

# Gradual doses used to vaccinate people allergic to their first dose of COVID-19 vaccine

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Researchers from Rochester Regional Health used graded doses to successfully administer a second dose of the Moderna vaccine to two

patients who had an immediate hypersensitivity reaction with the first dose. Their case report is published today in *Annals of Internal Medicine*.

The first patient, a 64-year-old woman with a history of shellfish allergy, received dose one of the Moderna vaccine and experienced skin irritation, hives, and a rapid heartbeat within 10 minutes. She was treated successfully by medical personnel at the vaccination site. Patient 2, a 39-year-old woman with a history of allergic rhinitis, received dose one of the Moderna vaccine and developed hives on her chest and neck within 15 minutes. Medical personnel treated her symptoms at the vaccination site, but she went on to develop mild facial swelling and was transported by ambulance to the emergency department. After brief treatment, her symptoms resolved and she was discharged to home in stable condition.

Before having a second dose of the vaccine, both patients were referred to the authors' allergy practice for further evaluation. Skin prick and intradermal showed reaction to the Moderna vaccine. But since both patients worked in the health care setting with repeated exposure to patients with COVID-19, they wanted to make an educated decision with their [health care](#) provider about proceeding with the second dose of the vaccine. The authors administered the vaccine without premedication through a graded dosing protocol that used smaller doses of [vaccine](#) over five injections given every 15 minutes with patients being observed for reaction throughout the process. Both patients responded well to the graded dosing protocol and reported no additional symptoms over the following 24 hours. In addition, three to four weeks after receiving the second dose, both [patients](#) had IgG antibodies directed against the spike protein of COVID-19, suggesting vaccination was efficacious despite the graded dosing protocol.

**More information:** S. Shahzad Mustafa et al. Administration of a Second Dose of the Moderna COVID-19 Vaccine After an Immediate

Hypersensitivity Reaction With the First Dose: Two Case Reports,  
*Annals of Internal Medicine* (2021). [DOI: 10.7326/L21-0104](https://doi.org/10.7326/L21-0104)

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