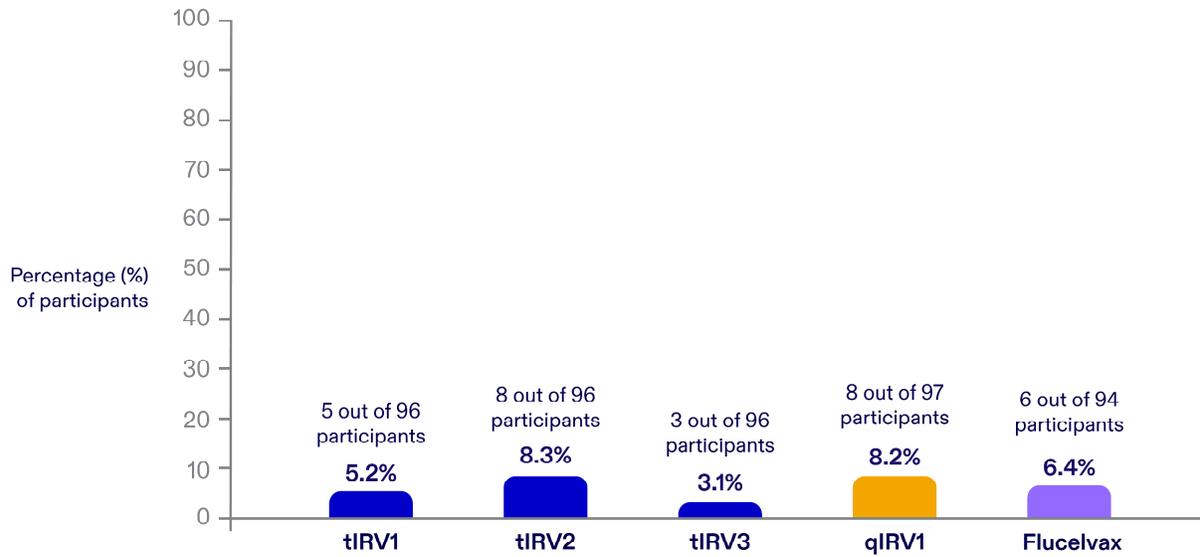


Figure 12. Percentage of participants who had medical problems within 4 weeks after vaccination in Substudy B

