

Storage and Handling	Moderna (Spikevax [mRNA-1273]) <sup>1-7</sup>			
Dry ice	<ul style="list-style-type: none"> <li>Do not use</li> </ul>			
Freezer storage	<ul style="list-style-type: none"> <li>-50°C to -15°C; Do not store below -50°C</li> <li>Keep in original packaging; Protect from light until ready to use</li> </ul>			
Refrigerator storage	<ul style="list-style-type: none"> <li>2°C to 8°C for up to 30 days</li> </ul>			
Refrigerator thawing	<p><b>Magenta/Teal/Purple Label vials:</b></p> <ul style="list-style-type: none"> <li>Thaw between 2°C to 8°C for 2 hours. Let each vial stand at room temperature for 15 mins before administering.</li> </ul> <p><b>Light Blue Label vials:</b></p> <ul style="list-style-type: none"> <li>5.5 mL (Max 11 Dose) Vial: Thaw at 2°C to 8°C for 2.5 hours</li> <li>7.5 mL (Max 15 Dose) Vial: Thaw at 2°C to 8°C for 3 hours</li> <li>After thawing, let each vial stand at room temperature for 15 minutes prior to administering.</li> </ul>			
Room temperature thawing	<p><b>Magenta/Teal/Purple Label vials:</b></p> <ul style="list-style-type: none"> <li>Thaw between 15°C to 25°C for 45 mins</li> <li>Unpunctured vials may be stored at 8°C to 25°C for up to 24 hrs.</li> </ul> <p><b>Light Blue Label vials:</b></p> <ul style="list-style-type: none"> <li>5.5 mL vial (Max 11 Dose) Vial: Thaw at 15°C to 25°C for 1 hour</li> <li>7.5 mL (Max 15 Dose) Vial: Thaw at 15°C to 25°C for 90 mins</li> <li>Unpunctured vials may be stored at 8°C to 25°C for up to 24 hrs.</li> </ul>			
In vial	<ul style="list-style-type: none"> <li>Stable for up to 12 hours from initial vial piercing at 2°C to 25°C; Discard after 12 hours</li> </ul>			
In syringe	<ul style="list-style-type: none"> <li>Stable for up to 12 hours from initial vial puncture (labeling and time stamp recommended)</li> <li>Store in refrigerator (2°C to 8°C) or at room temperature (15°C to 25°C)</li> <li>Keep out of direct sunlight</li> </ul>			
FDA status	<p><b>FDA-approved</b></p> <ul style="list-style-type: none"> <li>Primary two-dose series in individuals age ≥ 18 years</li> </ul>		<p><b>EUA:</b></p> <ul style="list-style-type: none"> <li>Primary 2-dose series in individuals 6 months through 17 years old</li> <li>Three-dose primary series for certain immunocompromised patients age 6 months or older</li> <li>First booster for individuals ≥ 18 years who have received primary series with Moderna or another authorized/approved COVID19 vaccine</li> <li>Second booster for individuals age ≥ 50 years or certain immunocompromised ≥ 18 years</li> </ul>	
Age minimum	<ul style="list-style-type: none"> <li>6 months</li> </ul>			
Dose	<ul style="list-style-type: none"> <li>0.5 mL for ≥ 12 years (<b>Light Blue Label</b>)</li> <li>0.5 mL for 6-11 years (<b>Purple*</b> or <b>Teal Label</b>); *<b>Purple</b> label vial states on vial "BOOSTER DOSES ONLY" but it may be used for primary dose series for individuals 6-11 years old</li> <li>0.25 mL 6 months to 5 years (<b>Magenta Label</b>)</li> </ul>			
Dose interval dose 1 to 2	<ul style="list-style-type: none"> <li>4 weeks</li> <li>3<sup>rd</sup> primary series dose ≥ 1 month after the 2<sup>nd</sup> dose is authorized in patients (≥ 6 months) who have undergone solid organ transplant or are diagnosed with conditions considered to have an equivalent level of immunocompromised</li> </ul>			
Booster dose	<ul style="list-style-type: none"> <li>0.25 mL (<b>Light Blue Label</b>)</li> <li>0.5 mL (<b>Purple Label</b>)</li> <li>Only for ≥ 18 years old</li> </ul>			
