

COVID Update

March 2021

Disclaimer

Reliable Information about any medical condition or treatment requires multiple carefully designed large studies done over many years.

- Small initial studies are often proven wrong by later larger studies
- Early results of a study often change:
 - After the study is completed
 - After other researchers re-analyze the data
- The actual data published does not always support the narrative asserting what the data means
- It's years too early into this illness to view any current information as reliable and I did not review the research methodologies in detail.

COVID Vaccines Under Approved and Under Development

Phase	One	Two	Three	Limited	Approved
Description	testing safety and dosage	expanded safety trials	large-scale efficacy tests	Vaccines in early or limited use	approved for full use
Participants	Small number	Hundreds	Thousands	In USA – Pfizer, Moderna, J&J	None in USA
Vaccines	45	32	23	6	7

- 79 Vaccines in human trials total

Pfizer/BioNTech and Moderna Vaccines

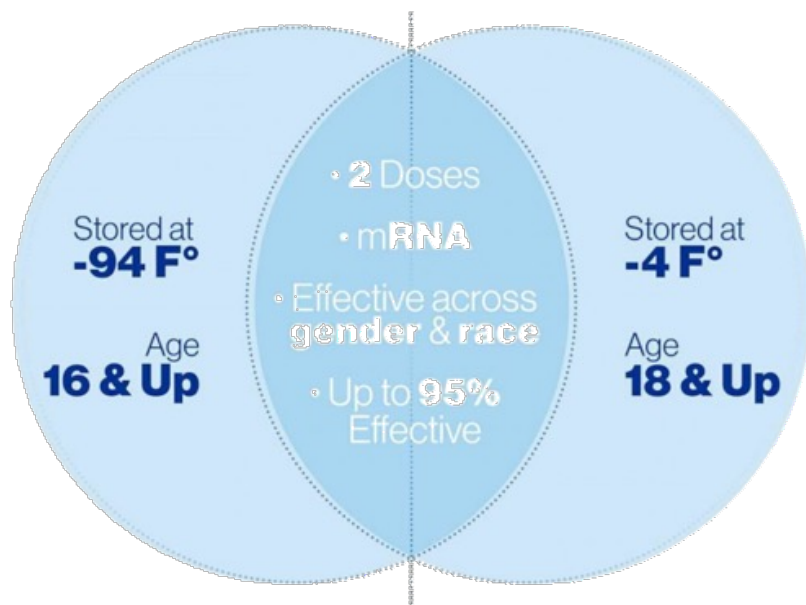
PFIZER vs. MODERNA



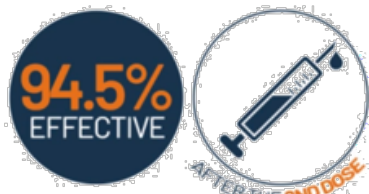
30 MICROGRAM DOSES
ADMINISTERED 21 DAYS APART



36,621
CLINICAL TRIAL
PARTICIPANTS
(16+ YEARS OLD)



100 MICROGRAM DOSES
ADMINISTERED 28 DAYS APART



30,350
CLINICAL TRIAL
PARTICIPANTS
(18+ YEARS OLD)

Johnson and Johnson

- genetically modified common cold virus common in chimpanzees produces COVID-19's spike proteins
- Initial efficacy results
 - USA 72%
 - Latin America 61%
 - 85% effective in preventing severe cases of Covid
 - 100% effective against hospitalization and death
- Stores for 3 months at 36-46 F and 2 years at -4 F
- Single dose
- FDA granted EUA on Feb 27
- But only 16M doses available by end of March
- Second Phase 3 trial to observe the effects of two doses of their vaccine, instead of just one began in November
- US funding: \$1 B upfront for 100M doses if the vaccine is approved.

