



COVID-19 Vaccine: What You Need to Know

February 5, 2021

12:00 - 1:00 pm

Join us for a webinar about the COVID-19 vaccine. Learn about how the vaccine was developed, how it is being rolled out, and some tips for talking with your employees, clients, and others.

Featuring



Dr. Sarah Haessler,
Hospital Epidemiologist
at Baystate Medical
Center



**Senator Eric
Lesser**



**Lindsey Tucker, Associate
Commissioner, MA
Department of Public
Health**



Vaccinations to prevent COVID-19

Sarah Haessler MD, MS, FSHEA

Vice Chair, Department of Medicine, Baystate Medical Center

Hospital Epidemiologist, Division of Infectious Diseases

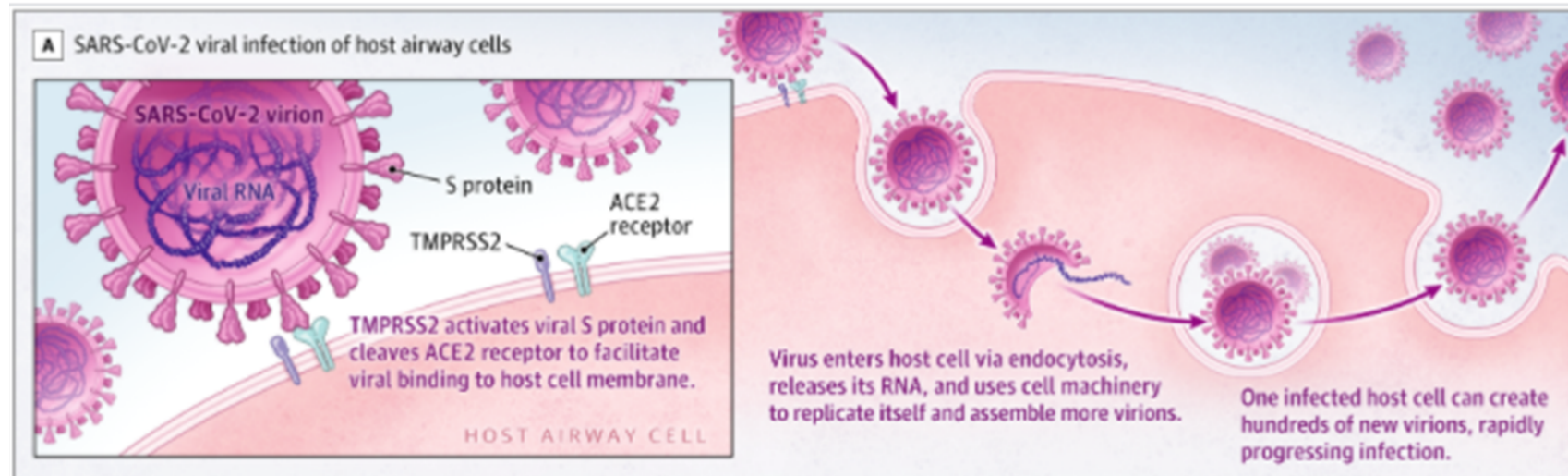
Associate Professor of Medicine, UMass Medical School-Baystate

Overview

- How do vaccinations for COVID-19 work?
- How were they developed so quickly?
- Are they safe?
- What are the side effects?
- Are there medical conditions that would prevent someone from getting vaccinated?
- Can pregnant people get the vaccine?
- Can we stop wearing masks once we are vaccinated?

