# Table 1: Available vaccine efficacy data *(last updated August 9, 2021)*

| | Infection: variant not specified | | Asymptomatic: variant not specified | Symptomatic disease: variant not specified | Severe disease: variant not specified | Infection: ancestral type (D614G) | | Symptomatic disease: ancestral type (D614G) | | Severe disease: ancestral type (D614G) | | Infection: Alpha (B.1.1.7) | Asymptomatic: Alpha (B.1.1.7) | Symptomatic disease: Alpha (B.1.1.7) | | Severe disease: Alpha (B.1.1.7) | Infection: Beta (B.1.351) | Symptomatic disease: Beta (B.1.351) | | Severe disease: Beta (B.1.351) | | Symptomatic disease: Gamma (P.1) | | Severe disease: Gamma (P.1) | | Symptomatic disease: Delta (B.1.617.2) | | Severe disease: Delta (B.1.617.2) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Vaccine** | **1st dose** | **Complete regimen** | **Complete regimen** | **Complete regimen** | **Complete regimen** | **1st dose** | **Complete regimen** | **1st dose** | **Complete regimen** | **1st dose** | **Complete regimen** | **Complete regimen** | **Complete regimen** | **1st dose** | **Complete regimen** | **Complete regimen** | **Complete regimen** | **1st dose** | **Complete regimen** | **1st dose** | **Complete regimen** | **1st dose** | **Complete regimen** | **1st dose** | **Complete regimen** | **1st dose** | **Complete regimen** | **1st dose** | **Complete regimen** | **Notes** | **Source** |
| **Pfizer-BioNTech** | USA (health care personnel): 85% (69% to 93%) | USA (health care personnel): 94% (82% to 98%) | Israel: 94.4% (93.3% to 95.3%) | England: 93.3% (85.8% to 96.8%)<br>England: 89% (85% to 93%)<br>Israel: 98% (97.6% to 98.3%)<br>Trial (multinational, 4 months follow-up): 83.7% (74.7% to 89.9%) | Israel national: 97.5% (97.1% to 97·8%)<br>Israel (hospitalization): 98.2% (97.5% to 98.7%)<br>Israel (death): 98.5% (97.4 to 99.2%) | UK SIREN (Day 21+): 72% (58% to 86%)<br>Israel SHEBA (Day 15-28): 75% (72% to 84%)<br>Israel CLALIT (Day 14-20): 46% (40% to 51%) | UK SIREN: 86% (76% to 97%)<br>Israel CLALIT: 92% (88 to 95%) | Trial (Day 0-21): 52% (29.5% to 68.4%)<br>Israel SHEBA (Day 15-28): 85% (71% to 92%)<br>Israel CLALIT (Day 14-20): 57% (50% to 63%)<br>Israel Maccabi (Day 13-24): 51.4% (-7.2% to 78.0%)<br>England (Day 28+, 80+ yrs): 57% (48% to 63%) | Trial (original): 94.6% (90.3% to 97.6%)<br>Trial (updated): 91.3% (89.0% to 93.2%)<br>Israel CLALIT: 94% (87 to 98%)<br>England (80+ yrs): 88% (84% to 90%)<br>Canada: 92% (96% to 86%) | Trial: 100% (-52% to 100%)<br>Israel CLALIT (Day 14-21): 62% (39% to 80%) | Trial: 75% (-152.6% to 99.5%)<br>Israel CLALIT: 92% (75% to 100%)<br>Canada: 97% (79% to 100%) | Qatar: 89.5% (85.9% to 92.3%) | Israel National: 91.5% (90.7% to 92·2%) | | Israel national: 97.0% (96.7% to 97·2%)<br>Scotland: 92% (90% to 93%)<br>UK: 93.7% (91.6% to 95.5%)<br>Canada: 89% (87% to 91%) | Qatar: 100.0% (81.7% to 100.0%)<br>UK: 95% (78% to 99%)<br>Canada: 96% (93% to 98%) | Qatar: 75% (70.5% to 78.9%) | | Trial (SA): 100% (53.5% to 100.0%)<br>Canada: 85% (70% to 93%)* | | Qatar: 100.0 (73.7–100.0)<br>Canada: 98% (82% to 100%)* | | Canada: 85% (70% to 93%)* | | Canada: 98% (82% to 100%)* | | Scotland: 79% (75% to 82%)<br>UK: 88% (85.3% to 90.1%)<br>Canada: 85% (59% to 94%) | Canada: 78% (64% to 87%) | UK: 96% (86% to 99%) | Trial, Israel and UK studies assumed to apply to ancestral/D614G/B.1.1.7 outcomes<br>*Results combined for both Beta and Gamma variants | www.nejm.org/doi/full/10.1056/NEJMoa2034577<br>www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00448-7/fulltext<br>www.nejm.org/doi/full/10.1056/NEJMoa2101765<br>papers.ssrn.com/sol3/papers.cfm?abstract_id=3790399<br>www.medrxiv.org/content/10.1101/2021.01.27.21250612v1<br>assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/963532/COVID-19_vaccine_effectiveness_surveillance_report_February_2021_FINAL.pdf<br>https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-confirm-high-efficacy-and-no-serious<br>https://www.nejm.org/doi/full/10.1056/NEJMc2104974<br>https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00947-8/fulltext<br>https://khub.net/web/phe-national/public-library/-/document_library/v2WsRK3ZlEig/view/479607266<br>https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01358-1/fulltext<br>https://www.nejm.org/doi/full/10.1056/NEJMoa2108891<br>https://www.medrxiv.org/content/10.1101/2021.06.28.21259420v2<br>https://khub.net/documents/135939561/430986542/RCGP+VE+riskgroups+paper.pdf/a6b54cd9-419d-9b63-e2bf-5dc796f5a91f<br>https://www.nejm.org/doi/full/10.1056/NEJMoa2107058<br>https://www.bmj.com/content/373/bmj.n1088<br>https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00947-8/fulltext<br>https://www.medrxiv.org/content/10.1101/2021.07.28.21261159v1 |
| **Moderna** | USA (health care personnel): 88% (61% to 96%) | USA (health care personnel): 84% (31% to 96%) | | | | Trial (Day 0-21): 89.6% (85.2% to 92.6%) | | | Trial: 94.1% (89.3% to 96.8%)<br>Canada: 91% (64% to 98) | | Trial: 100% (NE)<br>Canada (≥7 days after dose 2): 96% (85.3% to 90.1%) | | | | Canada: 91% (84% to 95%)<br>Qatar: 100% (91.9% to 100%) | Canada: 94% (97% to 90%) | | Canada: 78% (60% to 88%)* | Qatar: 96.4% (91.9% to 98.7%) | Canada: 94% (75% to 99%)* | | Canada: 78% (60% to 88%)* | | Canada: 94% (75% to 99%)* | | Canada: 70% (52% to 81) | | Canada: 95% (67% to 99%) | | Trial assumed to apply to ancestral/D614G/B.1.1.7 outcomes<br>*Results combined for both Beta and Gamma variants | www.nejm.org/doi/full/10.1056/NEJMoa2035389<br>https://www.medrxiv.org/content/10.1101/2021.06.28.21259420v2<br>https://www.nature.com/articles/s41591-021-01446-y<br>https://www.nejm.org/doi/full/10.1056/NEJMoa2107058 |
| **Oxford-AstraZeneca** | | | | Trial (UK, SA, Brazil): 66.7% (57.4% to 74.0%)<br>England: 78% (69.7% to 84%)<br>Trial (South Africa): 21.9% (-49.9% to 59.8%) | | | Trial (UK): 51.9% (42.0% to 60.1%) | Canada: 78% (41% to 92%) | Trial (UK): 74.2% (65% to 81%) | | | | | | Trial (variant-specific): 74.6% (41.6% to 88.9%)<br>Scotland: 73% (66% to 78%)<br>UK: 74.5% (68.4% to 79.4%)<br>Canada: 75% (-98% to 97%) | UK: 86% (53% to 96%)<br>Canada (≥7 days after dose 2): 67% (-155% to 96%) | | Canada: 50% (27% to 66%)* | Trial (South Africa): 10.4% (-76.8 to 54.8%) | Canada: 82% (61% to 92%)* | | Canada: 50% (27% to 66%)* | Trial (Brazil SD, non-variant-specific): 57.6% (40.7% to 69.7%) | Canada: 82% (61% to 92%)* | | Canada: 70% (46% to 83%) | Scotland: 60% (53% to 66%)<br>UK: 67% (61.3% to 71.8%) | Canada: 87% (56% to 96%) | UK: 92% (75% to 97%) | Variant efficacy based sequenced samples for B.1.1.7 and B.1.351 and trial location for P.1. (Brazil)<br>*Results combined for both Beta and Gamma variants | www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32661-1/fulltext<br>www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00432-3/fulltext<br>papers.ssrn.com/sol3/papers.cfm?abstract_id=3779160<br>www.who.int/publications/i/item/WHO-2019-nCoV-vaccines-SAGE_recommendation-AZD1222-background-2021.1<br>https://khub.net/web/phe-national/public-library/-/document_library/v2WsRK3ZlEig/view/479607266<br>https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01358-1/fulltext<br>https://www.nejm.org/doi/full/10.1056/NEJMoa2108891<br>https://www.medrxiv.org/content/10.1101/2021.06.28.21259420v2<br>https://khub.net/documents/135939561/430986542/RCGP+VE+riskgroups+paper.pdf/a6b54cd9-419d-9b63-e2bf-5dc796f5a91f<br>https://www.nejm.org/doi/full/10.1056/nejmoa2102214 |
