Clinical Study Results

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 Studied:	Abrysvo® (respiratory syncytial virus [RSV] stabilized prefusion F subunit vaccine), also called RSVpreF
Protocol Number:	C3671008
Dates of Study:	17 June 2020 to 27 October 2023
Title of this Study:	A Study of Respiratory Syncytial Virus (RSV) Vaccine in Pregnant Participants and Their Infants [A Phase 3, Randomized, Double-Blinded, Placebo-Controlled Trial to Evaluate the Efficacy and Safety of a Respiratory Syncytial Virus (RSV) Prefusion F Subunit Vaccine in Infants Born to Women Vaccinated During Pregnancy]
Date of this Report:	26 April 2024

– Thank You –

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

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

Why was this study done?

What is respiratory syncytial virus (RSV)?

Respiratory syncytial [sin-SISH-ul] virus (RSV) is a common and contagious virus that affects the lungs. Symptoms of RSV disease are similar to a bad cold, such as cough, runny nose, and fever. There is no treatment yet for RSV disease.

RSV disease can happen in people of all ages and can be severe in infants, young children, older adults, and people with long-term medical conditions. People with severe RSV disease may have trouble breathing and may need to be hospitalized.

What is respiratory syncytial virus stabilized prefusion F subunit vaccine (RSVpreF)?

RSVpreF is an injectable RSV vaccine tested in this study. A pregnant person vaccinated with RSVpreF can pass RSV-fighting antibodies to their fetus. This may help to prevent RSV disease in the infant after birth.

> When pregnant people get vaccinated, their immune system will make antibodies, which are special disease-fighting proteins. A pregnant person naturally passes these antibodies to their fetus. These antibodies can help to protect the infant from disease after birth.

Since August 2023, based on results of this study, RSVpreF has been approved by health agencies in different countries for use in pregnant people to protect infants from RSV. RSVpreF is also approved for use in older adults to protect them from RSV based on results of another study.

What was the purpose of this study?

The main purpose of this study was to learn about the following:

- If RSVpreF given to pregnant participants can prevent RSV disease in their infants.
- If RSVpreF was safe in pregnant participants and their infants.

This study also wanted to find out if pregnant participants had local or systemic reactions after vaccination.

> Local or systemic reactions are responses that a person can have to a vaccine.
>
> - **Local reactions** in this study are injection site reactions such as redness, swelling, or pain where the injection was given.
> - **Systemic reactions** in this study are tiredness, headache, nausea, muscle pain, joint pain, vomiting, or diarrhea.

Researchers wanted to know:

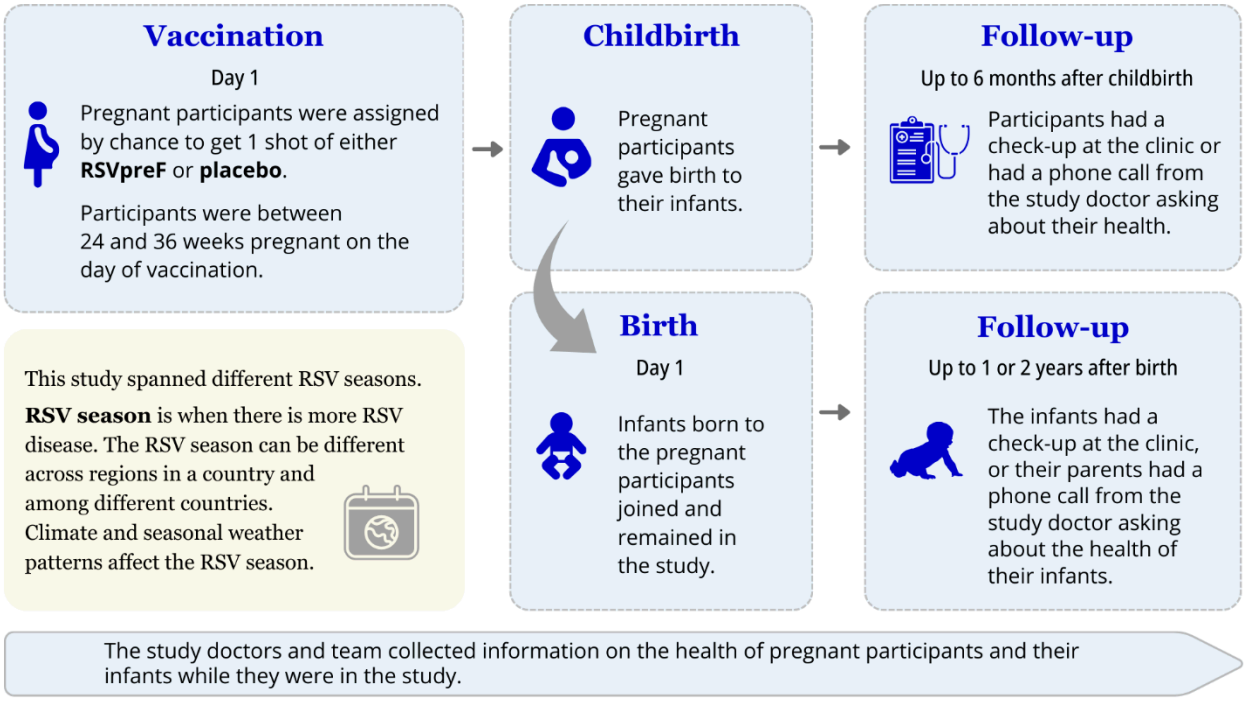
- **Did giving RSVpreF to pregnant participants help to protect their infants against RSV disease?**
- **How many pregnant participants had local or systemic reactions within 7 days after vaccination?**
- **How well were the infant participants doing when they were born?**
- **What medical problems did the pregnant or infant participants have during the study?**