Prior Work on SARS-CoV and MERS-CoV identified the COVID-19 vaccine target

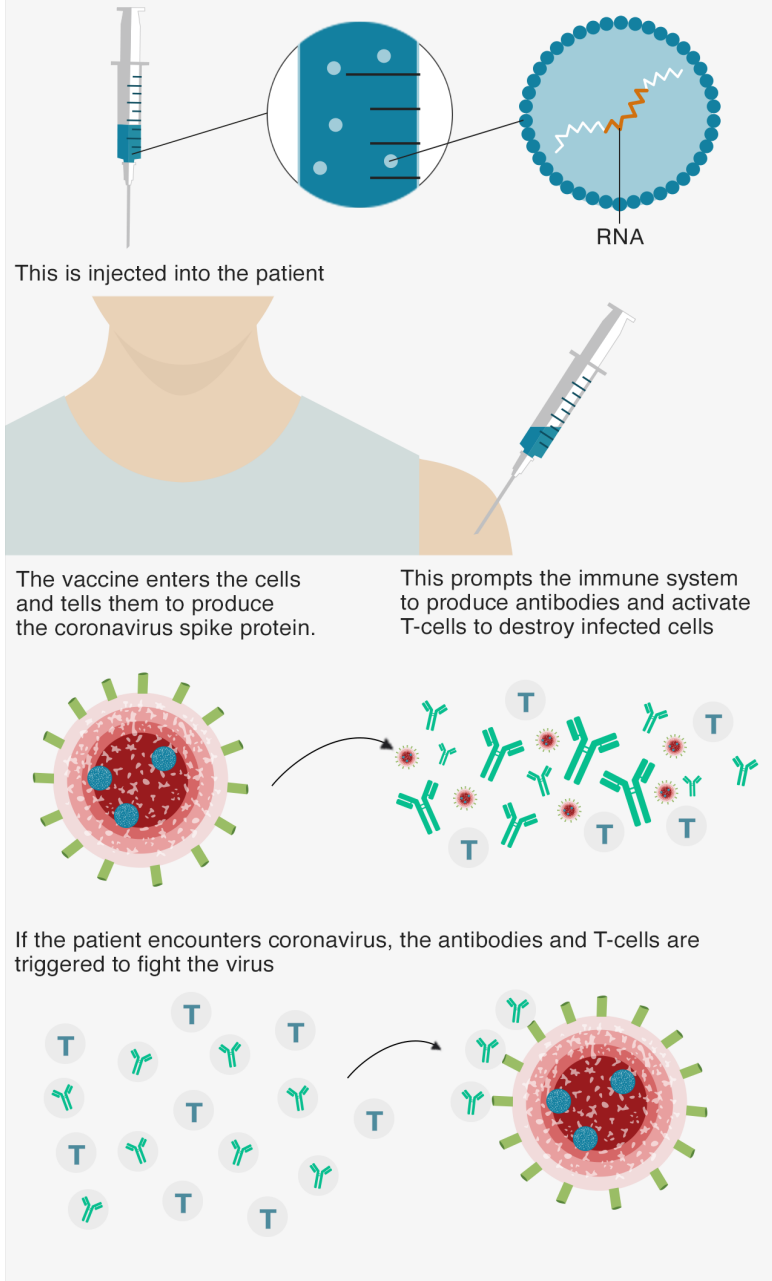
- Spike protein on the surface of the virus helps it bind to and enter cells
- This was the target of previous SARS-CoV vaccine studies
- SARS-CoV-2 is closely related to SARS-CoV, so the spike protein was chosen as the COVID-19 vaccine target



- 1) *Nature*. 586:516-527, 2020
- 2) *JAMA*. 324(8):782-793, 2020.

How an RNA vaccine would work

Scientists take part of the virus genetic code that tells cells what to build and coat it in a lipid so it can enter the body's cells



mRNA vaccines use our cells to express the SARS-CoV-2 spike protein

- Messenger RNA (mRNA) is wrapped in lipid nanoparticles in order to protect it
- The mRNA enters the cells, where it is read, and the cells produce the spike protein
- The spike protein is seen by immune cells, which create immunity
 - B cells produce neutralizing antibodies
 - T cells directly kill cells infected by the virus

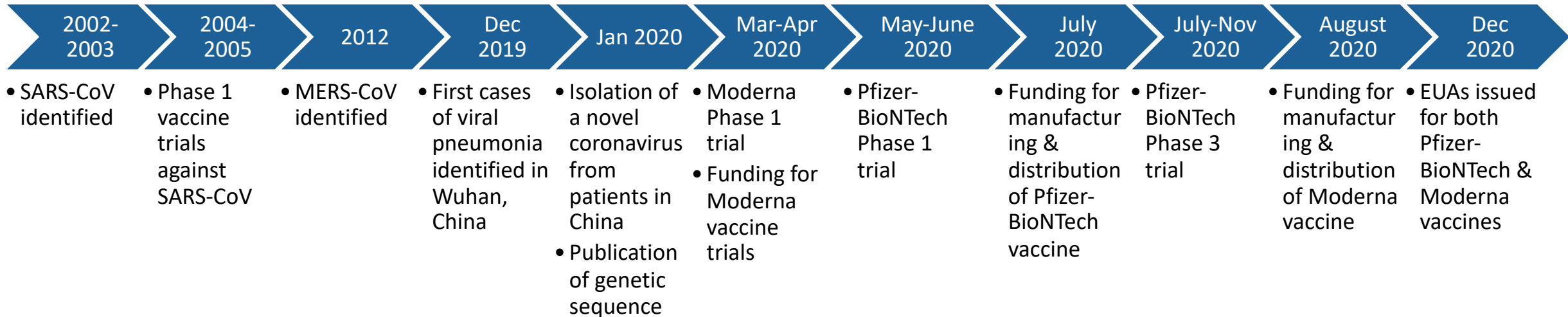
mRNA vaccines have been under investigation for decades

- mRNA is quickly destroyed in the body, so the initial challenge was protecting it long enough to produce proteins
- Katalin Karikó, a Hungarian immigrant at Penn, worked on mRNA since 1990
 - Due to lack of results, she was demoted
 - Finally, in 2005, she published a solution to inserting mRNA into cells
- Karikó now works for BioNTech, the German company that partnered with Pfizer for COVID-19 vaccine development



How did vaccine get approved so quickly?

