

SVH TownHall COVID-19 The Vaccine Edition

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Overview

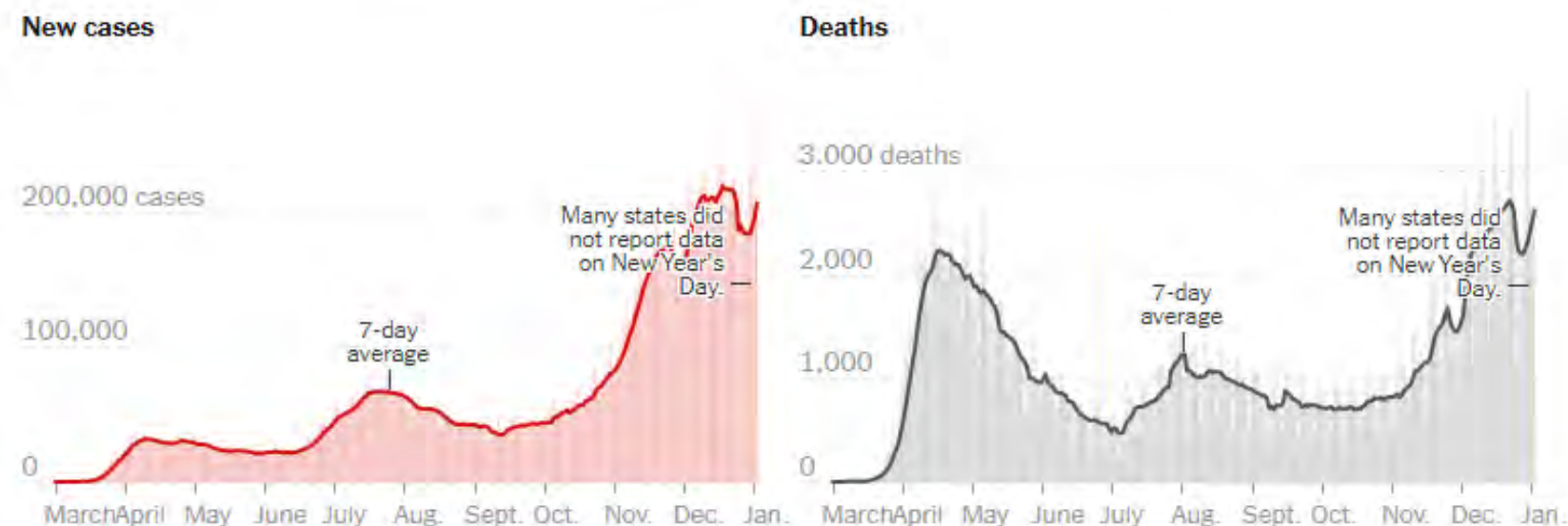
- Current State of COVID-19
- Vaccine
 - Mechanism of Action
 - Pfizer & Moderna Study Findings
 - Pfizer vs. Moderna Logistics
 - Administration & Special considerations
 - Distribution Phases
- *CA Notify* Smart Phone App
- Q&A

COVID-19 Current State: National Crisis

United States

Known cases are going up. The average number of new cases in the United States reached **205,840** yesterday, a **5 percent increase** from the day before. Since January, at least **1 in 16** people who live in the United States have been infected, and at least **1 in 947** have died.

	ON JAN. 2	DAILY AVG. IN LAST 7 DAYS	PER 100,000	14-DAY CHANGE	TOTAL REPORTED
Cases	291,384	205,840	62	-5% ↘	20,464,766
Deaths	2,373	2,617	1	Flat →	350,329
Hospitalized	123,614	123,415	37	+10% →	



Daily reported tests

2,000,000 tests

1,000,000

0

March April May June July Aug. Sept. Oct. Nov. Dec. Jan.

7-day
average

Hospitalizations

100,000

50,000

0

March April May June July Aug. Sept. Oct. Nov. Dec. Jan.

7-day
average

The New York Times: https://www.nytimes.com/interactive/2020/us/covid-cases-deaths-tracker.html?action=click&campaign_id=154&emc=edit_cb_20201125&instance_id=24486&module=Top+Stories&nl=coronavirus-briefing&pgtype=Homepage®i_id=127514720&segment_id=45453&te=1&user_id=8650848561b56dfe94fe3949186830b6