Booster dose interval (after receiving primary series)	<ul style="list-style-type: none"> <li>At least 5 months after primary series</li> <li>A 2<sup>nd</sup> booster may be given ≥ 4 months after 1<sup>st</sup> booster for individuals ≥ 50 years old and certain immunocompromised adults ≥ 18 years old</li> </ul>			
Dilution required?	<ul style="list-style-type: none"> <li><b>DO NOT DILUTE</b></li> </ul>			
Additional instructions	<ul style="list-style-type: none"> <li>Swirl gently after thawing and between each withdrawal. <b>Do not shake.</b></li> <li>Pierce stopper at different site each time; Do not puncture individual vial stopper more than 20 times.</li> </ul>			
# of primary series doses/vial	<ul style="list-style-type: none"> <li>5-15 (depends on vial size)</li> </ul>			
Vial types and # of full doses per vial based on experience	<b>Magenta Label and Dark Blue Cap vial</b> 10 doses NDC 80777-279-99	<b>Teal Label and Dark Blue Cap vial</b> 10 doses NDC 80777-277-99	<b>Purple Label and Dark Blue Cap vial</b> 5 doses NDC 80777-275-05	<b>Light Blue Label and Red Cap vial</b> 11-Dose vial (10-11 doses) NDC 80777-273-99; 15-Dose vial (13-15 doses) NDC 80777-273-98
Determining number of vials to thaw	<p>Consider 'no shows' and vials currently stored and/or thawing in the refrigerator.</p> <p><b>Example Calculation:</b></p> <ul style="list-style-type: none"> <li>▶ 609 vaccinations scheduled*1 (100% show rate)/10 = 60.9 vials (round up)</li> <li>▶ 61 – 2 vials from previous clinic – 10 vials thawing in refrigerator = remove 49 vials from freezer</li> </ul>			
Additional Information	<ul style="list-style-type: none"> <li>Call Moderna Medical Information: 1-866-663-3762</li> </ul>			

Storage and Handling		Pfizer-BioNTech (Comirnaty [BNT162b2]) <sup>8-15</sup>			
Dry ice	<ul style="list-style-type: none"> <li>Thermal shipping container may be used as temporary storage for up to 30 days from delivery with proper dry ice replenishment.</li> </ul>				
Freezer storage	<ul style="list-style-type: none"> <li>-90°C to -60°C until expiration date; Keep in original packaging and protect from light until ready to use</li> <li><b>Purple</b> cap vials may be stored at -25°C to -15°C for up to 2 weeks, and then may be returned <u>one-time</u> to -90°C to -60°C storage (track storage time/temperature)</li> <li><b>Do Not Store</b> Gray/Orange/Maroon vials in freezer (-25°C to -15°C).</li> <li>Vials expire 12 months from manufactured date regardless of storage</li> </ul>				
Refrigerator storage	<ul style="list-style-type: none"> <li>2°C to 8°C for up to 1 month for <b>Purple</b> cap vials and 10 weeks for Gray/Orange/Maroon cap vials</li> <li>Minimize room light exposure and avoid exposure to direct sunlight/ultraviolet light</li> </ul>				
Refrigerator thawing	<ul style="list-style-type: none"> <li>Thaw in refrigerator (2°C to 8°C); may take up to 6 hours depending on cap vial color and/or number of vials</li> <li>Vials that require dilution must be at room temperature at least 30 minutes prior to diluting</li> </ul>				
Room temperature thawing	<ul style="list-style-type: none"> <li>Thaw at room temperature (up to 25°C) for 30 minutes</li> <li>Vials that require dilution must be at room temperature for 30 minutes prior to diluting</li> <li><b>Purple</b> cap vials must be diluted within 2 hours of reaching room temperature</li> <li><b>Maroon/Orange/Gray</b> cap vials may be stored at room temperature (8°C to 25°C) for 12 hours prior to dilution</li> </ul>				
