

# SARS CoV-2 Vaccine Summary





## Vaccine Comparison:

	Pfizer	Moderna	AstraZeneca/ Oxford
<b>Vaccine Type</b>	mRNA	mRNA	Viral vector
	All vaccines are inactive; NO live virus is used.		
<b>Dosage form</b>	Multi-dose vials (dose quantity per vial varies)		
<b>Storage</b>	"Ultra-cold" (-70° to -100°C) Dry ice or "ultra-cold" freezer required	"Normal freezer temperatures" (-20°C)	"Normal refrigerator temperatures" (2° - 8°C)
<b>Preparation</b>	Reconstitution required Thawed (refrigerated but not reconstituted): Use within 24-48 hours Reconstituted @ room temp: Use within 6 hours	Ready to use (reconstitution not required) Thawed (refrigerated): Use within 7-14 days Room temp: Use within 6 hours	Ready to use (reconstitution not required) Stable at least 6 months in refrigerator
<b>Administration</b>	2 dose series, 21 days between doses	2 dose series, 28 days between doses	
<b>Injection site</b>	Deltoid IM injection		
<b>Adverse Event(s)</b>	Onset: 12-24 hours post injection Minor: 10-20% Injection site pain, low fever, mild headache Major: 2%* (defined as side effect that prevents normal daily activity; fever, chills, nausea, malaise, joint pain, severe headaches, vertigo and "flu-like" symptoms) *While 2% is low, with 35 million people immunized by the year's end, it translates into 700,000 severe reactions.		
<b>Reported Efficacy (see study details below)</b>	95% effective	94.6% effective 100% effective against severe disease	70-90% effective



## Study Considerations:

-  Efficacy in the Pfizer & Moderna trials was based upon **symptomatic disease**
  - o Study participants were not tested unless they later presented with disease symptoms
  - o AZ/Oxford trial tested all study participants weekly and **counted any positive test against the efficacy data** (one reason why efficacy of vaccine may look lower in comparison to others)
-  AstraZeneca study flaw: Several patient volunteers received ½ the intended dose with the initial series
  - o Those that received the lower initial dose showed higher efficacy
  - o Plan in place to further study two test groups