COVID-19 Current State: CA in Crisis

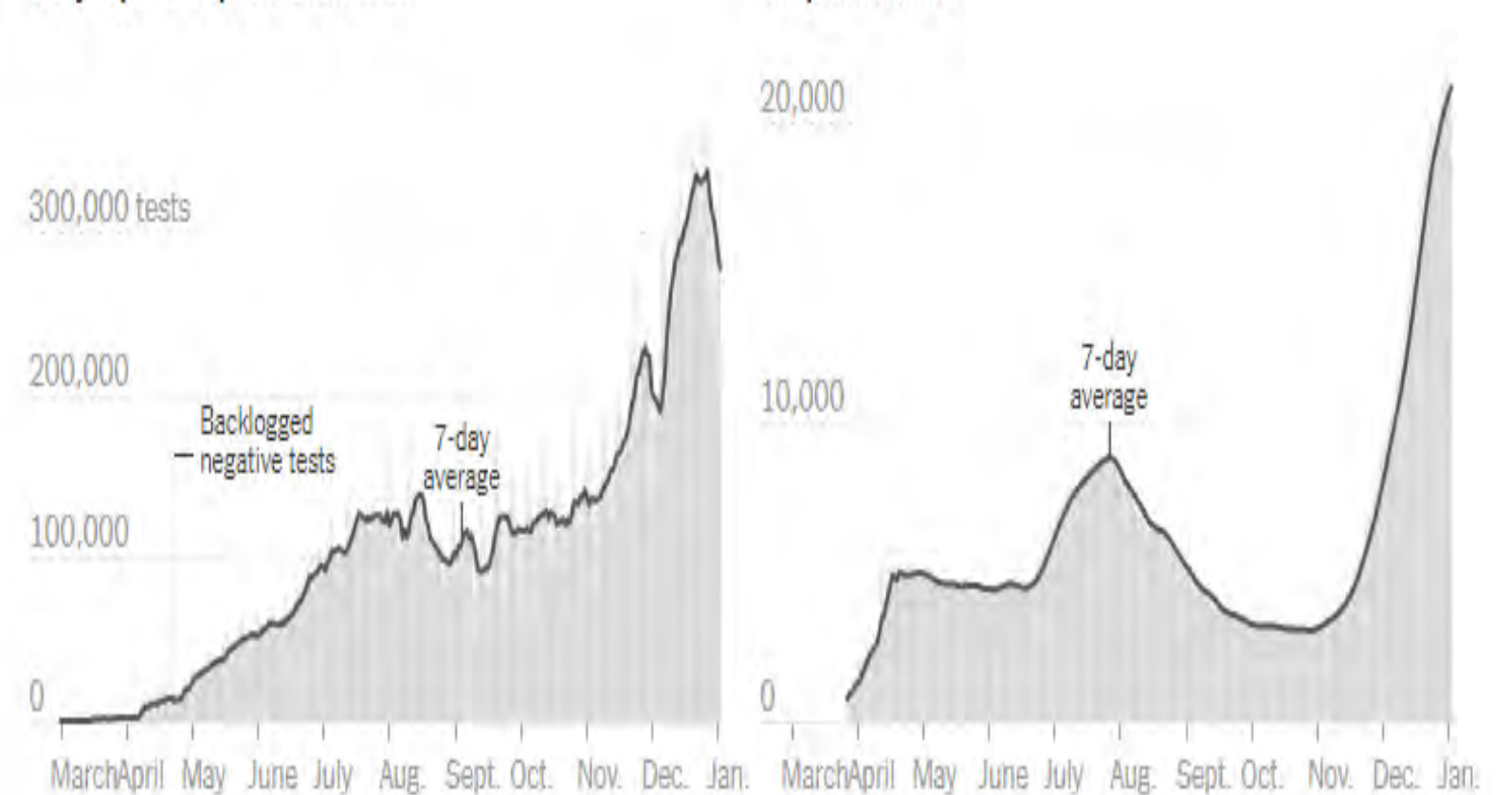
California

Known cases are going down. The average number of new cases in California fell to **38,321** yesterday, a **5 percent decrease** from the day before. Since January, at least **1 in 16** people who live in California have been infected, and at least **1 in 1,489** have died.

	ON JAN. 2	DAILY AVG. IN LAST 7 DAYS	PER 100,000	14-DAY CHANGE	TOTAL REPORTED
Cases	52,197	38,321	97	-8% ↘	2,397,923
Deaths	306	332	1	+37% ↗	26,542
Hospitalized	21,213	21,067	54	+34% ↗	



Daily reported specimens tested





The New York Times: https://www.nytimes.com/interactive/2020/us/covid-cases-deaths-tracker.html?action=click&campaign_id=154&emc=edit_cb_20201125&instance_id=24486&module=Top+Stories&nl=coronavirus-briefing&pgtype=Homepage®i_id=127514720&segment_id=45453&te=1&user_id=8650848561b56dfe94fe3949186830b6

COVID-19 Current State: Sonoma County Near Hospital Capacity

Sonoma County, Calif.

Known cases are going up. The average number of new cases in Sonoma County reached **195** yesterday, a **11 percent increase** from the day before. Since January, at least **1 in 25** people who live in Sonoma County have been infected, and at least **1 in 2,522** have died.

	ON JAN. 2	DAILY AVG. IN LAST 7 DAYS	PER 100,000	14-DAY CHANGE	TOTAL REPORTED
Cases	384	195	39	-32% 	19,513
Deaths	4	2	<1	+17% 	196