In vial	<b>Purple cap vials</b> <ul style="list-style-type: none"> <li>Stable for up to 6 hours from dilution at 2°C to 25°C; Discard after 6 hours</li> </ul>		<b>Gray/Orange/Maroon cap vials</b> <ul style="list-style-type: none"> <li>Stable for up to 12 hours from dilution at 2°C to 25°C; Discard after 12 hours</li> </ul>		
In syringe	<b>Purple cap vials</b> <ul style="list-style-type: none"> <li>Stable for up to 24 hours from dilution at 2°C to 30°C ± 2°C in polycarbonate and polypropylene syringes with stainless steel needles, with no more than 6 hours at room temperature (up to 30°C) and remainder in refrigerator (2°C to 8°C)</li> </ul>		<b>Gray/Orange cap vials</b> <ul style="list-style-type: none"> <li>Stable for up to 24 hours from dilution at 2°C to 30°C ± 2°C in polycarbonate and polypropylene syringes with stainless steel needles, with no more than 12 hours at room temperature (up to 30°C) and remainder in refrigerator (2°C to 8°C)</li> </ul> <b>MAROON cap: use immediately</b>		
FDA status	<b>FDA-approved</b> <ul style="list-style-type: none"> <li>Primary two-dose series in individuals age ≥ 16 years</li> </ul>		<b>EUA:</b> <ul style="list-style-type: none"> <li>Primary two-dose series in 5+ years; 3rd primary series dose in 5+ years with certain immunocompromising conditions; booster dose</li> <li>Primary 3 dose series for 6 months to &lt; 5 years;</li> <li>Children who will turn from 4 years to 5 years of age between any 2 doses in the primary series may receive: <ul style="list-style-type: none"> <li>2-dose primary series with the Pfizer-BioNTech COVID-19 Vaccine authorized for use in individuals 5 through 11 years of age <b>OR</b></li> <li>3-dose primary series initiated with the Pfizer-BioNTech COVID-19 Vaccine authorized for use in individuals 6 months through 4 years</li> </ul> </li> </ul>		
Age minimum	<ul style="list-style-type: none"> <li>6 months</li> </ul>				
Dose	<ul style="list-style-type: none"> <li>0.3 mL for 12+ years (<b>Purple</b> or Gray cap vial)</li> <li>0.2 mL for 5-11 years (<b>Orange</b> cap vial)</li> <li>0.2 mL for 6 months to &lt; 5 years (<b>Maroon</b> cap vial)</li> </ul>				
Dose interval dose 1 to 2	<b>Age 6 months to &lt; 5 years (Maroon cap vial):</b> <ul style="list-style-type: none"> <li>3 doses;</li> <li>3 weeks apart between doses 1 and 2</li> <li>Dose 3 at least 8 weeks after dose 2</li> </ul>		<b>≥ 5 years</b> <ul style="list-style-type: none"> <li>3 weeks</li> <li>3<sup>rd</sup> primary series dose ≥ 28 days after the 2<sup>nd</sup> dose is authorized in patients (≥ 5 years) who have undergone solid organ transplant or are diagnosed with conditions considered to have an equivalent level of immunocompromised</li> </ul>		
Booster dose	<ul style="list-style-type: none"> <li>0.3 mL (for 12+ years only) (<b>Purple</b> or Gray cap vial)</li> <li>0.2 mL (for 5-11 years only) (<b>Orange</b> cap vial)</li> </ul>				
Booster dose interval (after receiving primary series)	<ul style="list-style-type: none"> <li>At least 5 months after primary series</li> <li>A 2<sup>nd</sup> booster may be given ≥ 4 months after 1<sup>st</sup> booster for individuals ≥ 50 years old and certain immunocompromised patients ≥ 12 years old (<b>Purple</b> or Gray cap vial)</li> </ul>				
Dilution required?	<b>PURPLE cap and label vial</b>		<b>GRAY cap and label vial</b>		<b>ORANGE cap and label vial</b>