- Vaccine trial protocols overseen by NIH, allowing trials to start faster
- Operation Warp Speed:
 - The most promising vaccine candidates received government funding to:
 - support the clinical trials
 - start manufacturing vaccine prior to completion of vaccine trials
 - This allowed large scale amount of vaccine to be available as soon as the FDA Emergency Use Authorization (EUA) was granted



How do we know if the COVID-19 vaccines are safe?

- COVID-19 vaccines were tested in large clinical trials to make sure they meet safety standards
- FDA carefully reviews all safety data from clinical trials.
- FDA authorizes emergency vaccine use only when the expected benefits outweigh potential risks.
- ACIP reviews safety data before recommending any COVID-19 vaccine for use.
- FDA and CDC will continue to monitor the safety of COVID-19 vaccines to make sure even very rare side effects are identified.
- The US has robust vaccine safety monitoring systems in place



SAFETY

Phase 3 trial of vaccines

Pfizer-BioNTech

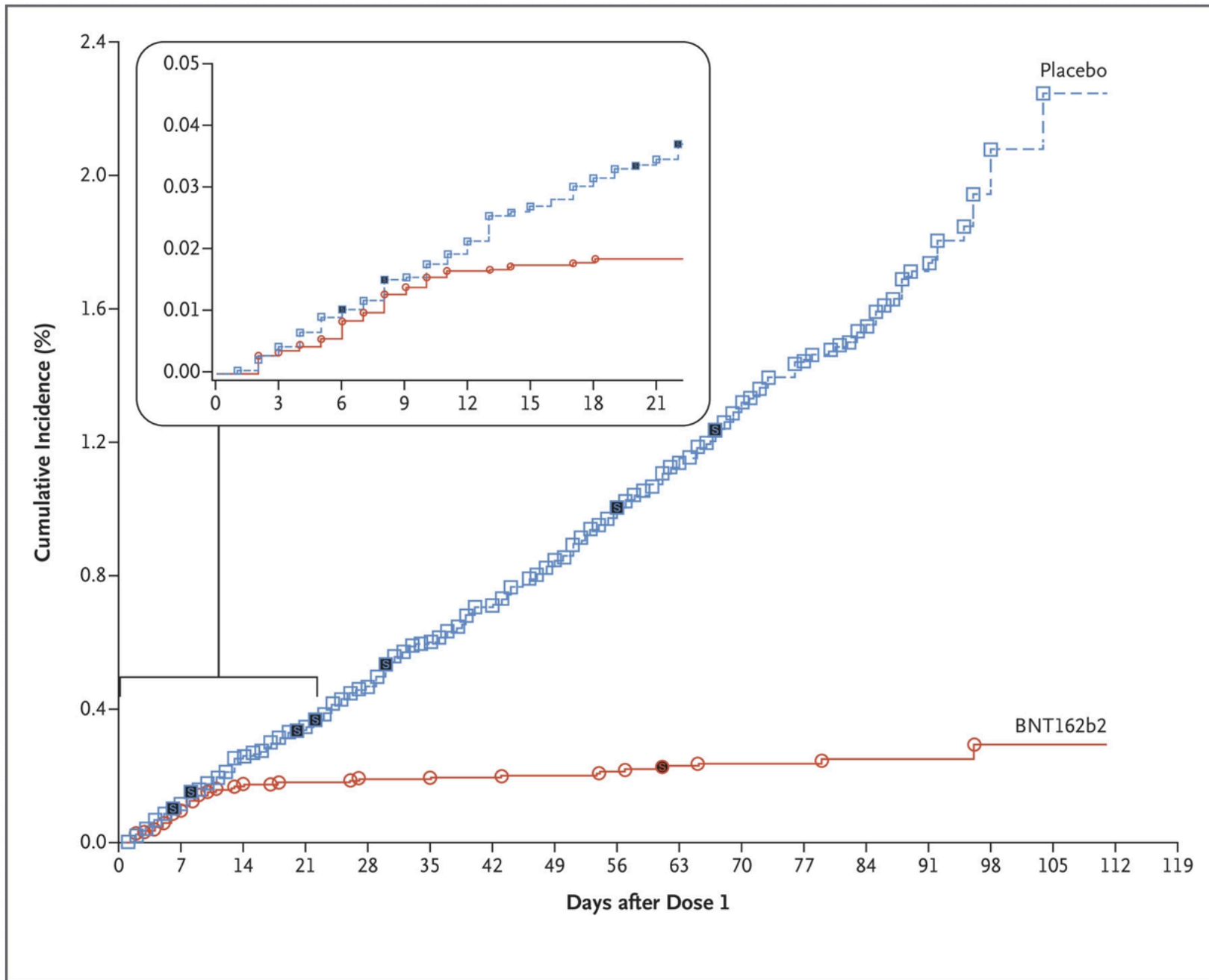
- Included adults 16 years of age or older- healthy or with stable chronic medical conditions; includes stable hepatitis B or C and HIV
- Excluded people with known history of COVID-19, treatment with immunosuppressive therapy, immunocompromising condition, or who were pregnant
- 21,720 people received vaccine & 21,728 people received placebo
- 51% male
- 9% black or African American
- 28% Latinx
- 42% 55 or older
- 35% obese