What happened during the study?

How was the study done?

The figure below shows how the study was done.

Figure 1. How was the study done?



Pregnant participants were assigned to a vaccine group by chance. They had an equal chance of getting RSVpreF or placebo. A placebo does not have any active ingredients in it, but it looks just like RSVpreF.

- **RSVpreF group:** Pregnant participants got 1 shot of RSVpreF.
- **Placebo group:** Pregnant participants got 1 shot of placebo.

The pregnant participants and researchers did not know which injection (RSVpreF or placebo) the participants got. This is known as a "double-blind" study.

Infants born to participants given RSVpreF or placebo also joined the study.

Researchers compared the results of pregnant participants given RSVpreF (and their infants) to the results of pregnant participants given placebo (and their infants).

Where did this study take place?

The Sponsor ran this study at 216 locations in 18 countries.

- Argentina
- Australia
- Brazil
- Canada
- Chile
- Denmark
- Finland
- Gambia
- Japan
- Republic of Korea
- Mexico
- Netherlands
- New Zealand
- Philippines
- South Africa
- Spain
- Taiwan
- United States

When did this study take place?

It began on 17 June 2020 and ended on 27 October 2023.

Who participated in this study?

The study included pregnant people and their infants once they were born.

- A total of 7420 pregnant participants participated in the study. Of these participants, 7386 received RSVpreF or placebo. At the time they received RSVpreF or placebo, the pregnant participants were from 14 to 47 years of age.
- A total of 7307 infants participated in the study.

A total of 7025 (95%) pregnant participants and 6612 (91%) infant participants finished the study. Among those who did not finish the study, the most common reason was that pregnant participants could not be reached for a check-up on their (or their infant's) health.

How long did the study last?

Pregnant participants were in the study for up to 10 months, which included the day they received RSVpreF or placebo through 6 months after giving birth. Infant participants were in the study from birth up to 1 to 2 years after birth. The entire study took about 40 months to complete.

The Sponsor reviewed the information in September 2022 to share this information with the public and to create a report of the results for health agencies. When the study ended in October 2023, the Sponsor again reviewed the information collected. The Sponsor then created a final report of the results. This is a summary of that final report.

What were the results of the study?

Did giving RSVpreF to pregnant participants help to protect their infants against RSV disease?

To answer this question, study doctors checked on the infant participants for any signs and symptoms of RSV disease up to 6 months after birth.

- A group of doctors who were not part of this study reviewed the medical records of infants with RSV disease and decided whether their RSV disease was severe or not.
- Then, researchers checked how many infants born to participants given RSVpreF or placebo had **RSV disease** and how many of them had **severe RSV disease**.

Definition of Terms in This Study:

Medically attended visit due to a respiratory tract illness (RTI or illness of the nose, throat, or lungs) means that infants had a check-up by a healthcare provider and had 1 or more signs or symptoms such as runny nose, difficulty breathing, cough, could not feed, a pause in breathing that lasts 20 seconds or longer, or other breathing-related symptoms.

RSV disease is when infants had a medically attended visit due to RTI **and** had:

- Fast breathing, **or**
- Low oxygen levels in the blood (below 95%), **or**
- Chest wall indrawing (chest pulls inward as the infant breathes in instead of outward),

and

- RSV was detected in a nasal swab sample.

Severe RSV disease is when infants had a medically attended visit due to RTI **and** had:

- Fast breathing, **or**
- Low oxygen levels in the blood (below 93%) **or**
- Needed help with breathing such as the use of a nasal cannula (a tiny straw that goes into the nose to help breathe better) or a tube inserted into the windpipe, **or**
- ICU stay for more than 4 hours, **or**
- Failure to respond (unconscious),

and

- RSV was detected in a nasal swab sample.