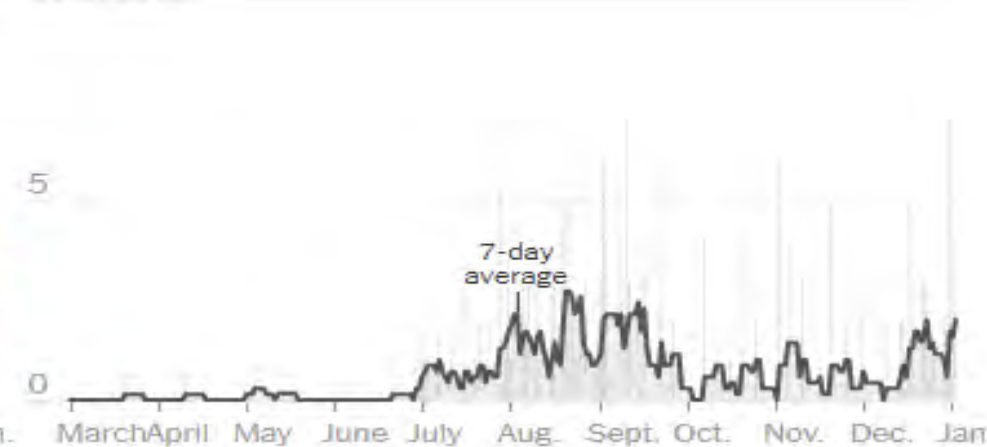
New cases

600 cases

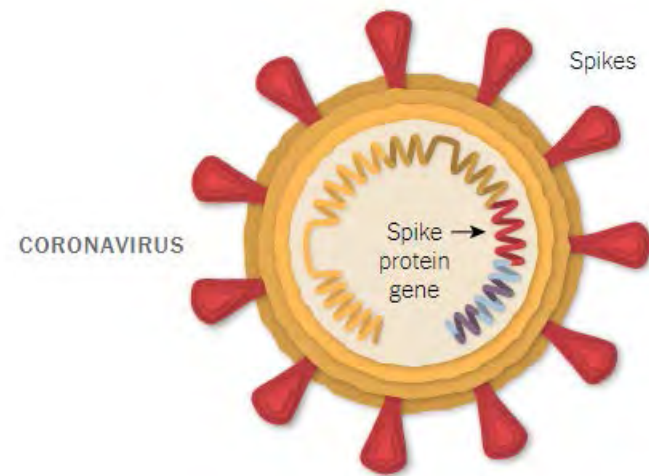


Deaths

10 deaths



Vaccine: mRNA Mechanism of Action

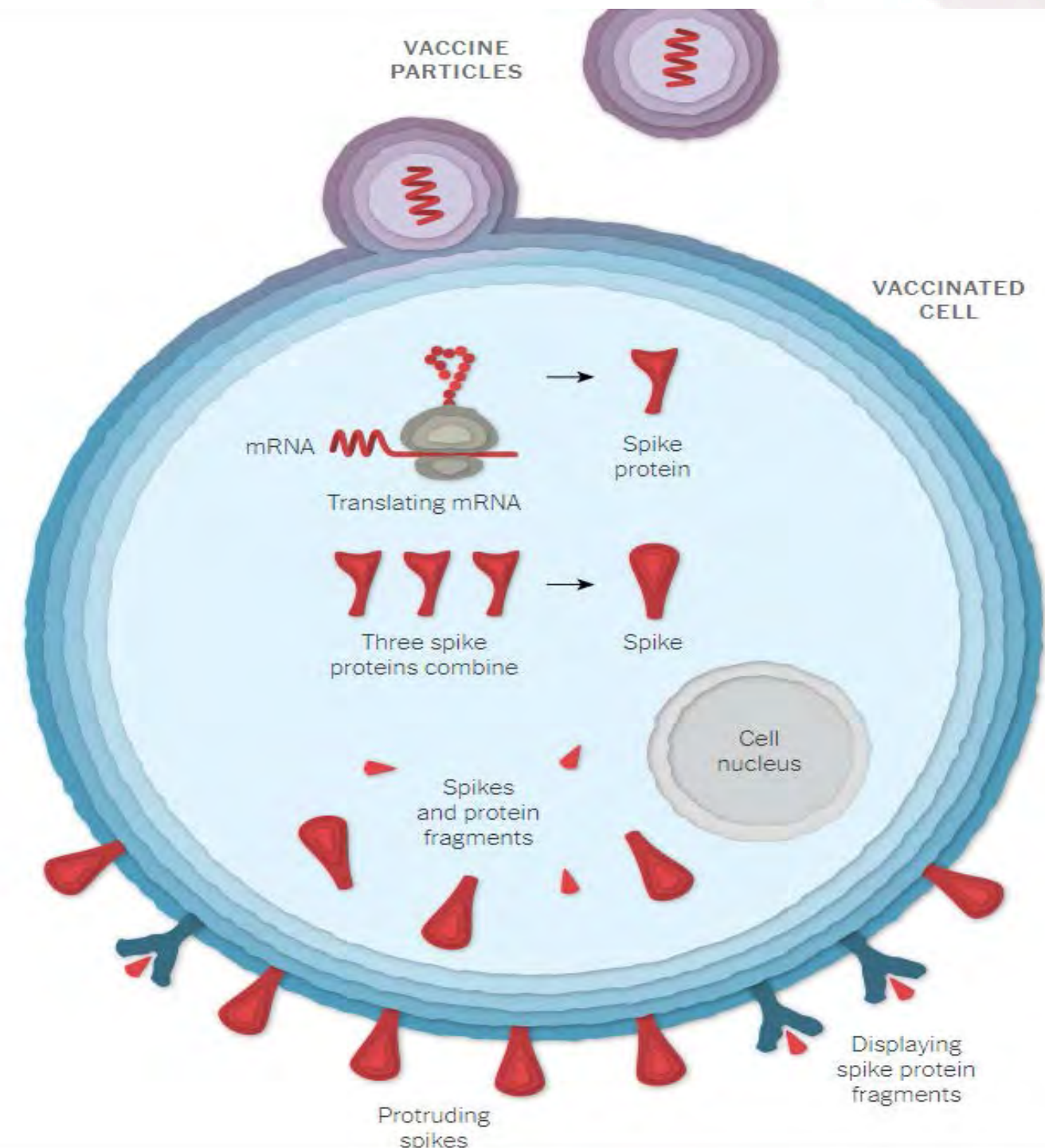


mRNA contains the “genetic instructions” on how to make the spike protein “S” specific to SARS-CoV-2..