95.0% efficacy

Moderna

- Included adults 18 years of age or older, including people with high risk for severe COVID-19 disease (e.g. chronic lung disease, significant cardiac disease, severe obesity, diabetes, liver disease, HIV)
- 15,181 people received vaccine & 15,170 received the placebo
- 47% female
- 10% black or African American
- 20% Latinx
- 25% 65 or older
- 22% with high risk condition
- 25% healthcare workers

94.5% efficacy



What can I expect after getting the vaccine?

Common Side Effects

- Soreness and/or swelling at site of injection in the arm
- Fever
- Chills
- Tiredness
- Headache



You may have some side effects, which are normal signs that your body is building protection. Side effects should go away in a few days.

Why is vaccine best option at this time?

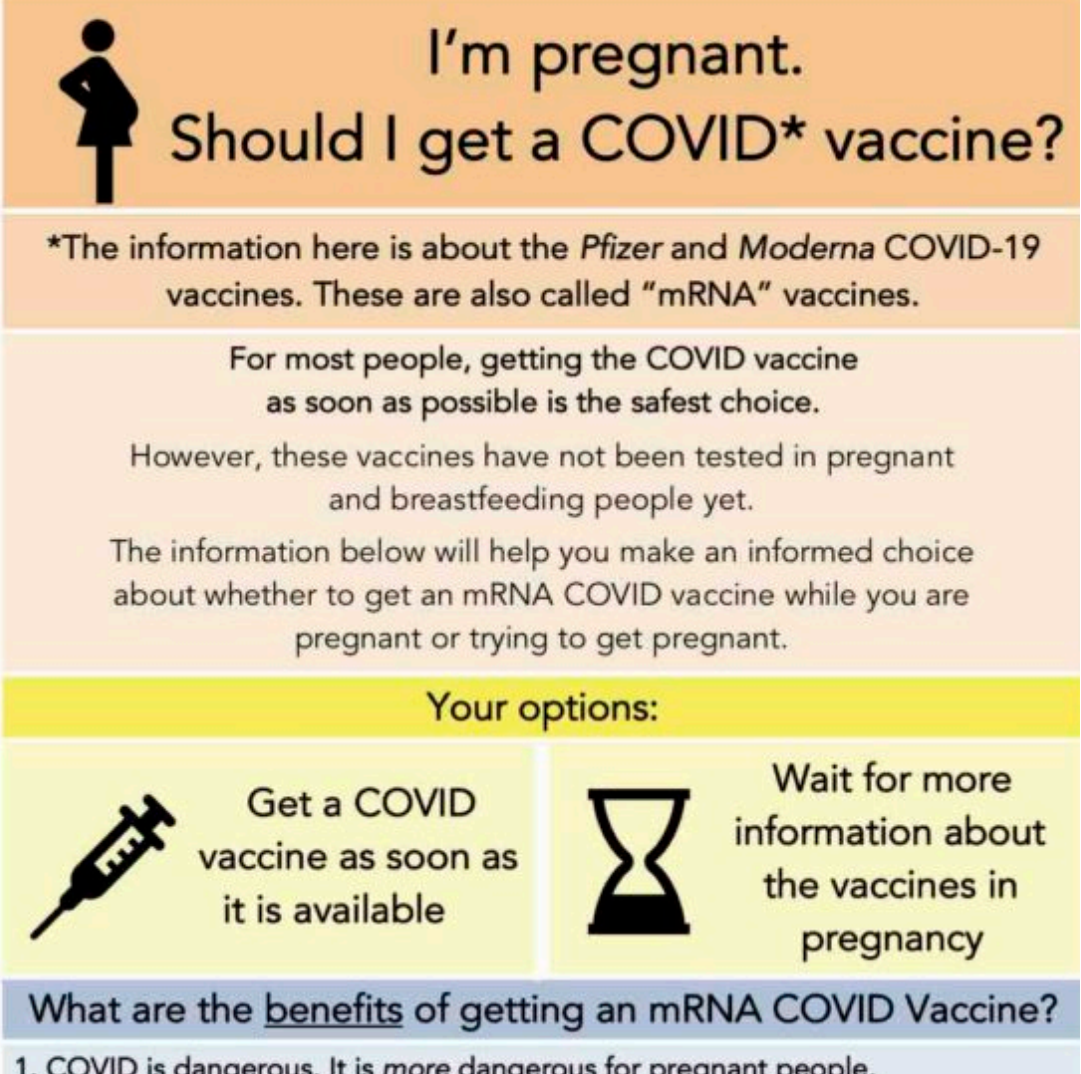
Natural immunity vs. immunity from vaccines


- Both the disease and the vaccine are new. We don't know how long protection lasts for those who get infected or get vaccinated.
- COVID-19 has caused very serious illness and death for many people.
- If you get COVID-19, you also risk giving it to a loved ones who may get sick.
- **The vaccine has been rigorously tested & no serious safety concerns were identified.**
- Getting a COVID-19 vaccine is a safer choice.