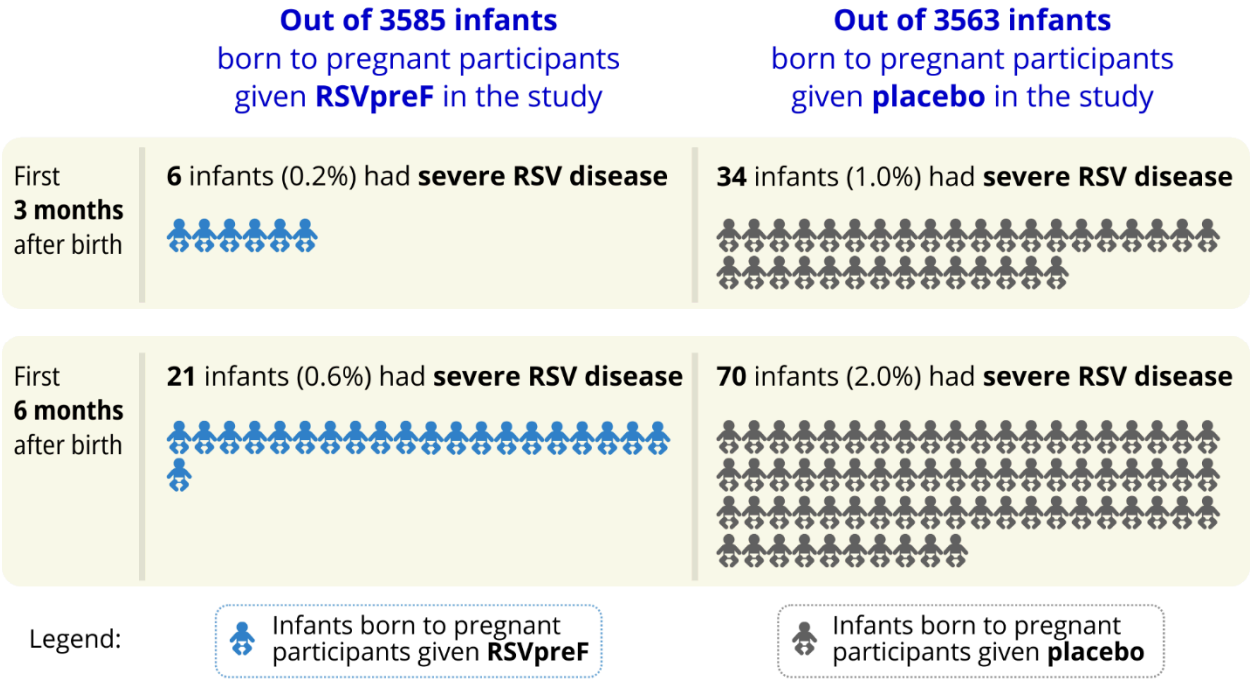
Severe RSV disease:

The meaning of “severe RSV disease” can be found above in the “Definition of Terms in This Study” (gray box).

The study results showed that RSVpreF vaccination in pregnant participants can help to reduce their infants’ risk of **severe RSV disease** in the first 6 months after birth.

In the first 6 months after birth, fewer infants born to participants given **RSVpreF** had **severe RSV disease** compared to infants born to participants given **placebo**. The figure below shows these results.

Figure 2. How many infants in the study had severe RSV disease in the first 3 and the first 6 months after birth?



Based on these results, researchers found that:

- In the first **3 months after birth**, the risk of having severe RSV disease was **lower by 82%** in infants born to participants given **RSVpreF** compared to infants born to participants given **placebo**.
- In the first **6 months after birth**, the risk of having severe RSV disease was **lower by 70%** in infants born to participants given **RSVpreF** compared to infants born to participants given **placebo**.

The results above are from the final analysis done at the end of the study in October 2023, and are similar to the results of the earlier analysis done in September 2022.