Lipid nanoparticles surrounding mRNA

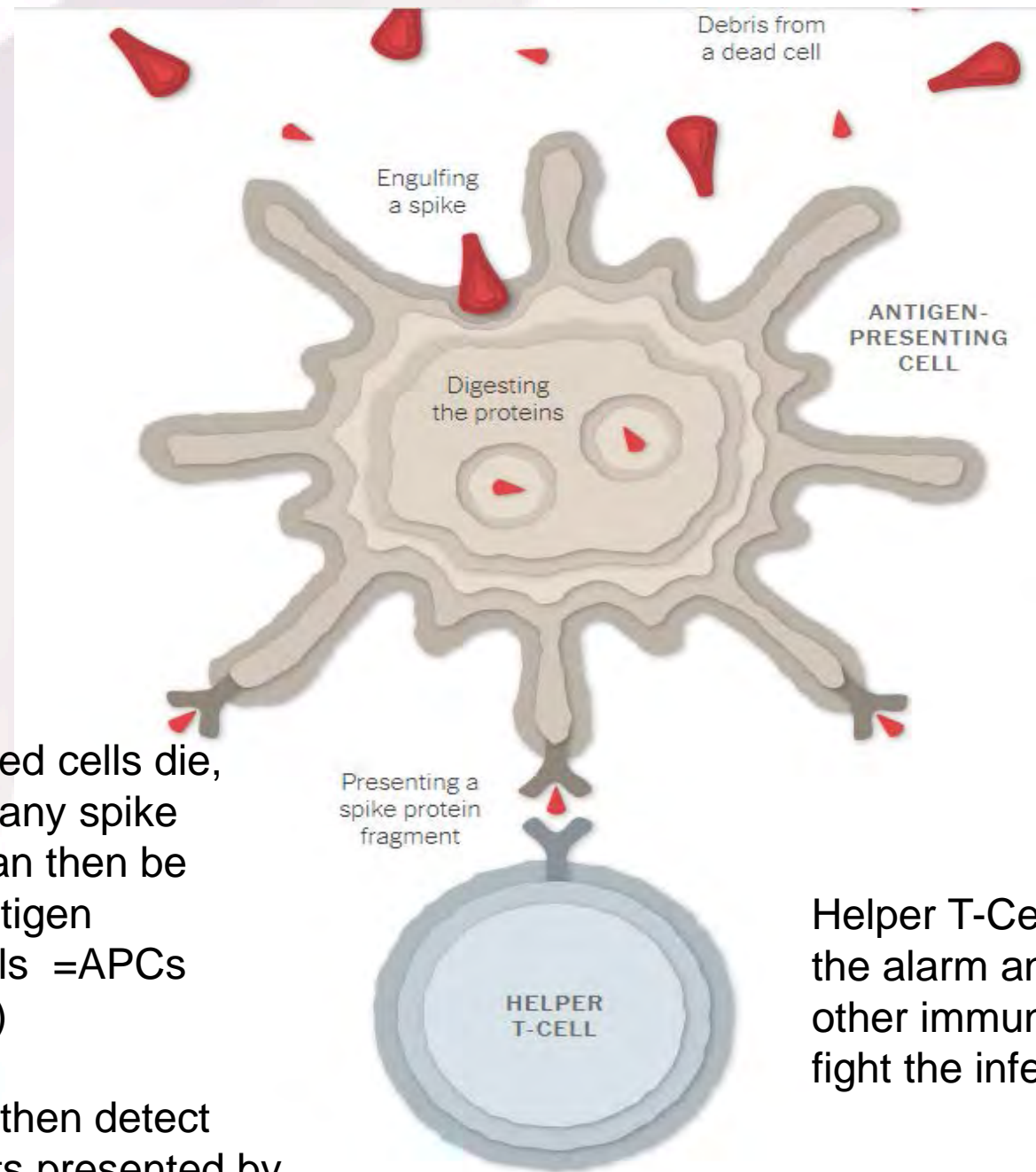
Lipid coating protects MRNA, but is unstable at room temperature. DRY ICE to the rescue.



Recipients cells take in the mRNA and make copies of the spike protein. The original mRNA from the vaccine is **DESTROYED** by the recipients cells.

The new spike proteins are displayed on the outside of the cell.

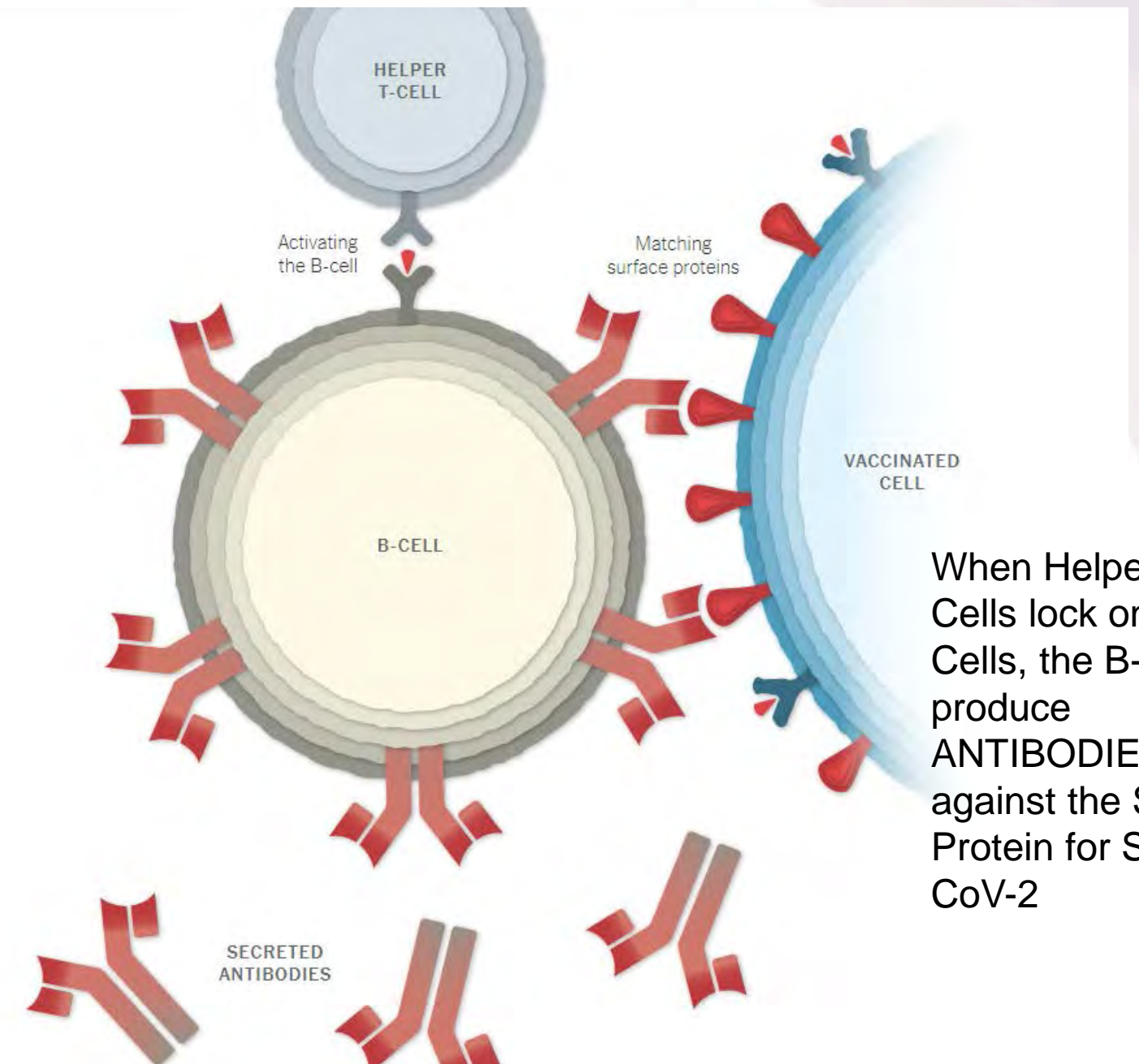
Vaccine: mRNA Mechanism of Action



When vaccinated cells die, they release many spike proteins that can then be taken up by Antigen Presenting Cells =APCs (Immune Cells)

