

# Moderna Vaksin Covid-19

Vaksin COVID-19 Spikevax, atau yang lebih sering dikenal dengan Vaksin Moderna, adalah jenis vaksin mRNA, yaitu vaksin yang mengandung komponen genetik (mRNA) dari virus SARS-COV-2 yang mengkode protein spike virus tersebut. Vaksin ini tidak mengandung virus hidup, dan tidak menyebabkan penyakit COVID-19. Dengan vaksin ini, tubuh akan membuat replica atau kopi dari protein spike, sehingga sistem imun bisa belajar mengenali dan melawan virus SARS-COV-2 yang menyebabkan COVID-19.<sup>1,2</sup>

## Izin Vaksin Moderna

Vaksin Moderna sudah mendapat izin Emergency Use Authorization (EUA) dari Food and Drug Administration (FDA) Amerika Serikat untuk pencegahan COVID-19 pada usia 18 tahun ke atas.<sup>3</sup>

Di Indonesia sendiri, vaksin Moderna ini sudah mengantongi Izin Penggunaan Darurat dari Badan Pengawas Obat dan Makanan Republik Indonesia (BPOM RI).<sup>4</sup>

## Penerima Vaksin Moderna

Vaksin Moderna dapat diberikan pada orang yang berusia 18 tahun ke atas. Vaksin ini aman diberikan kepada ibu hamil maupun menyusui. Apabila Anda memiliki salah satu dari kondisi di bawah ini, pastikan Anda mendapat advis kapan sebaiknya divaksinasi dari dokter Anda terlebih dahulu.<sup>1,2</sup>

- Adanya penyakit radang/inflamasi jantung (miokarditis, perikarditis, endokarditis) dalam 6 bulan terakhir
- Demam reumatik akut atau penyakit jantung reumatik
- Kardiomiopati dilatasi pada usia kurang dari 30 tahun
- Penyakit jantung kongenital
- Gagal jantung berat
- Penerima transplan jantung
- Riwayat langsung pingsan setelah vaksinasi sebelumnya

## Cara Pemberian Vaksin Moderna

Vaksin Moderna diberikan dengan cara suntikan di lengan atas sebanyak 2 kali, yang mana dosis kedua diberikan 4-6 minggu (sekitar 1 bulan) setelah dosis pertama.<sup>1,2</sup>

## Kontraindikasi Vaksin Moderna

Berikut beberapa hal yang menjadi kontraindikasi vaksin Moderna:<sup>1,2</sup>

- Anafilaksis (reaksi alergi berat) terhadap vaksin COVID-19 jenis mRNA sebelumnya (misalnya: Pfizer, Moderna)
- Anafilaksis terhadap komponen vaksin, termasuk polyethylene glycol (PEG)
- Terjadinya miokarditis dan/atau perikarditis setelah menerima vaksin COVID-19 jenis mRNA sebelumnya (misalnya: Pfizer, Moderna)

## Keuntungan Vaksin Moderna

Beberapa keuntungan vaksin Moderna antara lain:<sup>1,2</sup>

- Pada penerima vaksin lengkap (2 dosis), efektivitas mencapai 94% untuk mencegah COVID-19 yang bergejala dibandingkan mereka yang tidak divaksin.
- Vaksin ini ditemukan efektif pada lansia >65 tahun (86%)
- Proteksi mulai muncul sekitar 2 minggu setelah dosis pertama meski tidak berlangsung lama, sehingga tetap membutuhkan 2 dosis untuk proteksi optimal meskipun belum diketahui belum berapa lama proteksi ini bertahan.

## Efek Samping Vaksin Moderna

| Frekuensi     | Efek Samping <sup>1,2,5</sup>  |
|---------------|--|
| Cukup Sering  | Nyeri / bengkak / kemerahan di area bekas suntikan, pembesaran kelenjar getah bening di lengan yang disuntik, sakit kepala, lemas, pegal-pegal, demam / meriang, nyeri sendi / otot (hilang dalam 1-2 hari)              |
| Lebih jarang  | Reaksi alergi tidak berat meliputi: ruam kulit, lepuhan kulit, gatal-gatal, bengkak*   |
| Jarang        | Radang/inflamasi jantung (miokarditis dan/atau perikarditis), umumnya gejala muncul beberapa hari setelah dosis ke-2 Moderna: nyeri dada, sesak nafas, berdebar-debar.*  |
| Sangat jarang | Reaksi alergi berat (anafilaksis) umumnya muncul dalam beberapa menit sampai 1 jam setelah penyuntikan. Ditandai dengan: sesak nafas, bengkak pada wajah dan tenggorokan, berdebar-debar, ruam di sekujur tubuh, lemas** |