Additional instructions	<ul style="list-style-type: none"> <li>DILUTE</li> <li>After vial reaches room temperature invert vial 10 times; dilute with <b>1.8 mL</b> of <b>Preservative-Free</b> 0.9% NS and remove 1.8 mL of air from vial; invert vial 10 times. <b>Do not shake.</b></li> <li>Must be diluted within 2 hours of reaching room temperature</li> </ul>		<ul style="list-style-type: none"> <li><b>DO NOT DILUTE</b></li> <li>Before withdrawing each dose of vaccine, carefully mix by inverting vaccine vial gently 10 times. <b>Do not shake.</b></li> </ul>		<ul style="list-style-type: none"> <li>DILUTE</li> <li>After vial reaches room temperature invert vial 10 times; dilute with <b>1.3 mL</b> of <b>Preservative-Free</b> 0.9% NS and remove 1.3 mL of air from vial; invert vial 10 times. <b>Do not shake.</b></li> </ul>
	<b>MAROON cap and label vial</b>				
	<ul style="list-style-type: none"> <li>Each vial must be thawed before dilution either in the refrigerator (2 °C to 8 °C) or at room temperature (up to 25 °C)</li> <li>Mix by gently inverting vial 10 times. <b>Do not shake.</b></li> <li>Dilute the vial contents using 2.2 mL of sterile 0.9% NS and remove 2.2 mL air from vial.</li> <li>Gently invert the vial 10 times to mix; <b>Do not shake.</b></li> </ul>				
Vial types and # of full doses per vial based on experience	<b>PURPLE cap and label vial</b>		<b>GRAY cap and label vial</b>		<b>ORANGE cap and label vial</b>
	<b>6-7 doses</b> NDC 59267-1000-3; 59267-1000-2		<b>6-7 doses</b> NDC 59267-1025-4; 59267-1025-3		<b>10 doses</b> NDC 59267-1055-4
			<b>MAROON cap and label vial</b>		
			<b>10 doses</b> NDC 59267-0078-4		
Determining # of vials to thaw	<ul style="list-style-type: none"> <li>Consider 'no shows' and vials currently stored and/or thawing in the frig.</li> <li>If using low dead-volume syringes with pre-attached needles, 6-7 doses can usually be obtained from the 6-dose vial. If not, the average # of full-doses/vial is ~5.4</li> </ul> <p style="text-align: center;"><b>Example Calculation:</b></p> <ul style="list-style-type: none"> <li>▶ 609 vaccinations scheduled*1 (100% show rate)/5.5 = 110.7 vials (round up)</li> <li>▶ 111 – 2 vials from previous clinic – 2 vials thawing in refrigerator = remove 109 vials from freezer</li> </ul>				
Additional Information	<ul style="list-style-type: none"> <li>Call Pfizer Medical Information: 1-800-438-1985</li> </ul>				

Storage and Handling	Janssen Biotech (JNJ-78436735) <sup>16-18</sup>	Novavax, Adjuvanted <sup>19-21</sup>
Dry ice	<ul style="list-style-type: none"> <li>Do not use; not stored frozen</li> </ul>	<ul style="list-style-type: none"> <li>Do not use; not stored frozen</li> </ul>
Freezer storage	<ul style="list-style-type: none"> <li>Do not store frozen</li> </ul>	<ul style="list-style-type: none"> <li>Do NOT store frozen</li> </ul>
Refrigerator storage	<ul style="list-style-type: none"> <li>2°C to 8°C</li> <li>Protect from light. Do not store frozen.</li> </ul>	<ul style="list-style-type: none"> <li>2°C to 8°C</li> <li>Protect from light. Do not store frozen.</li> </ul>
Refrigerator thawing	<ul style="list-style-type: none"> <li>Vaccine is initially stored frozen by the manufacturer, then shipped at 2°C to 8°C. If vaccine is still frozen upon receipt, thaw at 2°C to 8°C.</li> </ul>	<ul style="list-style-type: none"> <li>N/A: Vials are stored refrigerated, no need to thaw</li> </ul>