| **Johnson & Johnson** | | | Trial (USA, SA, Brazil): 65.5% (39.9% to 81.1%) | Trial (USA, SA, Brazil): 66.1% (55.0% to 74.8%) | | | | | Trial (USA): 72.0% (58.2% to 81.7%) | | Trial (USA): 85.9% (-9.4% to 99.7%) | | | | | | | | Trial (SA): 64.0% (41.2% to 78.7%) | | Trial (SA): 81.7% (46.2% to 95.4%) | | Trial (Brazil): 68.1% (48.8% to 80.7%) | | Trial (Brazil): 87.6% (7.8% to 99.7%) | | | | | Efficacy is based on 28+ day outcomes<br>Variant efficacy based on trial location (USA, Brazil, South Africa):<br>94.5% of sequenced samples in South Africa were B.1.351<br>69.4% of sequenced samples in Brazil were P.1<br>96.4% of sequenced samples in USA were D614G | www.fda.gov/media/146218/download<br>www.fda.gov/media/146217/download<br>www.fda.gov/media/146219/download |
| **Novavax** | | | | Trial phase 3 UK (7 days after dose 2): 89.7% (80.2% to 94.6%) | | | | | Trial (UK): 89.3% (75.2% to 95.4%) | | | | | UK Trial phase 3: 86.3% (71.3% to 93.5%) | Trial (variant-specific): 86% (59.2% to 95.0%) | | | | Trial (SA): 51.0% (-0.6% to 76.2%) | | | | | | | | | | | 92.7% of sequenced samples in South Africa were B.1.351 | ir.novavax.com/static-files/2f6f14cb-3205-4719-b28c-1711793b9782<br>https://www.nejm.org/doi/full/10.1056/NEJMoa2103055<br>https://www.nejm.org/doi/10.1056/NEJMoa2107659 |
| **Sputnik V** | | | | | | | | | Trial: 91.6% (85.6% to 95.2%) | | Trial: 100% (94.4% to 100%) | | | | | | | | | | | | | | | | | | | Trial assumed to apply to ancestral/D614G/B.1.1.7 outcomes | www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00234-8/fulltext |
| **CoronaVac** | | | | Trial (Turkey): 83.5% (65.4% to 92.%)<br>Chile: 65.9% (65.2% to 66.6%) | Trial (Turkey): 100% (20.4% to 100%)<br>Chile (hospitalization): 87.5% (86.7% to 88.2%)<br>Chile (death): 86.3% (84.5% to 87.8%) | | | | Trial (Indonesia): 65.3% (25 cases)<br>Trial (Turkey): 91.3% (29 cases) | | | | | | | | | | | | | | Trial (Brazil): 50.3% (252 cases: 167 placebo, 85 vaccine)<br>Brazil (healthcare workers): 36.8% (-54.9 to 74.2) | | | | | | | | www.nature.com/articles/d41586-021-00094-z<br>https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01429-X/fulltext<br>https://www.nejm.org/doi/full/10.1056/NEJMoa2107715<br>https://www.thelancet.com/journals/lanam/article/PIIS2667-193X(21)00017-X/fulltext |
| **Sinopharm** | | | | Trial: 72.5% (not reported) | | | | | | | | | | | | | | | | | | | | | | | | | | Unpublished reports | www.scmp.com/news/china/science/article/3122980/covid-19-vaccines-made-chinas-sinopharm-cansino-release-efficacy |
| **CanSinoBio** | | | | Trial: 65.7% (not reported) | | | | | | | | | | | | | | | | | | | | | | | | | | Unpublished reports | www.reuters.com/article/us-health-coronavirus-vaccine-pakistan/cansinobios-covid-19-vaccine-65-7-effective-in-global-trials-pakistan-official-says-idUSKBN2A81N0 |
| **Covaxin** | | | | Trial: 78% (61% to 88%) | Trial: 100% (60% to 100%) | | | | | | | | | | | | | | | | | | | | | | | | | Interim results | https://www.bharatbiotech.com/images/press/covaxin-phase3-clinical-trials-interim-results.pdf |