I'm Pregnant? Should I get a COVID vaccine?

- Free decision tool for pregnant people available at:
<http://foamcast.org/COVIDvacPregnancy/>
- Developed by Dr. Elizabeth Schoenfeld and Baystate colleagues



 I'm pregnant.
Should I get a COVID* vaccine?



*The information here is about the *Pfizer* and *Moderna* COVID-19 vaccines. These are also called "mRNA" vaccines.

For most people, getting the COVID vaccine as soon as possible is the safest choice.

However, these vaccines have not been tested in pregnant and breastfeeding people yet.

The information below will help you make an informed choice about whether to get an mRNA COVID vaccine while you are pregnant or trying to get pregnant.

Your options:

 <p>Get a COVID vaccine as soon as it is available</p>	 <p>Wait for more information about the vaccines in pregnancy</p>
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What are the benefits of getting an mRNA COVID Vaccine?

1. COVID is dangerous. It is more dangerous for pregnant people.

Appendix A: Triage of persons presenting for mRNA COVID-19 vaccination

	MAY PROCEED WITH VACCINATION	PRECAUTION TO VACCINATION	CONTRAINDICATION TO VACCINATION
CONDITIONS	<p>CONDITIONS</p> <ul style="list-style-type: none"> Immunocompromising conditions Pregnancy Lactation <p>ACTIONS</p> <ul style="list-style-type: none"> Additional information provided* 15 minute observation period 	<p>CONDITIONS</p> <ul style="list-style-type: none"> Moderate/severe acute illness <p>ACTIONS</p> <ul style="list-style-type: none"> Risk assessment Potential deferral of vaccination 15-minute observation period if vaccinated 	<p>CONDITIONS</p> <ul style="list-style-type: none"> None <p>ACTIONS</p> <ul style="list-style-type: none"> N/A
ALLERGIES	<p>ALLERGIES</p> <p>History of allergies that are unrelated to components of an mRNA COVID-19 vaccine¹, other vaccines, injectable therapies, or polysorbate, such as:</p> <ul style="list-style-type: none"> Allergy to oral medications (including the oral equivalent of an injectable medication) History of food, pet, insect, venom, environmental, latex, etc., allergies Family history of allergies <p>ACTIONS</p> <ul style="list-style-type: none"> 30-minute observation period: Persons with a history of anaphylaxis (due to any cause) 15-minute observation period: All other persons 	<p>ALLERGIES</p> <ul style="list-style-type: none"> History of any immediate allergic reaction² to vaccines or injectable therapies (except those related to component of mRNA COVID-19 vaccines¹ or polysorbate, as these are contraindicated) <p>ACTIONS:</p> <ul style="list-style-type: none"> Risk assessment Consider deferral of vaccination and/or referral to allergist-immunologist 30-minute observation period if vaccinated 	<p>ALLERGIES</p> <p>History of the following are contraindications to receiving either of the mRNA COVID-19 vaccines¹:</p> <ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose of an mRNA COVID-19 vaccine or any of its components Immediate allergic reaction² of any severity to a previous dose of an mRNA COVID-19 vaccine or any of its components¹ (including polyethylene glycol)³ Immediate allergic reaction of any severity to polysorbate⁴ <p>ACTIONS</p> <ul style="list-style-type: none"> Do not vaccinate⁵ Consider referral to allergist-immunologist

The following recommendations may change as further information becomes available.

Source: <https://www.cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html#Appendix-A>

Do I still have to wear a mask and physically distance after getting the vaccine?



The [current safety precautions](#) will still be important. Here are some reasons why:

- As the vaccine rolls out, there will still be high levels of infection in our communities.
- You will most likely need two doses of the vaccine in order to be protected. It takes 2 weeks after receiving the second dose of mRNA vaccines to achieve full immune response.
- **Even though you are protected after getting the vaccine, it is not known if you could still become asymptotically infected and spread the virus to others.**