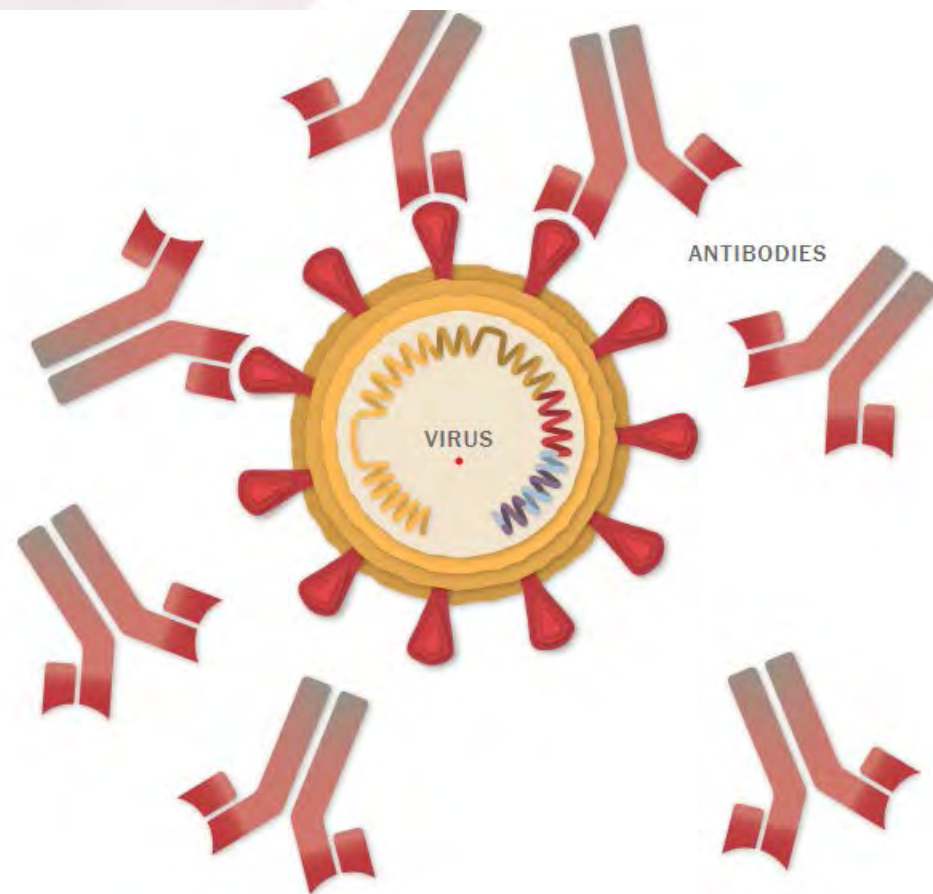
Helper T-Cells then detect these fragments presented by the APCs

Helper T-Cells raise the alarm and alert other immune cells to fight the infection.

