

COVID-19 Vaccination Overview

Presented by:

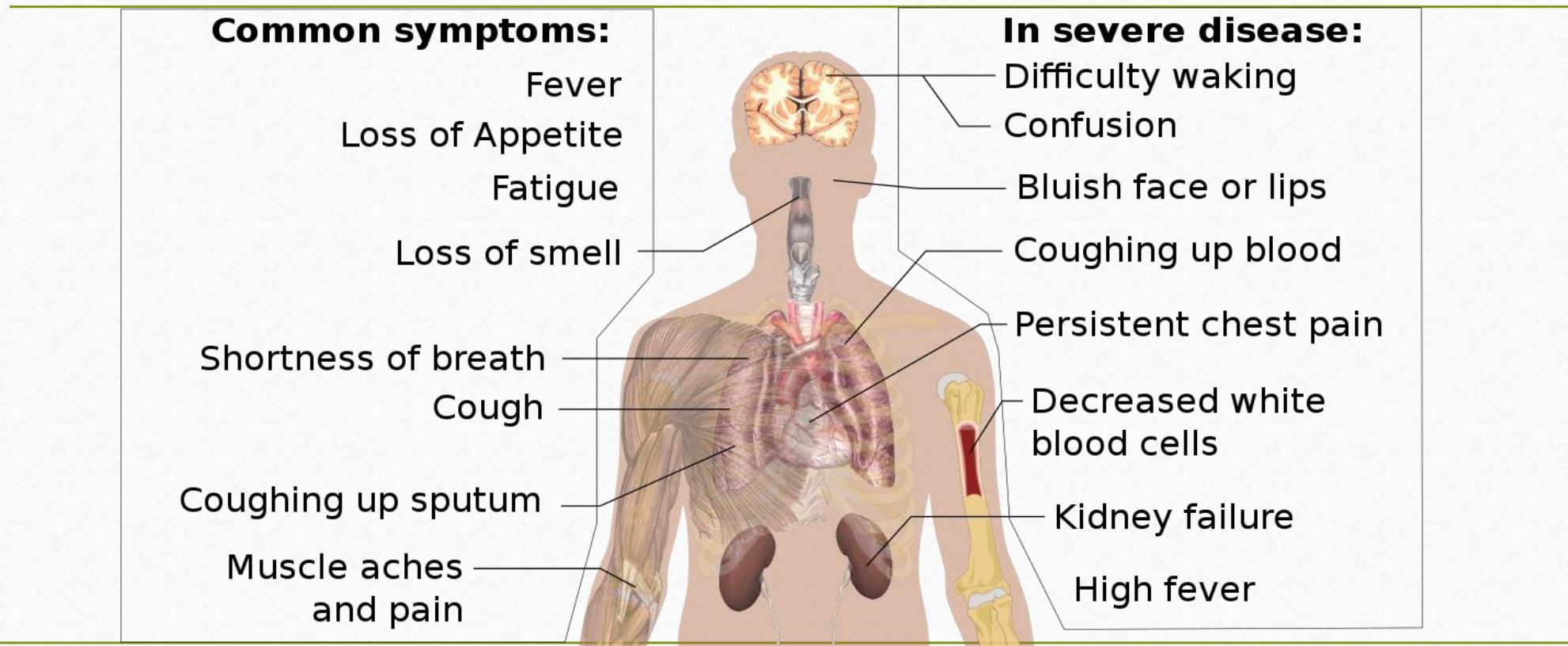
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Learning Objectives

- Briefly review signs/symptoms of COVID-19 infection
- Discuss the benefits of vaccination
- Overview of safety data and efficacy
- Provide access to resources and ways to get an appointment

COVID-19 Signs/Symptoms



COVID-19 Vaccine: Why is it Important?