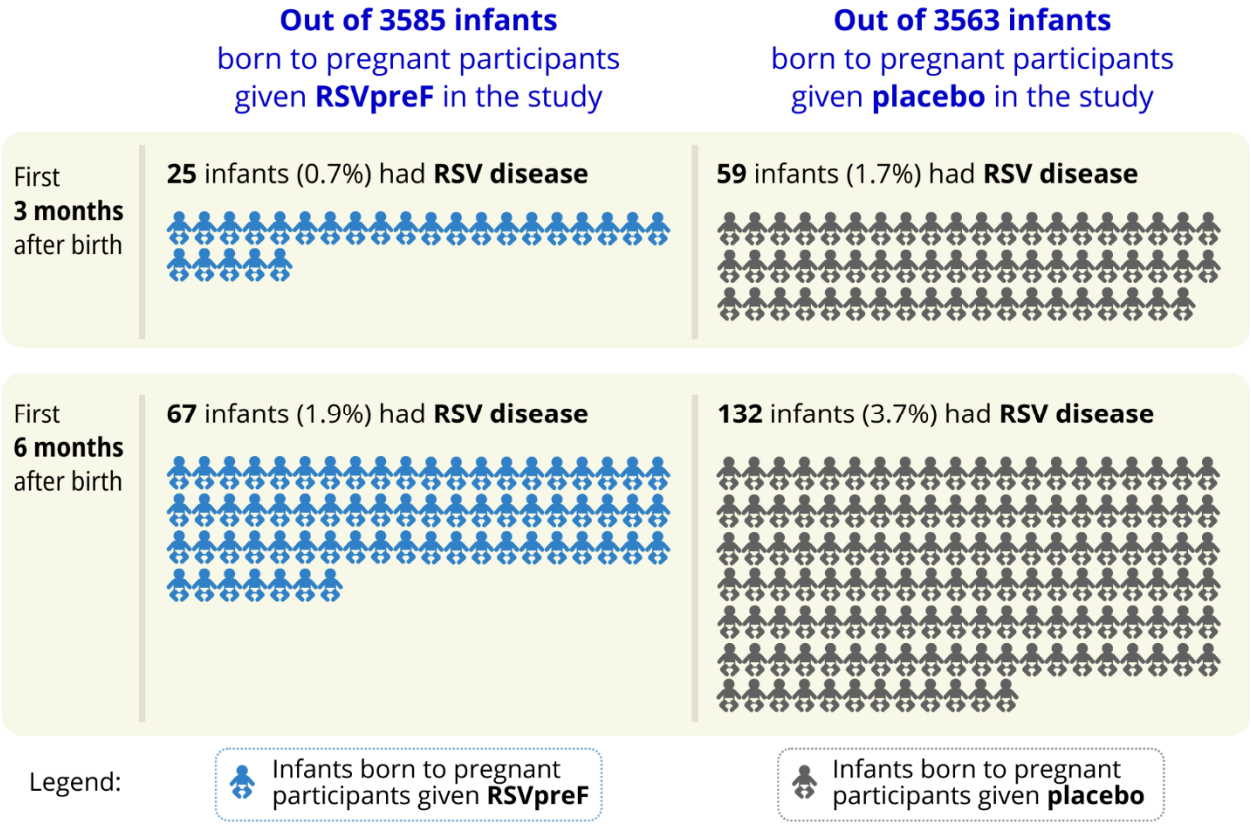
RSV disease:

The meaning of “RSV disease” can be found in the earlier section under “Definition of Terms in This Study” (gray box).

The study results showed that RSVpreF vaccination in pregnant participants can help to reduce their infants’ risk of having **RSV disease** in the first 6 months after birth.

In the first 6 months after birth, fewer infants born to participants given **RSVpreF** had **RSV disease** compared to infants born to participants given **placebo**. The figure below shows these results.

Figure 3. How many infants in the study had RSV disease in the first 3 and the first 6 months after birth?



Based on these results, researchers found that:

- In the first **3 months after birth**, the risk of having RSV disease was **lower by 58%** in infants born to participants given **RSVpreF** compared to infants born to participants given **placebo**.
- In the first **6 months after birth**, the risk of having RSV disease was **lower by 49%** in infants born to participants given **RSVpreF** compared to infants born to participants given **placebo**.

The results above are from the final analysis done at the end of the study in October 2023, and are similar to the results of the earlier analysis done in September 2022.

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.

How many pregnant participants had local or systemic reactions within 7 days after vaccination?

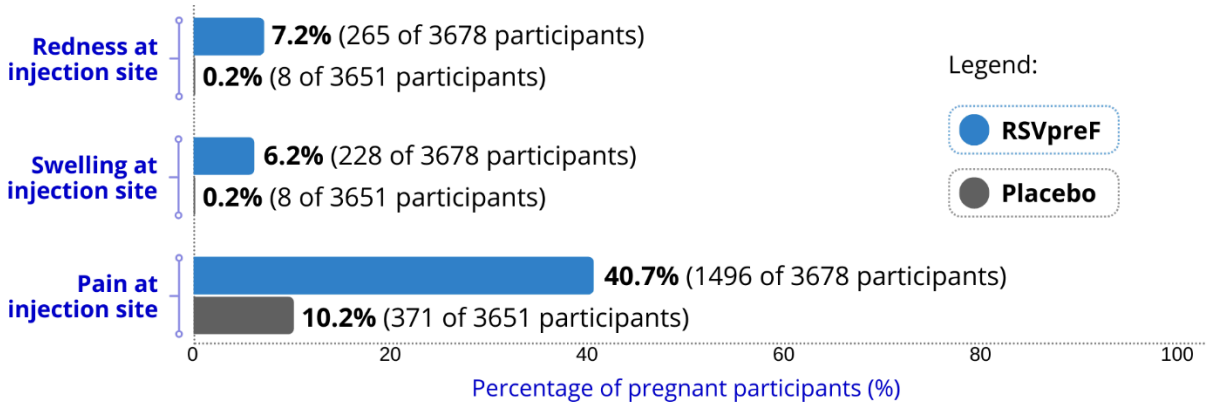
Pregnant participants recorded in their diary any local or systemic reactions they had within 7 days of getting RSVpreF or placebo.

