# COVID-19 Vaccines Key Differences (July 2021)

<table>
<thead>
<tr>
<th>Name, strength &amp; formulation of drug</th>
<th>Pfizer/BioNTech</th>
<th>Oxford/AstraZeneca</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comirnaty™ vaccine (BNT162b2[mRNA])</strong> concentrate for solution for injection, presented as a multidose vial.</td>
<td>COVID-19 Vaccine AstraZeneca concentrate for solution for injection, presented as a multidose vial.</td>
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<tr>
<td><strong>Vaccine type</strong></td>
<td>Nucleic acid vaccines: mRNA</td>
<td>Viral-vector vaccines</td>
</tr>
<tr>
<td><strong>Dose and frequency of administration</strong></td>
<td>Two separate doses, 21-day interval between doses (operationally 21-42 days).</td>
<td>Two separate doses, 12-week interval between doses (operationally 4 -12 weeks).</td>
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<tr>
<td><strong>Maximum number of allowable doses per vial</strong></td>
<td>6 (with use of a low dead space syringe/needle)</td>
<td>11 (or 9 if UK produced vial)</td>
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<tr>
<td><strong>Vaccine presentation</strong></td>
<td>The solution is a white to off-white frozen suspension</td>
<td>The solution is colourless to slightly brown, clear to slightly opaque and particle free</td>
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<tr>
<td><strong>Strength &amp; active ingredient</strong></td>
<td>30micrograms BNT162b2[mRNA] in 0.3mL dose</td>
<td>5x10^{10} viral particles of ChAdOx1-S in 0.5mL dose</td>
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</tbody>
</table>
| **Excipients** | • Polyethylene glycol  
• Cholesterol  
• Potassium chloride  
• Monobasic potassium phosphate  
• Sodium chloride  
• Dibasic sodium phosphate dihydrate  
• Sucrose  
• Water for injection | • Histidine,  
• Histidine hydrochloride monohydrate,  
• Sodium chloride,  
• Magnesium chloride hexahydrate,  
• Disodium edetate (EDTA),  
• Sucrose,  
• Ethanol absolute,  
• Polysorbate 80 and  
• Water for injections |
| **Criteria for exclusion** | • Less than 16 years of age  
• Have received a dose of COVID-19 (Pfizer) in the preceding 21 days | • Less than 18 years of age  
• Have received a dose of COVID-19 Vaccine (AstraZeneca) in the preceding 28 days  
• Have a confirmed medical history of cerebral venous sinus thrombosis (CVST)  
• Have a confirmed medical history of splanchnic vein thrombosis (SVT)  
• Have a confirmed medical history of Antiphospholipid syndrome with thrombosis |
<table>
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<tr>
<th>Identification &amp; management of adverse reactions</th>
<th>Most frequent adverse reactions</th>
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</tr>
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<tbody>
<tr>
<td><strong>Cautions</strong></td>
<td>• Have a confirmed medical history of heparin induced thrombocytopenia</td>
<td>• Age less than 60 years old</td>
</tr>
<tr>
<td><strong>Pregnancy</strong></td>
<td>• Category B1</td>
<td>• Category B2</td>
</tr>
<tr>
<td></td>
<td>• Preferred vaccine for pregnant women.</td>
<td>• Animal reproductive toxicity studies have not been completed</td>
</tr>
<tr>
<td><strong>Preparation</strong></td>
<td>• Vial requires thawing and dilution</td>
<td>• No reconstitution required</td>
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<tr>
<td><strong>Disposal</strong></td>
<td>• Standard Schedule 4, clinical waste requirements</td>
<td>• Contains genetically modified organisms (GMOs), spill kit required.</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>• See <a href="https://example.com">QH Comirnaty protocol</a> for detailed storage information.</td>
<td>• See <a href="https://example.com">QH COVID-19 (AstraZeneca) protocol</a> for detailed storage information.</td>
</tr>
</tbody>
</table>

**Most frequent adverse reactions**
- Pain at the injection site (> 80%)
- Fatigue (> 60%)
- Headache (> 50%)
- Myalgia (> 30%)
- Chills (> 30%)
- Arthralgia (> 20%)
- Pyrexia (> 10%)

**Most frequent adverse reactions**
- Injection site tenderness (>60%)
- Injection site pain, headache, fatigue (>50%)
- Myalgia, malaise (>40%)
- Pyrexia, chills (>30%)
- Arthralgia, nausea (>20%).
- Note: possible causative link with Thrombosis with thrombocytopenia syndrome (TTS). TTS is thought to be rare.