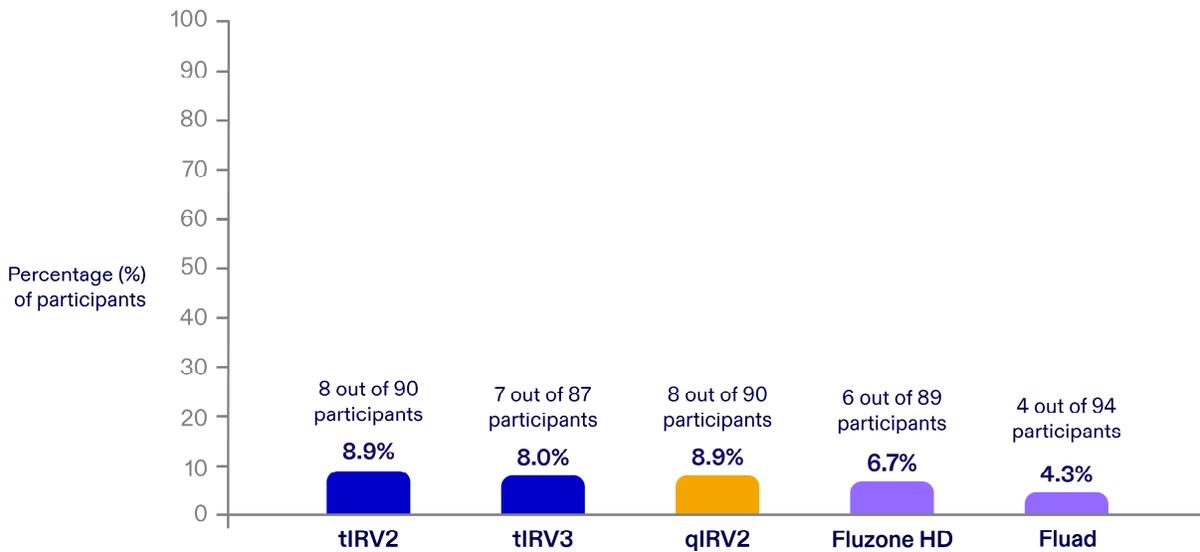
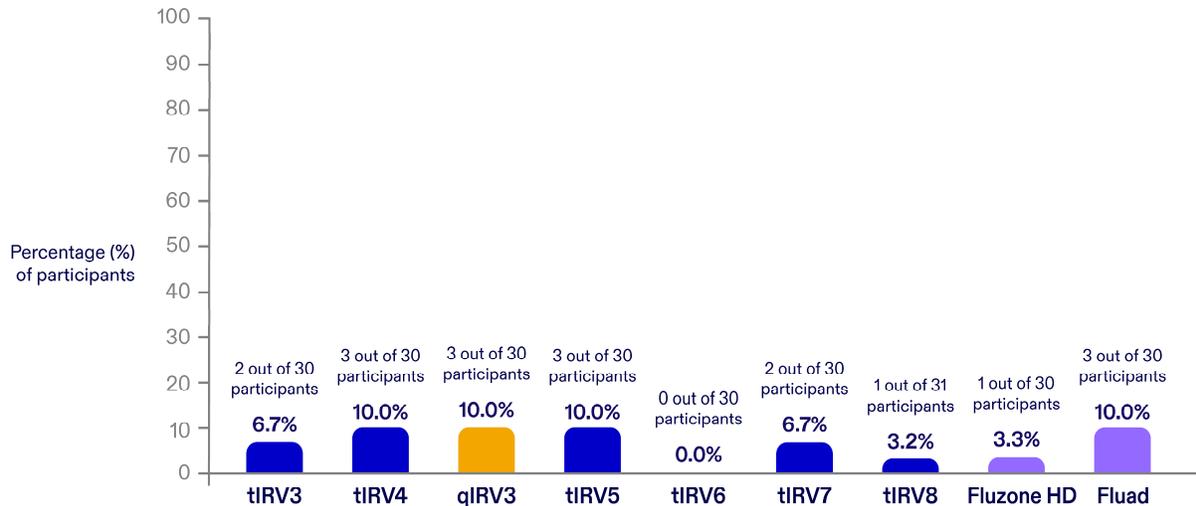


Figure 13. Percentage of participants who had medical problems within 4 weeks after vaccination in Substudy C



In Substudy A, each type of medical problem was reported by 1 or 2 participants, so no type of medical problem was reported more than another.

The most reported medical problems in Substudy B were COVID-19 infection (reported by 5 participants across the vaccine groups) and fall (reported by 3 participants across the vaccine groups). All other medical problems were reported by 1 or 2 participants.

The most reported medical problem in Substudy C was COVID-19 infection, reported by 3 participants across the vaccine groups. All other medical problems were reported by 1 or 2 participants.

Did participants have any medical problems that they needed to see a doctor for, within 6 months after vaccination?

- In Substudy A, 31 out of 479 participants (6.5%) had a medical problem that they saw a doctor for. The most reported type of these problems was a “urinary tract infection” or “UTI”, which is an infection of the structures

that carry urine, such as the bladder. This was reported by 4 participants in total across the vaccine groups.

- In Substudy B, 44 out of 450 participants (9.8%) had a medical problem that they saw a doctor for. The most reported types of these problems were COVID-19 infection and fall, each reported by 4 participants in total across the vaccine groups.
- In Substudy C, 18 out of 271 participants (6.6%) had a medical problem that they saw a doctor for. The most reported category of these problems was infections, reported by 8 participants across the vaccine groups. This category included various different types of infections.

Did participants have any newly diagnosed chronic medical conditions within 6 months after vaccination?

Substudy A

Five (5) out of 479 participants (1.0%) in Substudy A had a newly diagnosed chronic medical condition within 6 months after vaccination. The new conditions were all different.