> Local or systemic reactions are responses that a person can have to a vaccine.
>
> - **Local reactions** in this study are injection site reactions such as redness, swelling, or pain where the injection was given.
> - **Systemic reactions** in this study are tiredness, headache, nausea, muscle pain, joint pain, vomiting, or diarrhea.

Local reactions (also called injection site reactions):

A higher number of pregnant participants in the RSVpreF group had injection site reactions than those in the placebo group. Pain at the injection site was the most common reaction for both groups. The figure below shows these results.

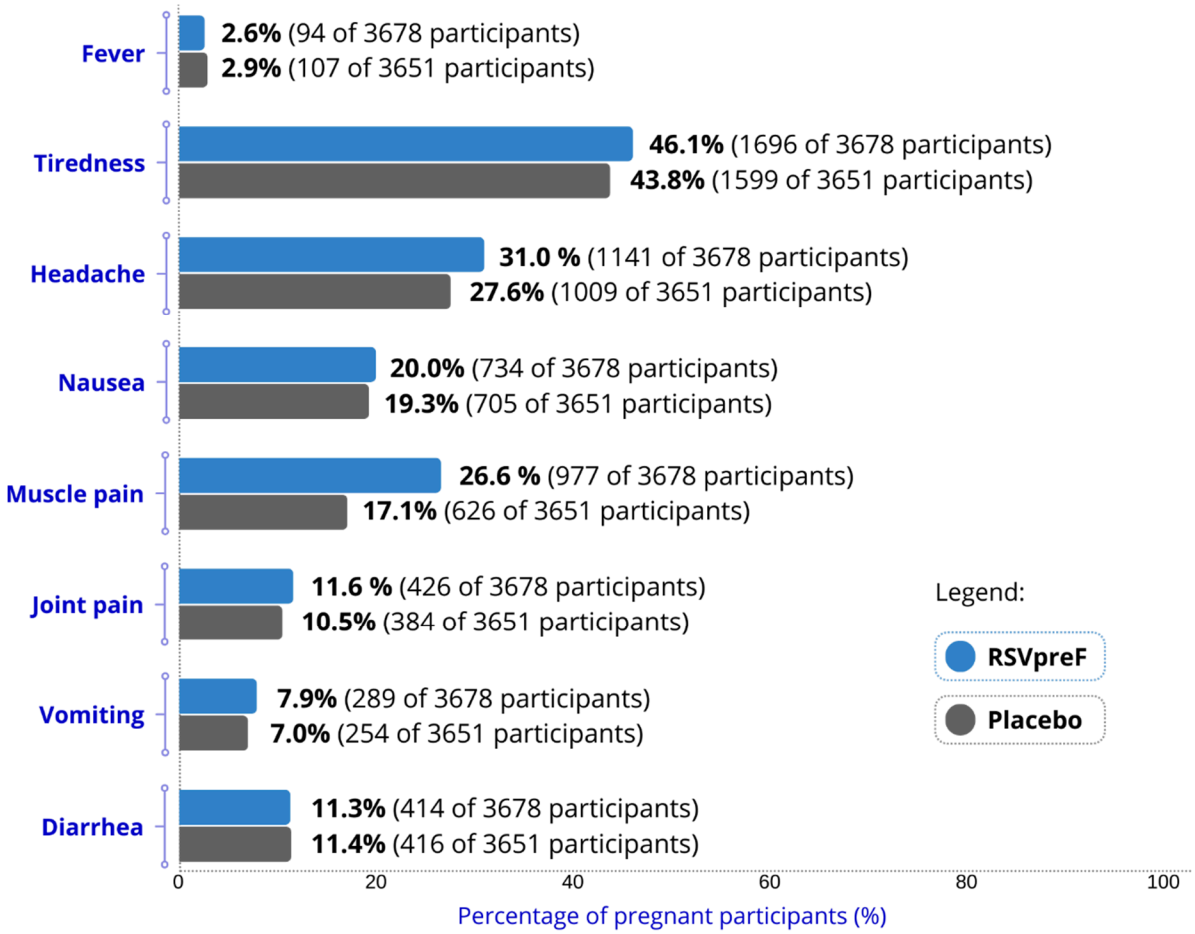
Figure 4. How many pregnant participants had injection site reactions within 7 days after vaccination?



Systemic reactions:

In general, similar numbers of pregnant participants in the RSVpreF group and those in the placebo group had systemic reactions. A higher number of pregnant participants in the RSVpreF group reported muscle pain than those in the placebo group. Tiredness was the most common reaction for both groups. The figure below shows these results.