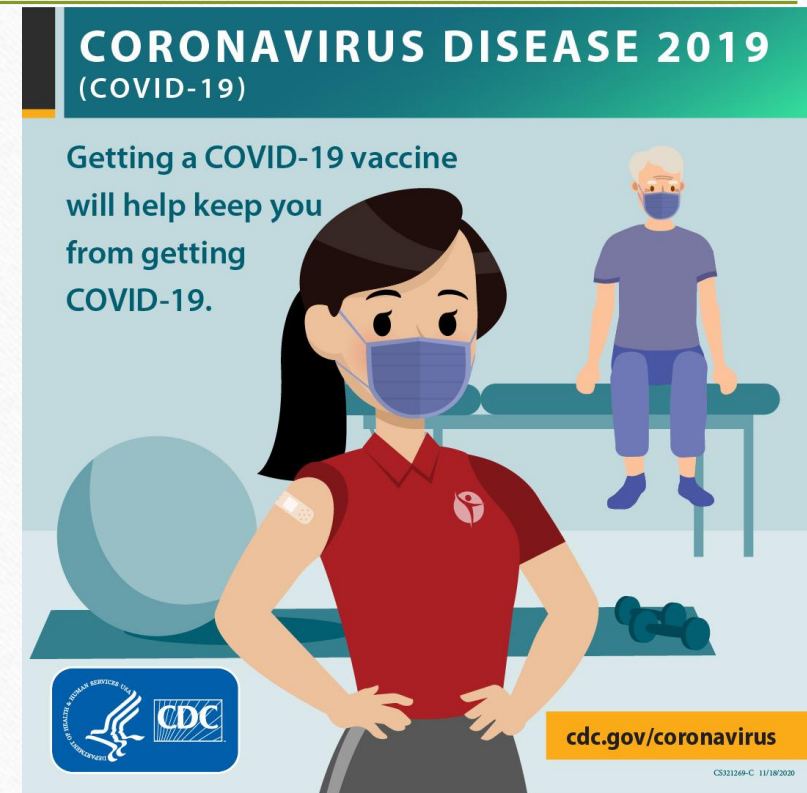
- CDC estimates that age brackets 50-64 and 65+ are at highest risk for developing severe illness
- While **30%** of infections are asymptomatic, current estimates show these patients are still highly contagious

COVID-19 epidemiology compared to influenza

- **Influenza:** ~ 39-56 million confirmed cases in US between October 2019-April 2020
- **COVID-19:** ~ 30 million confirmed cases in US between January 2020-March 2021
- **Influenza:** In the past **decade** (2010-2020), the CDC estimates 359,000 deaths in the US
- **COVID-19:** Between January 2020-March 2021, the CDC estimates 545,000 deaths in the US

Benefits of COVID-19 Vaccines

- All COVID-19 vaccines approved in the US have been shown to be highly effective at preventing and reducing severity of illness
 - Pfizer-BioNTech **95% effective**
 - Moderna **94.1% effective**
 - Johnson & Johnson **66% effective** at preventing illness; 85% effective against severe illness



CORONAVIRUS VARIANTS

UK: Kent  B.1.1.7 Key mutations: N501Y - speeds up transmission	UK: Bristol  VOC-202102/02 Key mutations: Kent variant with E484K , which can 'escape' antibodies for other variants	UK: Liverpool  VUI-202201/01 Key mutations: 2020 version of virus with E484K	NEW  B.1.525 Key mutations: E484K 'escape' antibodies from vaccines O677H, 6888L unknown effects
SOUTH AFRICA  501Y.V2 or B.1.351 Key mutations: N501Y speeds up transmission E484K can 'escape' antibodies for other variants	BRAZIL 1  P.1 Key mutations: N501Y speeds up transmission E484K can 'escape' antibodies, K417T unknown effects	BRAZIL 2  P.2 Key mutations: E484K can 'escape' antibodies for other variants	US: California  B.1.429 Key mutations: L452R can 'escape' some antibodies from vaccines
NEW: US UK  B.1.1.7 + B.1.429 Key mutations: N501Y speeds up transmission L452R can 'escape' some antibodies from vaccines	NEW: UK  VUI-202102/04 Key mutations: E484K , which can 'escape' antibodies for other variants	PHILIPPINES  VUI-202102/04 Key mutations: E484K + N501Y . The E484K protein was previously found in the Brazil variant	US: New York  B.1526 Key mutations: E484K . Can 'escape' some anti-bodies from vaccines

Halt the Emergence of New Mutant Strains

- Uncontrolled spread increases the chance the virus will mutate into more infectious or harder to treat variants
- Vaccinating the majority of the population will help reduce the occurrence of new strains

