Table E1: Studies reported Allergy skin testing for COVID-19 vaccine and its excipients:

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Study, year of publication, country | Study methodology and time (month/year) | Female % (NO/Total No of patients) | Patients reported reaction to COVID-19 vaccine (NO/%) | Medications used for polysorbate 80 testing | Medications used for PEG testing | COVID-19 Vaccine used in testing | Patients with positive allergy testing (NO/%) | Patients with positive allergy testing reacted second dose of the same or different vaccine | Patients with positive allergy testing tolerate second dose of the same or different vaccine | Conclusion |
| Wolfson et al. 2021, USA  (1) | Prospective, January to March 2021 | 89% (71/80) | 80 (100%) | Triamcinolone acetonide, Refresh Tears | Miralax, Methylprednisolone acetate | No | 14 (18%) | 30% (3/10) | 70% (7/10) | Skin testing has little utility in assessing non-anaphylaxis allergic reactions secondary to COVID-19 vaccine |
| ALMuhizi et al. 2022, Canada  (2) | January 1, to October 31, 2021 | 88.7% (39/44) | 40 (91%) + 4 with previous PEG-related allergies | Polysorbate 80 (Tween80) | PEG 300, PEG 3350, PEG 3000, PEG 20,000 | No | -7.5%  (3/40)  - 50%  (2/4) | 33% (1/3) non-severe reaction | -66%  (2/3)  -100%  (2/2) tolerated different vaccine | PEG testing is often unnecessary; most patients tolerated vaccination |
| Otani et al. 2022, USA  (3) | December 1, 2020, to August 31, 2021 | 89%  39/44 | 44 (100%) | Triamcinolone acetate, Prevnar-13 | Miralax, Methylprednisolone acetate | N0 | (3/14) 21%  questionable positives | 0/3 | 3/3 | Skin testing had limited predictive value for second-dose tolerance. |
| Svarca et al. 2024, Kosovo  (4) | December 2020 to February 2023 | 69.6% (163/234) | 234 (high-risk/allergy history | Not specified | Not specified | 66% (155/234)  (BNT162b2, Pfizer), 34%  (79/234) AZD1222, AstraZeneca | (4/155) 2.58% for Pfizer, (3/79) 3.8% for AZ | - | - | Most reactions to COVID  19 vaccinations are mild, self-limiting, and did not discourage vaccination |
| Vidal Oribe et al. 2022, Spain  (5) | 2022, Case report | Not specified | 5 | polysorbate 80 | PEG 4000 (Casenlax), PEG 3350 (Movicol)  PEG 2000, PEG 1500 (Roxall) | Pfizer, Moderna, AstraZeneca | 1 positive IDT with PS80 and with all the vaccines | 0/1 | 0/1 | Patients allergic to polysorbate 80 may tolerate PEG-containing vaccines. |
| Pitlick et al. 2022, USA  (6) | Retrospective.  January to July 2021 | Cohort 1:(44/55) 80%  Cohort 2: 65/74 (87.8%) | Cohort 1: 55 | Triamcinolone acetonide, Prevnar-13 | Miralax, fresh polysorbate compounds | Pfizer-BioNTech, Janssen in 11 patients | Cohort 1  (4/55) 7.3%  Cohort 2: (8/74) 10.8% | Cohort 1: 25% (1/4)  Cohort 2: 0/8 | Cohort 1: 50% (2/4)  Cohort 2:  37.5% (3/8) | Skin testing showed limited utility; graded dosing often effective. |
| Shavit et al. 2022, Israel  (7) | March to December 2021 | 92.1% (47/51) | 51 | - | PEG-3350, Normalax, methylprednisolone acetate | Pfizer (BNT162b2), AstraZeneca (AZD1222) | (6/51) 11.7% | 16.6% (1/6) reacted to different vaccine | 83%  (5/6) | Vaccine IDT with either BNT162b2 or AZD1222 vaccine may identify sensitized patients. |

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