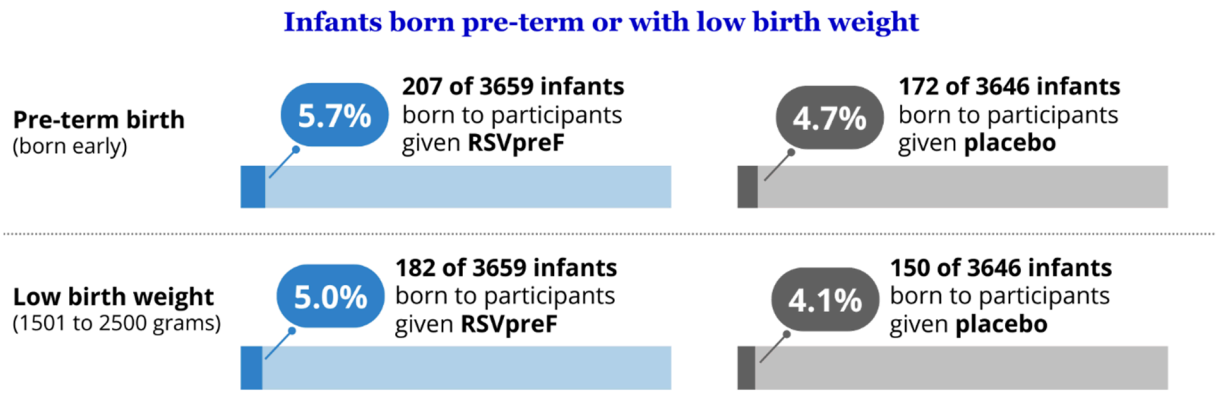
Figure 5. How many pregnant participants had systemic reactions within 7 days after vaccination?



How well were the infant participants doing when they were born?

Birth outcomes (or health and well-being at birth) of infant participants were similar for the RSVpreF and placebo groups. Most of the infants were born full-term and had normal birth weight.

The figure below shows the number of infants born early (pre-term) or with low birth weight in the RSVpreF and placebo groups.



The difference in these results between the RSVpreF and placebo groups may be due to chance. It is not known whether the difference was related to the vaccine or not.

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 medicine the participant was taking. Sometimes the cause of a medical problem is unknown. By comparing medical problems across many vaccine groups in many studies, doctors try to understand what effects a study vaccine might have on a participant.

Out of all the participants in the RSVpreF and placebo groups, 1 pregnant participant left the study because of medical problems. This participant got placebo during the study.

No infant born to participants given RSVpreF or placebo left the study because of medical problems.

How many pregnant participants had medical problems within 1 month after vaccination?

A similar number of pregnant participants in the RSVpreF group and those in the placebo group had at least 1 medical problem within 1 month after vaccination. The figure below shows these results.

Within 1 month after vaccination, giving birth to a **pre-term** baby (premature delivery) was the most common medical problem experienced by pregnant participants in either group. A similar number of pregnant participants in the RSVpreF group and those in the placebo group had this medical problem:

- 82 of 3698 pregnant participants (**2.2%**) given RSVpreF
- 73 of 3687 pregnant participants (**2.0%**) given placebo

How many infant participants had medical problems within 1 month after birth?

A similar number of infants born to participants given RSVpreF and infants born to participants given placebo had at least 1 medical problem within 1 month after birth. The figure below shows these results.

Table 1 lists the most common medical problems in infant participants during their first month after birth. These medical problems are the ones reported in more than 3% of infant participants in either group. These medical problems were seen in similar numbers of infants born to participants given RSVpreF and those born to participants given placebo.

Below are instructions on how to read Table 1.

Instructions for Understanding Table 1.

- The **1st** column of Table 1 lists medical problems that were commonly reported in infants during the study. All medical problems reported in more than 3% of infants in either group are listed.
- The **2nd** column tells how many of the 3659 infants born to participants given RSVpreF were reported with each medical problem. Next to this number is the percentage of the 3659 infants born to participants given RSVpreF who were reported with the medical problem.
- The **3rd** column tells how many of the 3646 infants born to participants given placebo were reported with each medical problem. Next to this number is the percentage of the 3646 infants born to participants given placebo who were reported with the medical problem.
- Using these instructions, for example, you can see in Table 1 that 267 out of the 3659 infants (7.3%) born to participants given RSVpreF were reported with yellowing of the skin and whites of the eyes (jaundice in newborn babies). A total of 250 out of the 3646 infants (6.9%) born to participants given placebo were reported with the same medical problem.

These instructions may be used to read Tables 2 and 3.

Table 1. Commonly reported medical problems in infant participants within 1 month after birth		
Medical Problem	**RSVpreF (3659 infants born to participants given RSVpreF)**	**Placebo (3646 infants born to participants given placebo)**
Yellowing of the skin and whites of the eyes (jaundice in newborn babies)	267 infants (7.3%)	250 infants (6.9%)
Low birth weight (1001 to 2500 grams)	186 infants (5.1%)	158 infants (4.3%)
Pre-term baby (born early; less than 37 weeks at birth)	207 infants (5.7%)	172 infants (4.7%)

How many infant participants had new long-term medical conditions within 2 years after birth?