- Four (4) of these participants were in the qIRV1 group.
- One (1) of these participants was in the Flucelvax group.

Substudy B

Eight (8) out of 450 participants (1.8%) in Substudy B had a newly diagnosed chronic medical condition within 6 months after vaccination. The new conditions were all different.

- Three (3) participants were in the Fluzone HD group.
- Two (2) participants were in the qIRV2 group.
- Two (2) participants were in the Flud group.

- One (1) participant was in the tIRV3 group.

Substudy C

Two (2) out of 271 participants (0.7%) in Substudy C had a newly diagnosed chronic medical condition within 6 months after vaccination. The new conditions were different for each participant.

- One (1) participant was in the tIRV4 group.
- One (1) participant was in the Fluzone HD group.

Did study participants have any serious medical problems?

A medical problem is considered “serious” when it is life-threatening, needs hospital care, or causes lasting problems.

Did participants have any serious medical problems within 6 months after vaccination?

Substudy A

The list below shows the 2 out of 479 participants (0.4%) who had serious medical problems within 6 months after vaccination:

- One (1) participant who got tIRV1 had septic (infected) arthritis in their knee. Separately, they also broke their leg.
- One (1) participant who got tIRV1 had a blood clot in a deep vein.

The researchers believed that none of these serious medical problems were related to the study vaccines. No participants stopped taking part in the study because of medical problems. There were no deaths.

Substudy B

The list below shows the 13 out of 450 (2.9%) participants who had serious medical problems within 6 months after vaccination:

- **tIRV3 group:**
 - One (1) participant had a type of skin cancer called malignant melanoma.
 - One (1) participant had a worsening “hiatus hernia”, where part of the stomach bulges into the chest and can cause heartburn. They also had a bleeding stomach ulcer.
 - One (1) participant broke their pelvis and their shoulder blade. This participant stopped taking part in the study because of a broken pelvis.
 - One (1) participant broke their leg.
- **qIRV2 group:**
 - One (1) participant had an abnormal heart rhythm.
 - One (1) participant had a mini stroke.
 - One (1) participant had pneumonia (an infection of the lungs), failure to thrive (weight loss, weakness, decline in health and independence due to illness, poor nutrition, and lack of support), and low potassium. They stopped taking part in the study because of failure to thrive.
 - One (1) participant had a problem with the electrical functioning of their heart.
- **Fluzone HD group:**
 - One (1) participant had a diabetic foot ulcer.

- One (1) participant had cancer in the tube that joins the kidneys to the bladder.
- One (1) participant had a type of blood cancer where the body makes too many red blood cells.
- **Fluad group:**
 - One (1) participant had chest pain that was not heart-related.
 - One (1) participant had a type of blood cancer affecting the type of white blood cells called lymphocytes.

The researchers believed that none of these serious medical problems were related to the study vaccines. There were no deaths.

Substudy C

The list below shows the 4 out of 271 participants (1.5%) who had serious medical problems within 6 months after vaccination.

- One (1) participant who got tIRV5 broke their pelvis.
- One (1) participant who got tIRV5 had a low level of sugar in their blood.
- One (1) participant who got tIRV7 had a blood clot in a deep vein.
- One (1) participant who got tIRV8 broke their hip.

The researchers believed that none of these serious medical problems were related to the study vaccines. No participants stopped taking part in the study because of medical problems. There were no deaths.

Where can I learn more about this study?

If you have questions about the results of your study, please speak with the doctor or staff at your study site.

For more details on your study protocol, please visit:

[www.pfizer.com/research/
research_clinical_trials/trial_results](http://www.pfizer.com/research/research_clinical_trials/trial_results)

Use the protocol number
C4781013

The full scientific report of this study is available online at:

www.clinicaltrials.gov

Use the study identifier
NCT06436703

Please remember that researchers look at the results of many studies to find out which vaccines can work and are safe for patients.

Again, if you participated in this study,
thank you for volunteering.

We do research to try to find the
best ways to help patients, and you helped
us to do that!