NovaVax

- Grows spike proteins in moth cells (same method used in flu and HPV vaccines) then places the spike proteins onto microscopic particles that trigger an immune response after injection.
- Initial efficacy results
 - Original Virus 96%
 - South Africa (B.1.351) 49 %
- Stores for 3 months at 36-46
- Two doses
- US Funding: \$1.6 B upfront in July, contract for 100M doses if approved
- Current phase 3 trials underway
 - Dec 28 launched 30,000 volunteer trial in US, results expected in March
 - May be able to supply 110 M doses by June

AstraZeneca and Oxford University

- genetically modified common cold virus common in chimpanzees produces COVID-19's spike proteins
- Efficacy
 - 82.4% in UK
 - Not effective in South African variant (B.1.351)
 - 79% in USA and 100% against severe illness and hospitalization
- Lasts 6 months at 36-46 F, Costs only \$3-4/dose, easy mass production
- 2 injections, 12 weeks apart
- Mixed Approvals
 - In Use in over 45 countries including Brazil, UK, Canada, India
 - On Hold in Norway, Denmark, and parts of EU, due to concerns about blood clots. WHO and EMA found that the risks are no higher in comparison with the background level of these events
- US funding: \$1.2B upfront for 300M doses, 80M immediately available

Vaccination Progress Report – March 25

- Fully Vaccinated 46.4 M (14 %)
- At least one dose 85.5 M (26 %)
- Average Vaccinations per day 2.49 M
- Doses Delivered 169.2 M
- Doses used 77%
 - NM, MA, ND 88%
 - AR, AL, DC, MS 64-68%

Estimated date to 70% at least partially vaccinated
(herd immunity) – June 20

Risk of Severe Reactions is Very Low

- As of January 6 only 21 of the first 1.9 million of Americans to receive the Covid-19 vaccine experienced the severe allergic reaction known as anaphylaxis
- 17 had known risk factors for severe allergic reactions
- 20 known to have recovered and no known deaths
- By way of comparison
 - This rate of adverse reactions is 1.1 per 100,000
 - US Rate of death by motor vehicle crashes is 11.2 per 100,000
- CDC advises:
 - people with a history of drug allergies be observed for 30 minutes
 - All others be observed for 15 minutes after getting the shot
 - vaccination sites should have emergency equipment on hand, including epinephrine



Vaccine Acceptance is Increasing

Month	Got it or will ASAP	Wait and See	Mandated /Never
December	34%		
January	47%	31%	22%
February	55%	22%	22%

Covid has killed about 15 times more Americans than either the flu or vehicle crashes do in a typical year.

COVID Variants Appearing

- Britain (.1.1.7) – 30-50% more contagious, currently accounts for 23-30% of new cases,, Approx 60% more deadly than original, vaccines protect well
- South Africa (B.1.351) – more contagious, not as susceptible to vaccine induced antibodies but vaccines are still effective
- Brazil (B.1.1.28.1 or P.1) – similar to South African variant
- Currently USA has no national surveillance program checking virus genomes for new mutations



CDC New Distancing Recommendations

- Fully Vaccinated Persons Can:
 - Visit with other fully vaccinated people indoors without wearing masks or physical distancing
 - Visit with unvaccinated people from a single household who are at low risk for severe COVID-19 disease indoors without wearing masks or physical distancing
 - Refrain from quarantine and testing following a known exposure if asymptomatic
- Schools can reduce social distance to:
 - 3 foot –
 - All elementary schools
 - middle and high schools in low and medium transmission communities
 - 6 foot for middle and high schools in high transmission communities

Persons with SMI or SUD should be CDC Priority Phase 1c

- CDC Priority Phase 1c populations
 - Age 65-75
 - **Age 16-64 with medical condition putting them at high risk of Hospitalization, illness, death**
 - Essential Workers
- Increased risk due to SMI or SUD
 - Persons with SMI die 10-25 yrs younger mostly due to medical illness
 - Two national studies report increased rates of COVID in persons with MI
 - Study in NY found persons with schizophrenia had 2-3X COVID mortality
 - Study of 73M people found persons with SUD at 8.7X risk COVID infection
 - Study 54,529 people found persons with SUD had 2.3-1.8X risk of hospitalization, ventilator, and mortality



Questions?

Thank You

for being an important part of
the National Council community.