A similar number of infants born to participants given RSVpreF and infants born to participants given placebo had a new long-term medical condition within 2 years after birth. The figure below shows these results.

No specific medical condition was reported in 1% or more of infants in either group within 2 years after birth.

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.

How many pregnant participants had serious medical problems during the study?

Pregnant participants were in the study from vaccination until 6 months after giving birth.

A similar number of pregnant participants in the RSVpreF group and those in the placebo group had at least 1 serious medical problem during the study. The figure below shows these results.

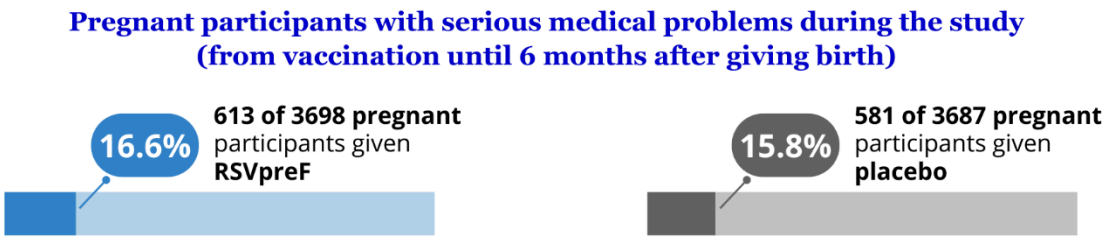


Table 2 lists the most common serious medical problems experienced by pregnant participants during the study. These serious medical problems were reported by 1% or more of pregnant participants in either group. These medical problems were seen in similar numbers of pregnant participants given RSVpreF and those given placebo.

Table 2. Commonly reported serious medical problems in pregnant participants during the study		
Serious Medical Problem	**RSVpreF (3698 pregnant participants)**	**Placebo (3687 pregnant participants)**
Pre-eclampsia (high blood pressure during pregnancy with signs of damage to organs such as the kidneys or liver)	67 pregnant participants (1.8%)	53 pregnant participants (1.4%)
Fetal distress (signs that the fetus is not receiving enough oxygen)	67 pregnant participants (1.8%)	65 pregnant participants (1.8%)
High blood pressure in pregnancy	43 pregnant participants (1.2%)	41 pregnant participants (1.1%)
Abnormal heart rate of the fetus	37 pregnant participants (1.0%)	30 pregnant participants (0.8%)
No progress in labor (the process that the pregnant person's body goes through in giving birth)	37 pregnant participants (1.0%)	43 pregnant participants (1.2%)

The serious medical problems that happened in 4 pregnant participants and were considered related to the study vaccine are listed below:

RSVpreF

- Arm or leg pain in 1 participant
- Pre-term labor (early start of labor process in giving birth) in 1 participant
- Eclampsia (seizures or convulsions with high blood pressure during pregnancy) in 1 participant

Placebo

- Early separation of the placenta from the wall of the uterus (before the baby is born) in 1 participant

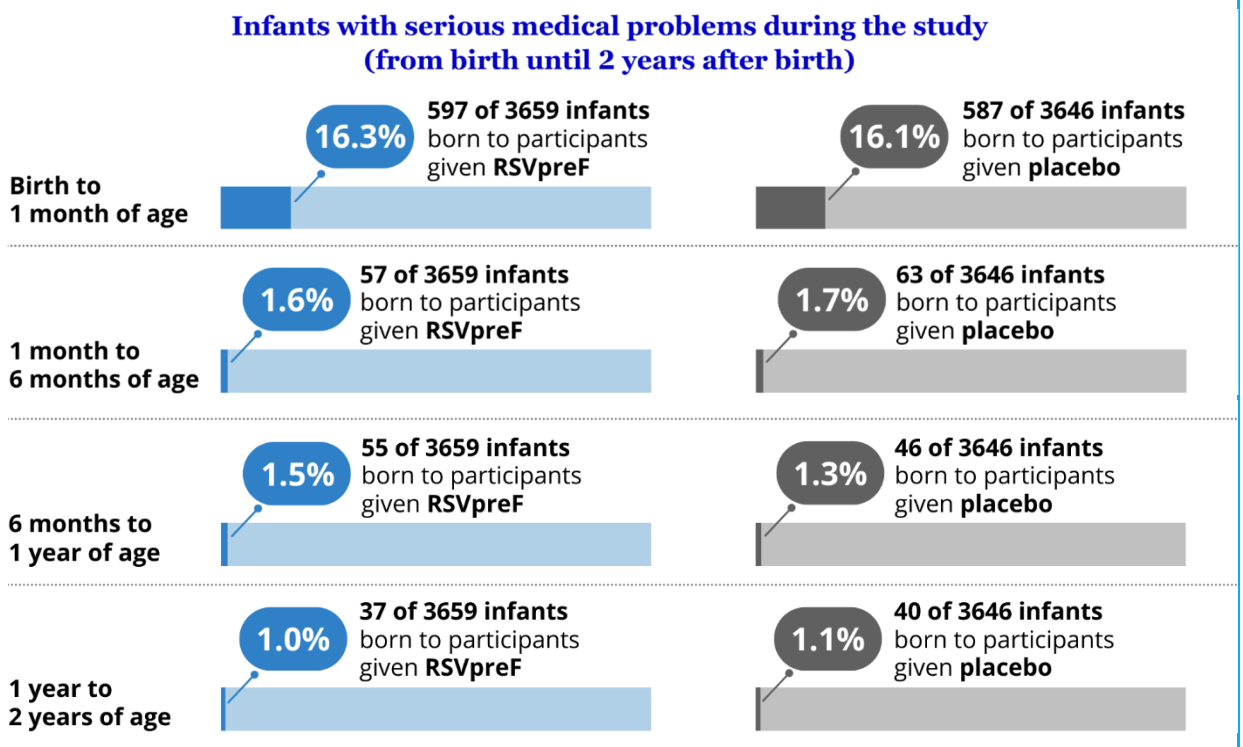
The **placenta** works as a life-support system during pregnancy. Oxygen and nutrients are transferred across the placenta to the fetus.