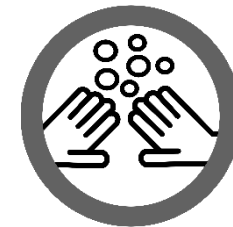
WEAR A MASK



STAY 6 FEET APART



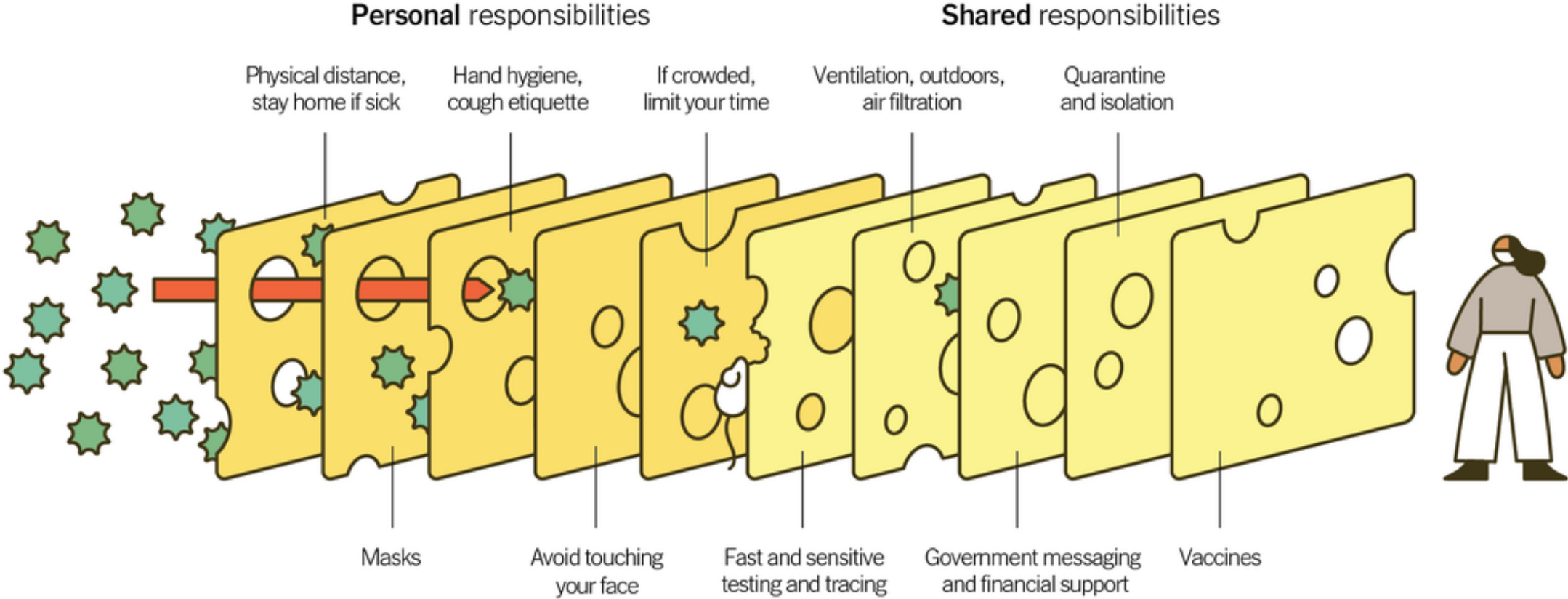
AVOID CROWDS



WASH YOUR HANDS OFTEN

Multiple Layers Improve Success

The Swiss Cheese Respiratory Pandemic Defense recognizes that no single intervention is perfect at preventing the spread of the coronavirus. Each intervention (layer) has holes.



Source: Adapted from Ian M. Mackay (virologydownunder.com) and James T. Reason. Illustration by Rose Wong

Where can I get more information?

- Centers for Disease Control and Prevention- <https://www.cdc.gov/vaccines/covid-19/>
- Mass.gov- <https://www.mass.gov/info-details/massachusetts-covid-19-vaccine-information>
- Baystate Health - <https://www.baystatehealth.org/covid19/vaccine>
- Mercy Medical Center/Trinity Health of New England- <https://www.trinityhealthofne.org/find-a-service-or-specialty/covid-19/covid-19-vaccine>
- Your healthcare provider



Massachusetts Department of Public Health

COVID-19 Vaccine Webinar

FEBRUARY 5, 2021



When can I get a **COVID-19** vaccine in MA?



PHASE ONE

In order of priority

- Clinical and non-clinical healthcare workers doing direct and COVID-facing care
- Long term care facilities, rest homes and assisted living facilities
- First responders (EMS, Fire, Police)
- Congregate care settings (including corrections and shelters)
- Home-based healthcare workers
- Healthcare workers doing non-COVID-facing care



PHASE TWO

In order of priority

- Individuals 75+
- Individuals 65+, Individuals with 2+ comorbidities (those that are at increased risk for severe illness)
- Early education and K-12 workers, transit, grocery, utility, food and agriculture, sanitation, public works and public health workers
- Individuals with one comorbidity