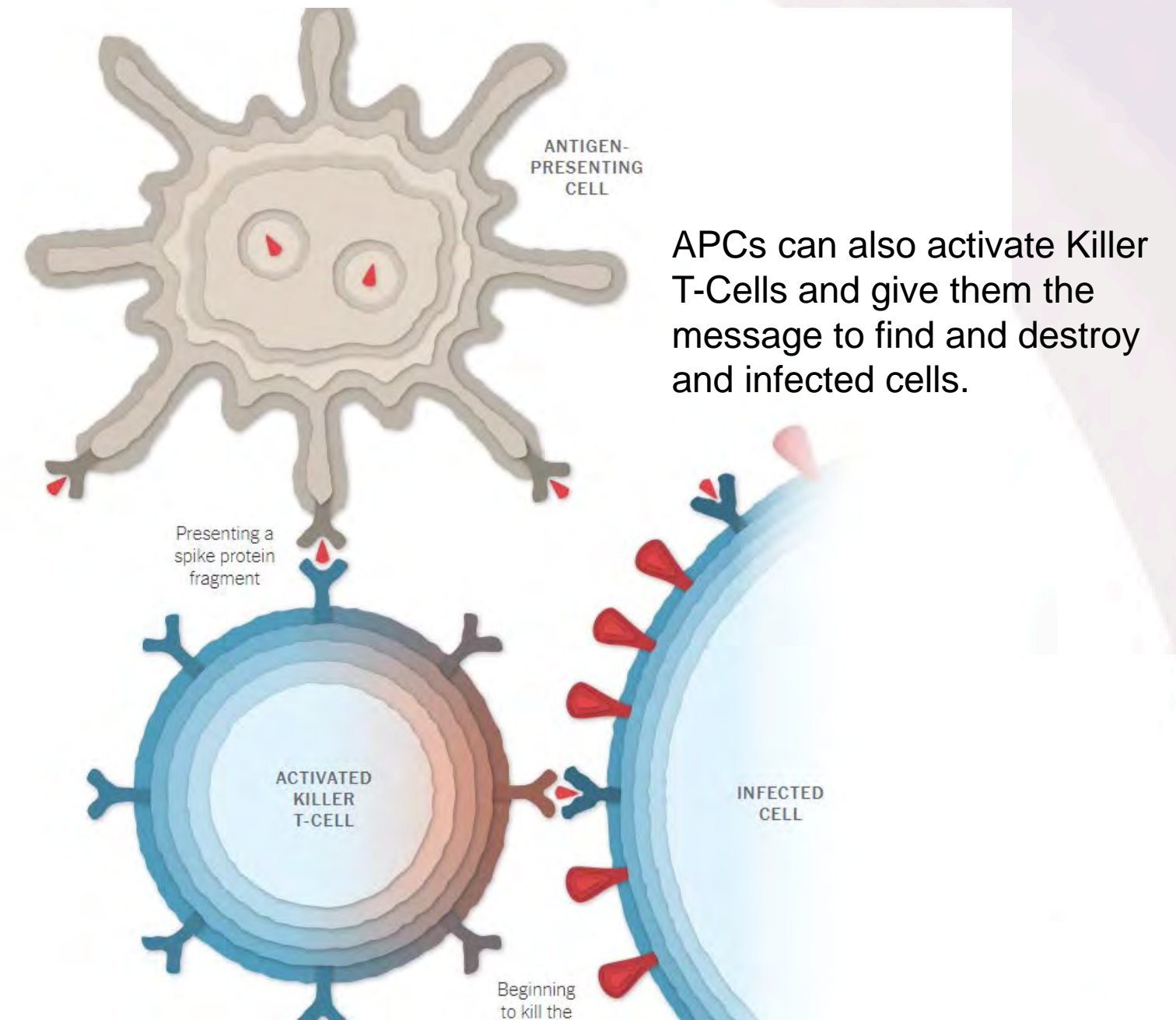


When Helper T-Cells lock onto B-Cells, the B-Cells produce **ANTIBODIES** against the Spike Protein for SARS-CoV-2

Vaccine: mRNA Mechanism of Action



When ANTIBODIES encounter SARS-CoV-2 they attach to the spike proteins which marks the virus for destruction and PREVENTS spikes from attaching to other cells (infection).



Vaccine: Study Designs

Pfizer

- 43,988 participants
 - 21,999 vaccine recipients
- 2 injections of 30mcg (0.3ml) IM 21 days apart
- Endpoint: Symptomatic infection 7 or more days after 2nd dose.

Moderna

- 30,000 participants
 - 15,000 vaccine recipients
- 2 injections of 100ug (0.5ml) IM 28 days apart
- Endpoint: Symptomatic infection after completion of 2nd dose.

Vaccine: Pfizer Study Findings

- 180 cases detected
 - 8 in vaccine group
 - 162 in placebo group
- 95% effective (Pfizer) & 94.1% effective (Moderna)
 - Effective in older adults
 - (Pfizer: 21.4% 65 years and older)
 - (Moderna: 25.3% 65 years and older)

Vaccine Studies: Limitations

■ Pfizer Study Group:

- Not studied in children
- Not studied in pregnancy
- 81.9% white
- 26.2% Hispanic / Latino
- 9.8% African American
- 4.4% Asian
- <3% Other races / ethnicities
- Minimum 2 months follow up

■ Moderna Study Group

- Not studied in children
- Not studied in pregnancy
- 79.4% white
- 20% Hispanic / Latino
- 9.7% African American
- 4.7% Asian
- <3% Other races / ethnicities
- Minimum 2 months follow up

Vaccine: Pfizer Study Side Effects

Day 1 through day 7 after each dose

Reactogenicity: local reactions (pain, redness, swelling), systemic events (fever, fatigue, headache, chills, vomiting, diarrhea, new or worsened muscle pain, and new or worsened joint pain)

Reaction	BNT162b2 Dose 1 vs 2	Placebo Dose 1 vs 2
Local	70.6 vs 73.1%	12.8 vs 10.6%
Systemic	59.1 vs 69.9%	47 vs 33.6%

Symptom onset: 0-2 days after dose

Symptoms duration: 1-2 days

- **Local:** injection site pain, redness, swelling.
- **Systemic:** fever, fatigue, headache, chills, muscle pain, joint pain.

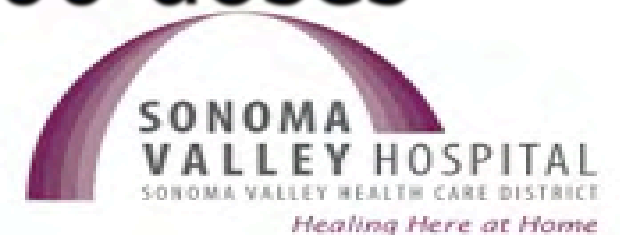
Shipping & Storage Logistics

Pfizer

- Ship & Store at -94 F
- Once thawed, 5 days to use at refrigerator temp.
- Once vial opened, 2 hours to use
- Minimum "order" 975 doses (5 doses per vial).

Moderna

- Ship and store at -4 F
- Once thawed, 30 days to use at refrigerator temp.
- Room temp stable for 12 hours.
- Once vial opened, 1 hour to use.
- Minimum "order" 100 doses (10 doses per vial)



Vaccine: Administration

Pfizer

- 2 dose series administered IM 3 weeks apart
- Administration of 2nd dose within 4 day grace period (day 17-21)
- If >21 days since 1st dose, administer asap
- Approved for 16 & older

Moderna

- 2 dose series administered IM 4 weeks apart
- 2nd dose after day 24 is considered valid
- Dose 2 "at least" 28 days after dose 1
- Approved for 18 & older.

Pfizer & Moderna

- Both doses necessary for protection, efficacy of single dose is unknown.
- Due to lack of data, it is advised no other vaccines be given within 14 days of these vaccines.
- Pfizer and Moderna are NOT approved to be interchangeable.

Vaccine: History of COVID-19

- Vaccine is INDICATED regardless of history of prior symptomatic or asymptomatic SARS-CoV-2 infection
- Antibody testing is NOT recommended for the purpose of vaccine decision-making.

Vaccine: Current COVID-19

- Defer vaccination until clinically recovered and isolation period complete.
- Re-infection unlikely in first 90 days after acute infection.
- Defer vaccination for 90 days in persons who have received antibody therapy (plasma or monoclonal).