How many infant participants had serious medical problems during the study?

Half of the infant participants were in the study from birth until 1 year after birth. The other half of the infant participants were in the study from birth until 2 years after birth.

A similar number of infants born to participants given RSVpreF and infants born to participants given placebo had at least 1 serious medical problem within 2 years after birth.

For both groups, most of the serious medical problems happened from birth to 1 month after birth. The figure below shows these results.



None of the serious medical problems in infants were considered related to the study vaccine given to pregnant participants.

Table 3 below lists the most common serious medical problems seen in infant participants within 2 years after birth. These were reported in 1% or more of infant participants in either group. These medical problems were seen in similar numbers of infants born to participants given RSVpreF and infants born to participants given placebo.

Table 3. Commonly reported serious medical problems in infant participants within 2 years after birth

Serious Medical Problem	RSVpreF (3659 infants born to participants given RSVpreF)	Placebo (3646 infants born to participants given placebo)
Yellowing of the skin and whites of the eyes (jaundice in newborn babies)	77 infants (2.1%)	69 infants (1.9%)
High levels of bilirubin in newborn babies (bilirubin is a yellow substance formed naturally by the breakdown of red blood cells)	51 infants (1.4%)	42 infants (1.2%)
Pre-term baby (born early)	49 infants (1.3%)	42 infants (1.2%)
Respiratory distress (signs that the infant is not receiving enough oxygen)	49 infants (1.3%)	46 infants (1.3%)
Birth defect of the heart in which there is a hole in the wall that divides the upper chambers of the heart (atrial septal defect)	37 infants (1.0%)	46 infants (1.3%)

Birth Defects:

> **Birth defects**, also called **congenital disorders**, are health conditions or physical abnormalities that an infant is born with.

In this study, birth defects were reported as serious medical problems regardless of severity.

A similar number of infants born to participants given RSVpreF and infants born to participants given placebo had birth defects. The figure below shows these results.

Deaths:

Deaths during the study included pregnant participants who died, infant participants who died, and stillbirths.

> **Stillbirth** is when a baby is born without any signs of life.

Table 4 below shows that:

- One (1) pregnant participant died during the study. This participant was part of the RSVpreF group and died due to complications from losing a lot of blood after giving birth.
- A total of 22 infant participants died during the study. Similar numbers of infant participants in the RSVpreF group and those in the placebo group died during the study.
- There were 19 stillbirths during the study. Similar numbers of stillbirths were reported in the RSVpreF and placebo groups.

Table 4. How many participants died during the study?

RSVpreF	Placebo
1 of 3698 **pregnant participants** (less than 0.1%) given RSVpreF died	**0** of 3687 **pregnant participants** (0%) given placebo died
8 of 3659 **infants** (0.2%) died among those born to participants given RSVpreF	**14** of 3646 **infants** (0.4%) died among those born to participants given placebo
10 of 3698 pregnant participants (0.3%) given RSVpreF had **stillbirths**	**9** of 3687 pregnant participants (0.2%) given placebo had **stillbirths**

None of the deaths or stillbirths were considered related to the study vaccine given to pregnant participants.

Where can I learn more about this study?

If you have questions about the results of your or your child's 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	Use the protocol number **C3671008**

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

www.clinicaltrials.gov	Use the study identifier **NCT04424316**
www.clinicaltrialsregister.eu	Use the study identifier **2019-002943-85**

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 and your child 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!