Segera temui dokter bila Anda mengalami reaksi alergi tidak berat\* dan ke IGD bila mengalami reaksi alergi berat\*\* setelah Anda meninggalkan area vaksinasi.

## Poin Penting Setelah Vaksin Moderna

Setelah menerima vaksin Moderna, berikut beberapa hal yang perlu diperhatikan:<sup>1,2</sup>

- Tidak ada vaksin yang 100% efektif, sehingga kita pun masih mungkin terkena COVID-19 setelah menerima vaksin Moderna
- Belum diketahui berapa lama proteksi dari vaksin Moderna bertahan
- Penting dicatat bahwa COVID-19 sekalipun ringan ataupun tanpa gejala, tetap bisa menular ke orang lain. Maka, kita tetap harus melakukan upaya pencegahan seperti: menjaga jarak, mencuci tangan, memakai masker, serta melakukan tes COVID-19 dan isolasi sesuai aturan pemerintah.



1. Australian Government. COVID-19 Vaccination: Information on COVID-19 Comirnaty (Pfizer) Vaccine. Latest update: 27 Aug 2021. Available from: <https://www.health.gov.au/sites/default/files/documents/2021/09/covid-19-vaccination-information-on-comirnaty-pfizer-covid-19-vaccine.pdf>.  
2. US Food and Drug Administration. Vaccine Information Fact Sheet for Recipients and Caregivers about Comirnaty (COVID-19 Vaccine, mRNA) and Pfizer-BioNTech COVID-19 Vaccine to Prevent Coronavirus Disease 2019 (COVID-19). Available from: <https://www.fda.gov/media/144414/download>.  
3. US FDA News Release. FDA Approves First COVID-19 Vaccine. Latest update: 23 Aug 2021. Available from: <https://www.fda.gov/news-events/press-announcements/fda-approves-first-covid-19-vaccine>.  
4. Badan POM. Siaran Pers Tambah Pilihan Jenis Vaksin COVID-19 di Indonesia. Latest update: 7 September 2021. Available from: <https://www.pom.go.id/new/view/more/pers/622/SIARAN-PERS-Tambah-Pilihan-Jenis-Vaksin-COVID-19-di-Indonesia-Badan-POM-Terbilkan-EUA-untuk-Janssen-COVID-19-Vaccine-dan-Vaksin-Convidecia.html>.  
5. Australian Government Department of Health. About the Comirnaty (Pfizer) COVID-19 Vaccine. Latest update: 13 Sept 2021. Available from: <https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/learn-about-covid-19-vaccines/about-the-comirnaty-pfizer-covid-19-vaccine>.  
6. Australian Government. COVID-19 Vaccination: After your COVID-19 Vaccination. Available from: <https://www.health.gov.au/sites/default/files/documents/2021/03/covid-19-vaccination-after-your-pfizer-comirnaty-vaccine-covid-19-vaccination-after-your-pfizer-comirnaty-vaccine.pdf>.

# Moderna Covid-19 Vaccine

Spikevax COVID-19 vaccine, or more widely known as Moderna Vaccine, is an mRNA vaccine, which is a vaccine that contains the genetic component (mRNA) of SARS-COV-2 virus which encodes for its spike protein. This vaccine allows our body to make copies of the spike protein so that our immune system can recognize and fight the SARS-COV-2 virus which causes COVID-19.<sup>1,2</sup>

## Authorization for Moderna Vaccine

Moderna Vaccine is available under Emergency Use Authorization (EUA) by the US Food and Drug Administration (FDA) to prevent COVID-19 on people aged 18 years and above.<sup>3</sup>

In Indonesia, Moderna vaccine is approved by Badan Pengawas Obat dan Makanan Republik Indonesia (BPOM RI) or Indonesian FDA for emergency use.<sup>4</sup>