Moderna and Pfizer Vaccines

- Both Pfizer and Moderna are RNA vaccines
 - Mechanism of action:
 - Inserts RNA into cells → Cells create harmless piece of protein from virus → antibodies against virus are made
 - Does not use live or attenuated virus and **cannot give you COVID**
 - Two shots
 - 21 days apart (Pfizer)
 - 28 days apart (Moderna)



Moderna and Pfizer Vaccines

- mRNA vaccines have been studied for decades
- Subjected to same rigorous **safety and effectiveness** standards as all other types of vaccines in the US by the FDA



Johnson & Johnson Vaccine

- Johnson & Johnson is a DNA vaccine
 - Mechanism of action: Uses a modified, harmless adenovirus (viral vector) to insert instructions into our cells that tell them to create antibodies against SARS-CoV-2
 - **Cannot give you COVID**
 - Only requires 1 shot

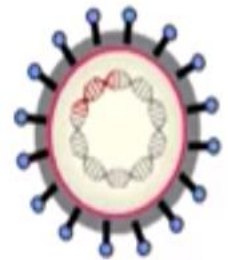


Johnson & Johnson Vaccine

- Same rigorous **safety and effectiveness** standards as all other types of vaccines
- Viral vectors studied since 1970; similar vaccine developed with this technology before:
 - **rVSV-ZEBOV** → Vaccine for Ebola
- Currently being considered for development of vaccines for diseases such as zika, influenza, and HIV

DNA Vaccine Advantages

- Antibody response is longer
- Cytotoxic T-cell response
- Low cost manufacture
- Greater stability
- Easier storage and transportation



BiotechPrimer. (2017, July 11). Dna vaccines. Retrieved March 26, 2021, from <https://www.youtube.com/watch?v=BOQ0XsxF02w>

Expected side effects from all vaccines

In the arm where you got the shot:	Throughout the rest of your body:	
<ul style="list-style-type: none">• Pain• Redness• Swelling	<ul style="list-style-type: none">• Tiredness• Headache• Muscle pain• Chills• Fever• Nausea	<ul style="list-style-type: none">• Usually start within a day or two after getting the vaccine• Typically mild-moderate

Who should not get vaccinated?

- If you have had a severe allergic reaction (requiring an EpiPen or hospital visit) to any of the ingredients contained in the vaccines
 - Pfizer: Contains PEG, Sucrose
 - Moderna: Contains PEG, Sucrose
 - Johnson & Johnson: Contains ethanol, Polysorbate
- Patients on immunosuppressive medication can receive vaccine safely, but medication may need to be spaced out for full immune response



Where to report adverse events?

- Vaccine Adverse Event Reporting System (VAERS) may be used by patients to report any adverse events they think are associated with vaccines
- May either call (1-800-822-7967) or submit a VAERS report online



More Vaccines on the Way

- Currently being evaluated for efficacy and safety in Phase III clinical trials:



COVID-19 Vaccine Distribution in Maine

- Mainers age 50 and older now qualify
- Staff at nursing homes, teachers, childcare workers, and other essential workers are eligible as well



What should I bring to my vaccination appointment?

- Proof of identity (Driver's license, other state-issued ID showing name, age, and Maine residency)
- Health insurance card (**You will not be charged**, but vaccine provider may bill insurer a fee)
- If eligible due to employment (Healthcare Worker/School Employees):
 - Proof of employment (pay stub, badge, or letter from employer)
- Wear a mask to your appointment



Transportation

- **Maine Community Vaccination Line:**
 - If homebound, no internet access, language barriers or require other help arranging vaccine, call 888-445-4111
 - Hotline open 7 a.m.-7 p.m. weekdays and 8 a.m.- 2 p.m. Saturday and Sunday
- **Free transit service via Maine Health Department:**
 - Rides to vaccine appointments available Monday through Saturday 7 a.m.- 4 p.m.
 - Call 855-608-5172 at least 48 hours before your scheduled shot to reserve a ride



Where to sign up?

- If you qualify, you can pre-register at [VaccinateME.Maine.gov](https://vaccinateME.Maine.gov)
 - When an appointment becomes available, you'll receive an email that allows you to look for openings and schedule an appointment
- MaineHealth Vaccine Clinic in Norway, ME
 - Call 877-780-7545 or visit <https://vaccine.mainehealth.org/>
- For a list of vaccination sites currently available:
 - <https://www.maine.gov/covid19/vaccines/vaccination-sites>

Questions?