PHASE THREE

Vaccine available to general public

December - February

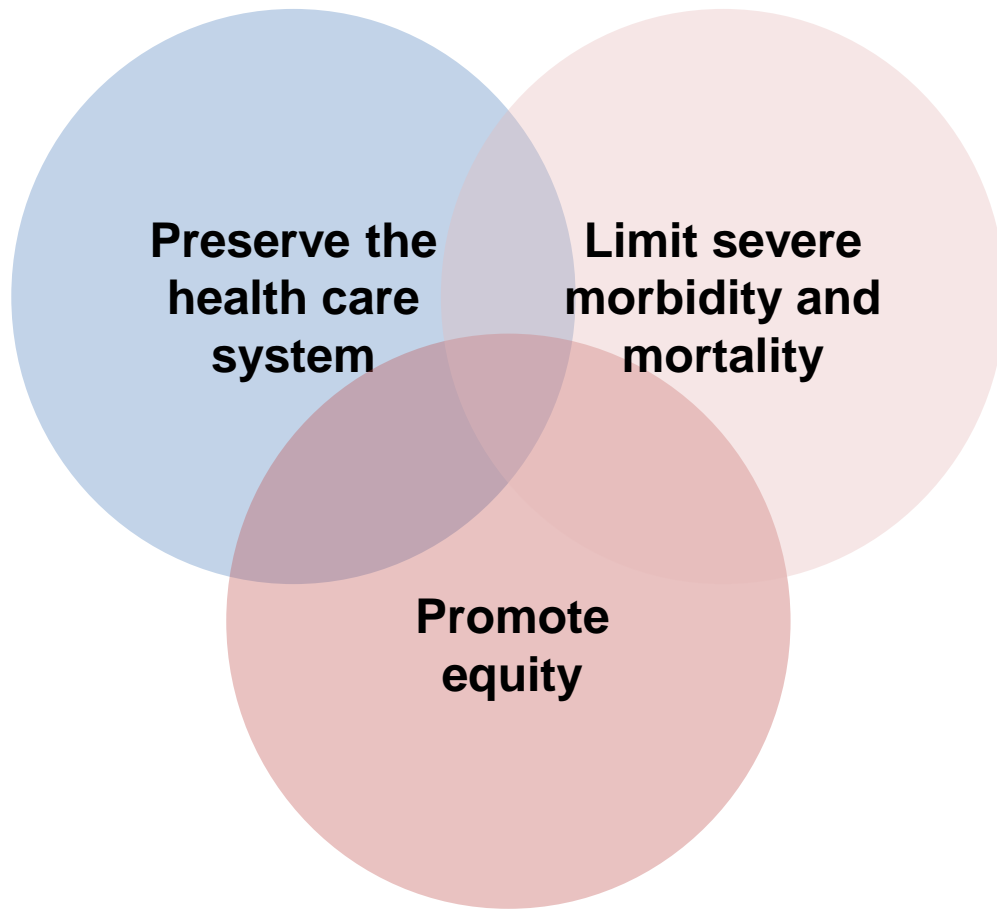
Estimated timeframes

February - April

April - June

Updated 1/25/2021

Advisory Group Recommendations Reflect Multiple Priorities



The Advisory Group took a strong stance on equity:

- Prioritizes all COVID-facing individuals in healthcare settings, including food service and environmental (not just doctors and nurses) as well as home health workers



COVID-19 Vaccine in Massachusetts

Massachusetts is preparing for the safe, equitable, and effective delivery of an FDA-approved COVID-19 vaccine. Learn about the approach and when you can expect to get vaccinated.

[WHEN CAN I GET THE VACCINE?](#)

How do I get a COVID-19 vaccine?



1. Find your priority group and an estimated timeline for eligibility

If you are eligible:



2. Find a COVID-19 vaccination location



3. Have important documents ready* to schedule an appointment and fill out the self attestation form

* Such as your insurance card if insured

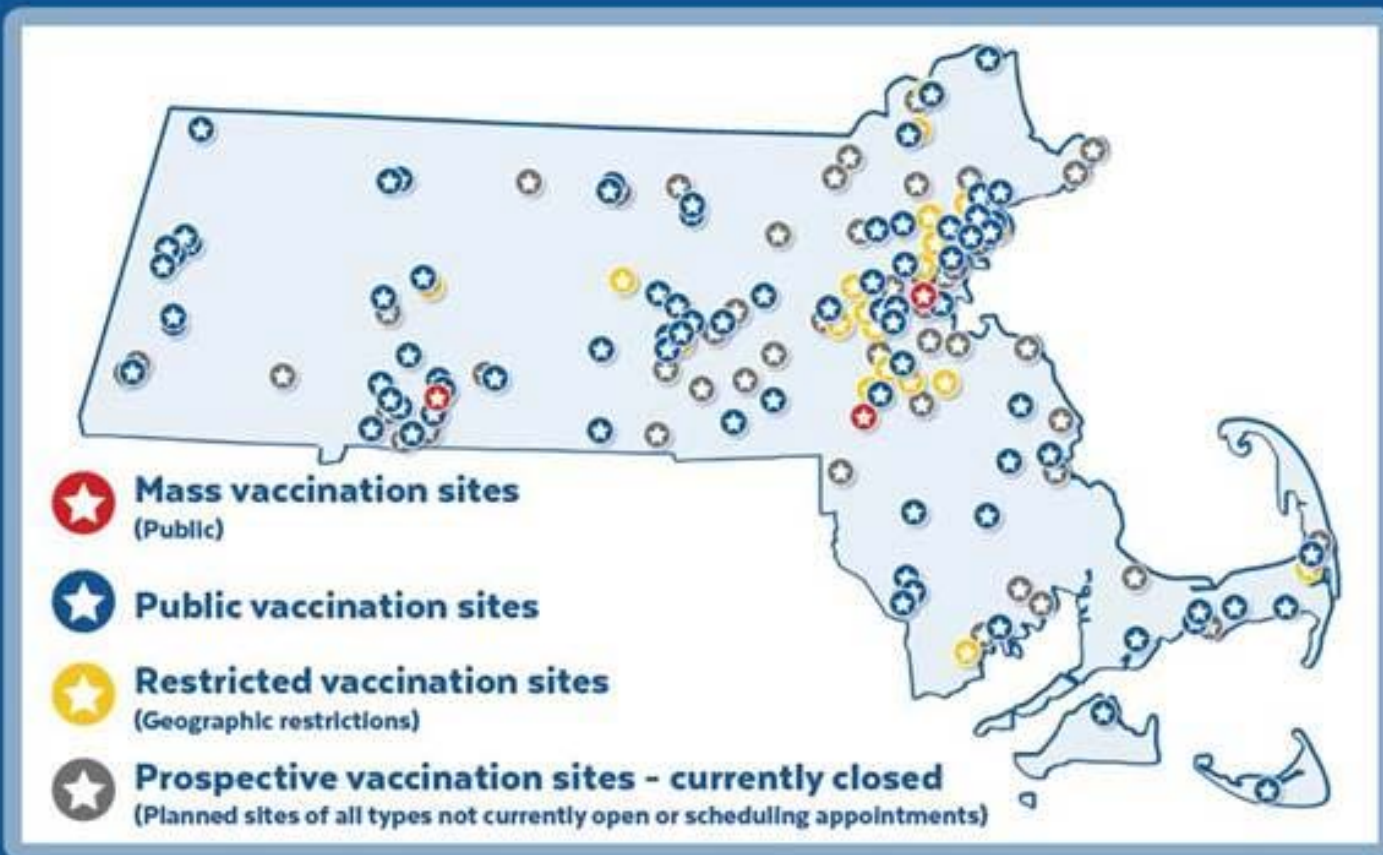
Go to [mass.gov/COVIDvaccine](https://www.mass.gov/COVIDvaccine)

Have medical questions? Contact your doctor



@massgov

COVID-19 Vaccination Locations



Additional sites added regularly. For location details and to book an appointment visit mass.gov/COVIDVaccineMap



Posters, Graphics & FAQs

It's **SAFE**



The available COVID-19 Vaccines are approved and recommended by the FDA and CDC.

By **prioritizing resources and efforts**, the vaccines were developed quickly and **never** at the expense of safety.

mass.gov/COVIDVaccinePhases

SWIPE >>>



@massgov

It's **FREE**

The COVID-19 vaccine is being administered **free of charge** to all individuals by the federal government.



No insurance is required.

mass.gov/COVIDVaccinePhases

SWIPE >>>



@massgov

Is the vaccine safe?

- **Yes. The vaccine is safe.**
- Vaccines go through more testing than any other pharmaceuticals, including extensive testing in clinical trials
- The FDA, which approves the vaccine, and the CDC's Advisory Committee on Immunization Practices (ACIP), reviewed data to ensure the Moderna and Pfizer vaccines are both safe and effective
- The infectious disease leads in the state's academic medical centers also reviewed the EUA data for both vaccines and provided an independent opinion about their safety and efficacy and recommended their use

What will the vaccine cost?

- **The vaccine is being provided free of charge to all individuals**
- There is no cost to the individual.
- Insurance companies will not charge any out-of-pocket fees or co-payments related to COVID-19 vaccine administration
- All health care provider sites that receive vaccine must agree to not charge patients out-of-pocket fees or deny anyone vaccination

Other FAQs are available on mass.gov/covidvaccine

<https://www.mass.gov/lists/guide-to-hosting-a-forum-on-the-covid-19-vaccine>



Massachusetts Department of Public Health

GUIDE TO HOSTING A FORUM ON COVID-19 VACCINE

Updated January 26, 2021

Where to learn more

Latest Massachusetts COVID-19 Vaccination Plan update
[COVID-19 Vaccination Program | Mass.gov](#)

When can I get the COVID-19 vaccine?
[When can I get the COVID-19 vaccine? | Mass.gov](#)

MA COVID-19 vaccination data report
[COVID-19 Vaccination Program | Mass.gov](#)

FAQs for the general public
[COVID-19 Vaccine Frequently Asked Questions | Mass.gov](#)

COVID-19 Vaccine information from CDC
[COVID-19 Vaccines | CDC](#)