Room temperature thawing	<ul style="list-style-type: none"> <li>If needed immediately, thaw at room temperature (max 25°C). At room temperature, a carton of 10 vials will take ~4 hours to thaw, and an individual vial will take ~1 hour to thaw.</li> <li>Unpunctured vials may be stored between 9°C to 25°C for up to 12 hours.</li> </ul>	<ul style="list-style-type: none"> <li>N/A: Vials are stored refrigerated, no need to thaw</li> </ul>
In vial	<ul style="list-style-type: none"> <li>Stable for up to 6 hours from first puncture at 2°C to 8°C or up to 2 hours at room temp (max 25°C)</li> <li>Discard vial if not used within these times</li> </ul>	<ul style="list-style-type: none"> <li>After first needle puncture, store between 2°C to 25°C for up to 6 hours</li> <li>Discard vial 6 hours after first needle puncture</li> </ul>
In syringe	<ul style="list-style-type: none"> <li>Filled syringes stable for up to 6 hours stored in refrigerator (2°C to 8°C) or 2 hours stored at room temperature (max 25°C) after first vial puncture</li> </ul>	<ul style="list-style-type: none"> <li>2°C to 25°C for up to 6 hours</li> </ul>
FDA status	<ul style="list-style-type: none"> <li>EUA</li> </ul>	<ul style="list-style-type: none"> <li>EUA: two-dose primary series</li> </ul>
Age minimum	<ul style="list-style-type: none"> <li>18 years</li> </ul>	<ul style="list-style-type: none"> <li>18 years</li> </ul>
Dose	<ul style="list-style-type: none"> <li>0.5 mL</li> </ul>	<ul style="list-style-type: none"> <li>0.5 mL</li> </ul>
Dose interval dose 1 to 2	<ul style="list-style-type: none"> <li>N/A; Single dose</li> </ul>	<ul style="list-style-type: none"> <li>3 weeks apart</li> </ul>
Booster dose	<ul style="list-style-type: none"> <li>0.5 mL; Moderna or Pfizer-BioNTech as a booster dose is preferred to Janssen in most situations</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Booster dose interval	<ul style="list-style-type: none"> <li>At least 2 months after primary series</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Dilution required? Additional instructions	<ul style="list-style-type: none"> <li>DO NOT DILUTE</li> <li>Before withdrawing each dose of vaccine, carefully mix the contents of the multi-dose vial by swirling gently in an upright position for 10 seconds. <b>Do not shake.</b></li> </ul>	<ul style="list-style-type: none"> <li>DO NOT DILUTE</li> <li>Gently swirl vial before each dose withdrawal. <b>Do not shake.</b></li> </ul>
# of primary series doses/vial	<ul style="list-style-type: none"> <li>5 doses/vial (NDC 59676-580-15)</li> </ul>	<ul style="list-style-type: none"> <li>10 doses/vial (NDC 80631-100-01)</li> </ul>
Determining # of vials to thaw	<ul style="list-style-type: none"> <li>Vials are stored refrigerated, no need to thaw</li> </ul>	<ul style="list-style-type: none"> <li>Vials are stored refrigerated, no need to thaw</li> </ul>
Additional Information	<ul style="list-style-type: none"> <li>Call Janssen Medical Information: 1-800-565-4008</li> </ul>	<ul style="list-style-type: none"> <li>Call Novavax Medical Information: 1-844-668-2829</li> </ul>
<b>NOTES FOR ALL COVID-19 VACCINES</b>	<ul style="list-style-type: none"> <li>Never refreeze vaccines after thawing.</li> <li>CDC states that pre-drawing vaccines may result in waste if more are drawn up than necessary, so they state that vaccines should be drawn only in preparation for immediate administration.</li> <li>Do not pool excess vaccine from multiple vials.</li> </ul>	

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