

15 SEPTEMBER 2021

CONSENSUS STATEMENT

COVID-19 VACCINATION

FOR INDIVIDUALS WITH
ALLERGIC/HYPERSENSITIVITY DISORDERS

SECTION OF CLINICAL IMMUNOLOGISTS AND ALLERGISTS
COLLEGE OF PHYSICIANS, SINGAPORE



ACADEMY OF MEDICINE
SINGAPORE



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BACKGROUND

1. The Singapore COVID-19 national vaccination programme currently comprises the following mRNA vaccines, approved via the Pandemic Special Access Route (PSAR):
 - (1) Pfizer-BioNTech/ Comirnaty COVID-19 mRNA vaccine in persons aged 12 years and above ^[1]
 - (2) Moderna COVID-19 mRNA vaccine in persons aged 18 years and above ^[2]
2. The Sinovac and Sinopharm vaccines are now available under the Special Access Route (SAR) and are now considered part of the national vaccination programme. They are however not covered by the Vaccine Injury Financial Assistance Programme (VIFAP).
3. Individuals who are fully vaccinated with the World Health Organization’s Emergency Use Listing (WHO EUL) vaccines such as Sinovac-CoronaVac, Sinopharm, and AstraZeneca will be considered “fully-vaccinated” two weeks after he or she has received the full regimen of Pfizer-BioNTech/ Comirnaty, Moderna, or any WHO EUL vaccines.
4. The UK Medicines and Healthcare products Regulations Agency (MHRA) surveillance of mRNA COVID-19 vaccine adverse events under the Yellow Card Scheme have reported anaphylaxis or anaphylactoid reactions; and self-limiting large local reactions which have been classified as delayed hypersensitivity reactions.
5. Other reported adverse reactions to the vaccine in publications include urticarial and morbiliform eruptions.^[3]
6. Whilst previously, reactions to polyethylene glycol (PEG) in mRNA COVID-19 vaccines were attributed to either IgE-mediated, or cell-mediated hypersensitivity, recent literature supports non-immunologic mechanisms causing anaphylaxis/ anaphylactoid reactions, such as complement activation-related pseudoallergy (CARPA).^[4]
7. International consensus on vaccine allergy and guidance on COVID-19 vaccine reactions have previously been published.^[5,6,7,8]
8. The United States Centres for Disease Control and Prevention (CDC) Guidelines dated 4 Mar 2021 lists the following advice for persons who had developed hypersensitivity reactions following vaccination with the first dose of mRNA COVID-19 vaccines: ^[9]
 - Persons who developed anaphylaxis should not receive the second dose.
 - Persons who developed immediate-type reactions (defined as a reaction occurring within 4 hours of vaccination, and includes manifestations of urticaria, angioedema, and wheeze) not requiring emergency care should not receive the second dose.
 - Persons who developed large local reactions may receive the second dose at the recommended interval, on the contralateral arm.
8. To date, there are emerging studies which have demonstrated successful revaccination of patients who developed anaphylaxis and delayed reactions.^[3, 10,11,12] However, overall

consensus and guidance on persons who developed delayed-type hypersensitivity reactions after the first dose of Pfizer or Moderna vaccines is scarce.

RECOMMENDATIONS

The Section of Clinical Immunologists and Allergists' updated recommendations are as follows:

1. **Known anaphylaxis** to first dose of either Pfizer-BioNTech or Moderna COVID-19 Vaccine: we would recommend avoid vaccinating the second dose, or other mRNA vaccine.
2. **High-risk hypersensitivity/allergic reaction to the first dose:** we would recommend avoiding vaccinating the second dose in the following circumstances:
 - Urticaria or angioedema with onset within 4 hours post-vaccination
 - Mucositis and/ or bullous skin eruptions of any duration of onset post-vaccination
3. **May receive second dose mRNA COVID-19 vaccination:**
 - Large local reactions
 - Other non-severe, non-immediate skin reactions (onset more than 4 hours after vaccination) without systemic symptoms: maculopapular rash, fixed drug eruption, erythema multiforme. Clinical judgement is to be exercised; if in doubt to refer to an allergist or dermatologist for assessment.
4. **Unlikely to be vaccination-related reactions:** we would recommend to proceed with second dose vaccination:
 - Non-specific cutaneous symptoms such as itch in the absence of any rash; localised erythema beyond the site of vaccination; eczema
5. **History of immediate allergic reactions from previous non-COVID-19 vaccines (containing polyethylene glycol (PEG) or polysorbate):** skin testing with PEG or polysorbate containing surrogate drugs for excipient allergy may be considered.^[13,14]

A list of PEG or polysorbate containing vaccines are available at: <https://www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/b/excipient-table-2.pdf>
6. **Cutaneous reactions with onset of more than 7 days from vaccination:** these are unlikely to be allergic in nature. A history of other potential triggers should be sought. The 2nd dose is not contraindicated.
7. **Reactogenic skin reactions:** these may occur in patients with underlying skin disorders e.g. flares of skin psoriasis, eczema, episodic or chronic spontaneous or inducible urticaria/ angioedema. The 2nd dose is not contraindicated.^[15]

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