

## Pfizer and Moderna Vaccine Comparison

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In December 2020, two COVID-19 vaccines were granted Emergency Use Authorization (EUA) by FDA. Produced by Pfizer/BioNTech and Moderna, both vaccines use the same technology (mRNA). However, some noteworthy differences between the vaccines exist. A comparison of key details about both vaccines can be found below. This list is not exhaustive. For further details see the FDA EUA document for [Pfizer/BioNTech](#) and [Moderna](#).

	<b>Pfizer/BioNTech vaccine</b>	<b>Moderna vaccine</b>
<b>Target population</b>	<ul style="list-style-type: none"> <li>Approved for people aged 16 and older.</li> </ul>	<ul style="list-style-type: none"> <li>Approved for people aged 18 and older.</li> </ul>
<b>Vaccine efficacy</b>	<ul style="list-style-type: none"> <li>95% effective at preventing symptomatic COVID-19 infection.</li> <li>Efficacy rates did not vary based on demographic factors like age, race, or ethnicity.</li> <li>Insufficient data to determine if asymptomatic infection or infection transmission is prevented.</li> </ul>	<ul style="list-style-type: none"> <li>94.1% effective at preventing symptomatic COVID-19 infection.</li> <li>Slightly lower efficacy in individuals older than 65. No difference in efficacy based on race or ethnicity.</li> <li>Insufficient data to determine if asymptomatic infection or infection transmission is prevented.</li> </ul>
<b>Vaccine administration</b>	<ul style="list-style-type: none"> <li>Two shots are required, delivered 21 days apart. Each dose contains 30 micrograms of vaccine.</li> <li>The vaccine must be mixed with diluent before administration.</li> <li>Each vial contains up to six doses. Undiluted vials can be stored refrigerated for up to five days and at room temperature for no more than two hours. Mixed vaccine must be used within six hours or discarded.</li> </ul>	<ul style="list-style-type: none"> <li>Two shots are required, delivered 28 days apart. Each dose contains 100 micrograms of vaccine.</li> <li>No diluent is required.</li> <li>Each vial contains 10 doses. However, early field use suggests that a vial may yield an 11th dose due to manufacturer overfilling. Before first use, vials can be stored refrigerated for up to 30 days and at room temperature for up to 12 hours. Vaccine must be used within 6 hours of withdrawing the first dose or discarded.</li> </ul>
<b>Possible side effects</b>	<ul style="list-style-type: none"> <li>Most common side effects: injection site pain, fatigue, headache, muscle pain, joint pain, and fever.</li> <li>Side effects are more common after the second dose and are reported more by younger adults.</li> <li>Rarer side effects: severe allergic reactions, Bell's palsy.</li> </ul>	<ul style="list-style-type: none"> <li>Most common side effects: injection site pain, fatigue, headache, muscle pain, joint pain, and fever.</li> <li>Side effects are more common after the second dose and are reported more by younger adults.</li> <li>Rarer side effects: Bell's palsy.</li> </ul>
<b>Safety for pregnant/lactating individuals</b>	<ul style="list-style-type: none"> <li>No human data is available but interim animal study data show no issues.</li> <li>Pregnant/lactating people should discuss the risks and benefits with their provider.</li> </ul>	<ul style="list-style-type: none"> <li>No human data is available but completed animal studies show no issues.</li> <li>Pregnant/lactating people should discuss the risks and benefits with their provider.</li> </ul>
<b>Storage requirements</b>	<ul style="list-style-type: none"> <li>Must be shipped at -94°F, requires an ultra-cold freezer and dry ice.</li> </ul>	<ul style="list-style-type: none"> <li>Must be shipped at -4°F, which is the temperature of a refrigerator freezer.</li> </ul>
<b>Minimum purchase order</b>	<ul style="list-style-type: none"> <li>An order of the vaccine includes 975 doses.</li> </ul>	<ul style="list-style-type: none"> <li>An order of the vaccine includes 100 doses.</li> </ul>