Vaccine in Special Populations

- Underlying medical conditions: OK
- Immunocompromised (HIV): OK
 - Limited data, potential for REDUCED immune response – FOLLOW PRECAUTIONS
- Pregnant / Breastfeeding women: OK for HCP
 - Limited data. Weigh risk vs. benefit.
 - NOT A LIVE VACCINE

Vaccine: Contraindications & Observation

- History of anaphylaxis (severe allergic reaction) to any vaccine.
 - Observe persons with h/o anaphylaxis (to anything) 30 minutes.
 - Observe everyone 15 minutes.

Vaccine: Did I Receive the Vaccine?



YES!

(Pfizer dose 1 on 12/21/2020)

MINOR injection site soreness for <10 min

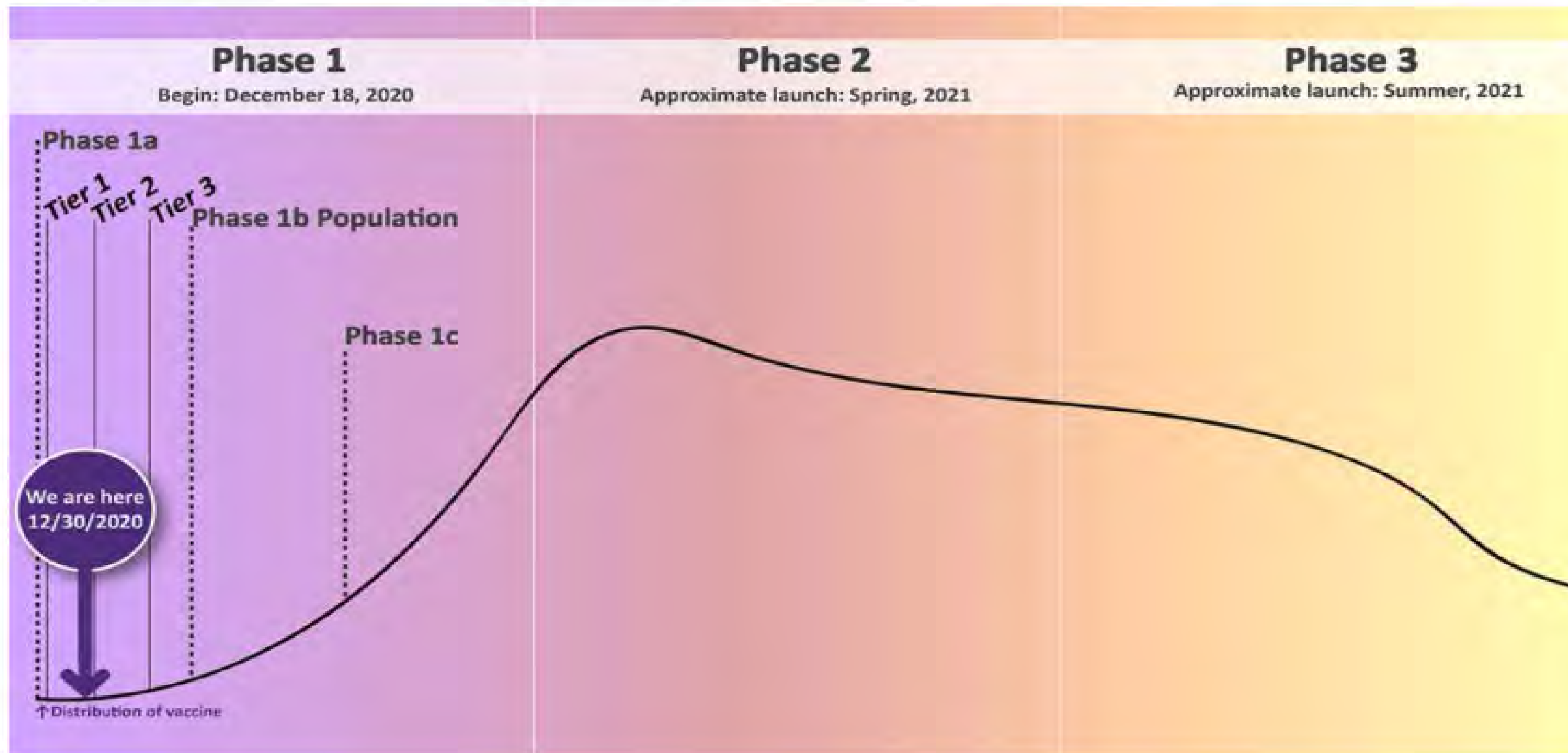
NO other side effects!

Vaccine: Distribution

- **EUA Approved 12/2020**
 - **Government allocates to states**
 - **CA allocates to counties (DPH) (or Multi-County Entities after first round)**
 - **County allocates to approved vaccination sites**
- **Shipments began 12/14/2020 for Pfizer & 1 week later for Moderna**
- **First shipment arrived in Sonoma County on 12/17/20.**
 - **4800 doses for ALL of Sonoma County**

Vaccine: Distribution Phases

Sonoma County Vaccine Distribution Plan



Vaccine: Distribution Phases

Phase 1

Begin: December 18, 2020

Populations

- Phase 1a < We are here:
 - Healthcare personnel at risk of exposure,
 - Residents of skilled nursing facilities and similar settings
- Phase 1b:
 - Essential workers,
 - Persons 65-74 years of age
- Phase 1c:
 - Persons 50-64 years of age,
 - Persons 16-64 years of age with underlying health conditions,
 - At risk essential workers

[More detail »](#)

Sonoma County – By the Numbers

- Approximate population: 19,000

Phase 2

Expected launch: Spring 2021

Populations

- Remainder of Phase 1 populations,
- Critical populations,
- General population

Supply & Locations Vastly Expanded

- Likely sufficient supply to meet demand
- Expand beyond initial populations
- Use broad provider network and settings including:
 - Healthcare settings
 - Commercial sector
 - Public Health

Vaccine: Distribution Phases

Phase 1a Populations

Tier 1 < We are here

Healthcare personnel at risk of exposure:

- Acute care, psychiatric and correctional facility hospitals
- Skilled nursing facilities, assisted living facilities, and similar settings for older or medically vulnerable individuals (includes residents in these settings)
- EMTs, Paramedics
- Dialysis Center Staff

Tier 2

- Intermediate Care (non-continuous nursing supervision)
- Home health care
- In home supportive services
- Community health workers and promotoras
- Public health field staff
- Primary care clinics, FQHCs
- Rural health centers
- Correctional facility clinics
- Urgent care clinics

Tier 3

- Specialty clinics
- Laboratory workers
- Dental/Oral health clinics
- Pharmacy staff

Phase 1b & Phase 1c

Phase 1b Populations

Tier 1

- Persons 75 years and older
- Persons at risk of exposure at work in the following sectors: education, childcare, emergency services, and food and agriculture

Tier 2

- Persons 65-74 years of age
- Persons at risk of exposure at work in the following sectors: transportation and logistics; industrial, commercial, residential, and sheltering facilities; critical manufacturing
- Congregate settings with outbreak risk: incarcerated and homeless

Phase 1c Populations

- Persons 50-64 years of age
- Persons 16-64 years with underlying medical condition or disability which increases their risk of severe COVID-19
- Persons at risk of exposure in the following sectors: water and wastewater; defense; energy; chemical and hazardous materials; communication and IT; financial services, government operations and community-based essential functions

[More information on risk for adults with certain underlying medical conditions »](#)

Vaccine: Distribution at SVH

- **First Allocation: 135 doses**
 - Administered 12/21/2020 & 12/22/2020
- **Second Allocation: 200 doses**
 - Administered 12/29/2020 & 12/30/2020
- **5 days to administer each Pfizer allocation due to storage (temperature) requirements. Two hours to use each Pfizer vial once opened.**

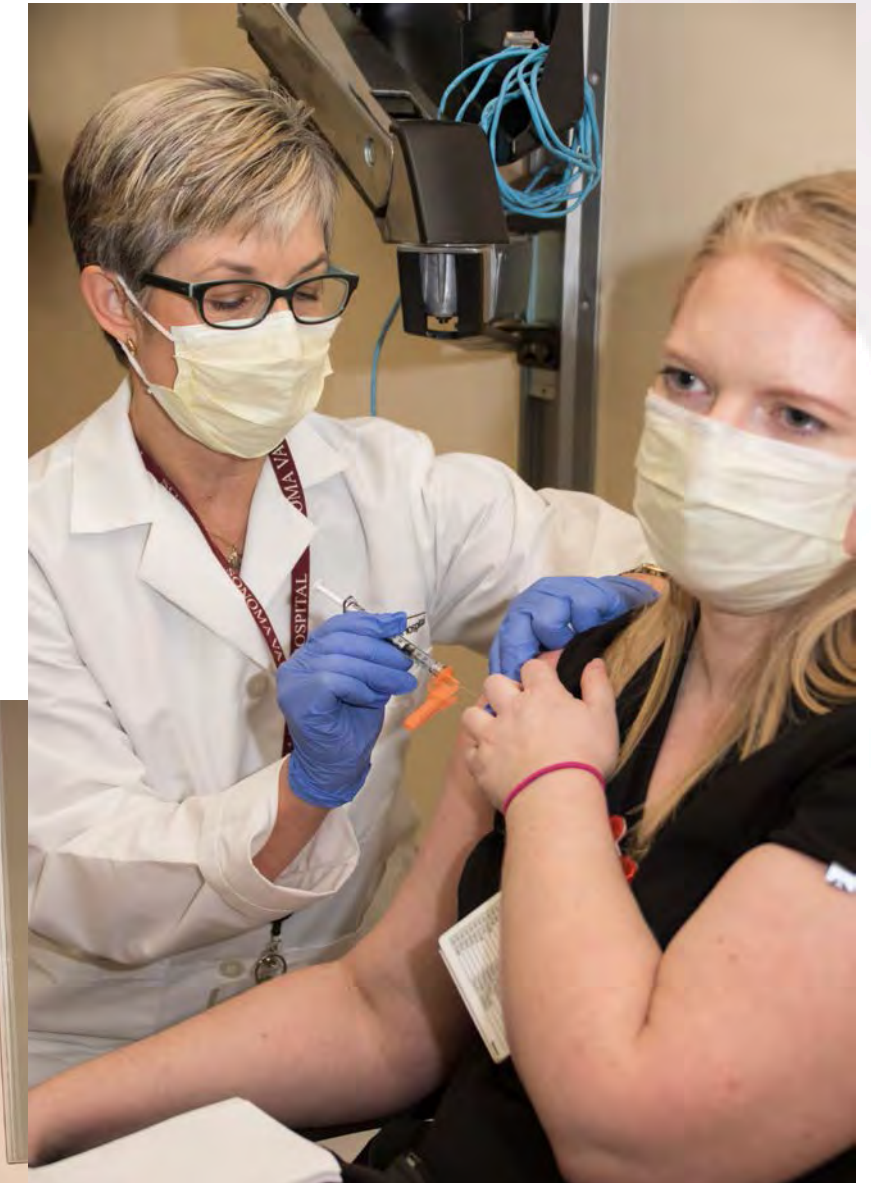


SVH Vaccinations

REPORTED SIDE EFFECTS with FIRST DOSE:

Injection site and arm soreness.

NO FEVERS or ALLERGIC REACTIONS!



Life After the Vaccine

- Yes, We must continue to:
 - Wear masks
 - Wash our hands
 - Keep our distance
- When will this be over:
 - After we reach “herd immunity”
 - Estimate: At least 70% (?) of the population has either vaccine induced or natural immunity.
 - Maybe summer 2021?

CA Notify App

- App designed to quickly notify individuals when they've been in sustained contact with someone who tested positive for COVID-19.
- App does NOT collect device location to detect exposure and does not share a user's identity. (Uses Bluetooth).

CA Notify App

- **How does it work?**
 - **If someone who downloads the app tests positive, they will be sent a verification code from CDPH to trigger anonymous notifications.**
 - **Anyone who receives a notification can follow guidance provided in app as to next steps.**

CA Notify App

Sign up TODAY!

canotify.ca.gov

Questions & Answers

THANK YOU!