## Moderna Vaccine Receiver

Moderna vaccine can be given to people aged 18 years and above. This vaccine is safe for both pregnant and lactating women. If you have one of the health conditions below, please ask for your doctor's advice on when to get vaccinated:<sup>1,2</sup>

- History of cardiac inflammation (myocarditis, pericarditis, endocarditis) in the past 6 months
- Acute rheumatic fever or rheumatic heart disease
- Dilated cardiomyopathy for people under 30 years old
- Congenital heart disease
- Severe heart failure
- Heart transplant receiver
- History of syncope at previous vaccinations

## Administration of Moderna Vaccine

Moderna vaccine is injected into the upper arm for 2 doses. The second dose is administered in 4-6 weeks (around 1 month) after the first dose.<sup>1,2</sup>

## Contraindication of Moderna Vaccine

The followings are the contraindications of Moderna vaccine:<sup>1,2</sup>

- Anaphylactic (severe allergic reaction) to other mRNA COVID-19 vaccine (e.g. Pfizer, Moderna)
- Anaphylactic to vaccine components including polyethylene glycol / PEG
- History of myocarditis and / or pericarditis after receiving mRNA COVID-19 vaccine (e.g. Pfizer, Moderna)

## Benefits of Moderna Vaccine

Several benefits of Moderna vaccine include:<sup>1,2</sup>

- Those who received vaccine completely (2 doses) are 94% less likely to get symptomatic COVID-19 compared to those who are not vaccinated
- This vaccine is found effective in elderly aged >65 years old (86%)
- Protection develops around 2 weeks after dose 1 is given although it may not last long. Hence, second dose is necessary for optimal protection although it is not known how long this protection will last.



## Side Effects of Moderna Vaccine

| Frequency      | Side Effects <sup>1,2,5</sup>  |
|----------------|--|
| Quite Often    | Redness / swelling / pain in the injected area, lymph node enlargement of the injected arm, headache, tiredness, fever / chills, muscle / joint pain (gone in 1-2 days)  |
| Less Often     | Non severe allergic reaction include: rash, hives, itching, swelling*  |
| Rare           | Inflammation of the heart (myocarditis and / or pericarditis), usually symptoms appear a few days after the second dose of Moderna: chest pain, breathing difficulties, having fast beating / fluttering / pounding heart.*                        |
| Extremely Rare | Severe allergic reaction (anaphylaxis) often occur within minutes to 1 hour after injection. Characterized by: breathing difficulties, swelling of the face / throat, having fast beating / pounding heart, bad rash all over the body, weakness** |

Please see your doctor if you have the symptoms\* or go to the emergency room immediately if you experience severe allergic reaction\*\* after you leave the vaccination area.

## Important Points After Getting Vaccinated with Moderna

After receiving Moderna injection, please note several points below:<sup>1,2</sup>

- There is no vaccine which is 100% effective. Thus, we may still get infected with COVID-19 after vaccination.
- It is not known yet how long the protection from Moderna vaccine will last
- It is important to note that COVID-19, although mild or even asymptomatic, can still infect others. Thus, we should continue other preventive measures like physical distancing, hand washing, wearing a face mask, COVID-19 testing and isolation according to government's regulation.

1. Australian Government. COVID-19 Vaccination: Information on Spikevax (Moderna) COVID-19 Vaccine. Latest update: 7 Sept 2021. Available from: <https://www.health.gov.au/sites/default/files/documents/2021/09/covid-19-vaccination-information-on-spikevax-moderna-covid-19-vaccine.pdf>

2. US Food and Drug Administration. Fact Sheet for Recipients and Caregivers Emergency Use Authorization (EUA) of the Moderna COVID-19 Vaccine to Prevent Coronavirus Disease 2019 (COVID-19) in Individuals 18 Years of Age and Older. Latest update: 27 Aug 2021. Available from: <https://www.fda.gov/media/144638/download>.

3. US Food and Drug Administration. Moderna COVID-19 Vaccine. Latest update: 31 Aug 2021. Available from: <https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/moderna-covid-19-vaccine>.

4. Badan POM. Saran PERS Tambah Pilihan Jenis Vaksin COVID-19 di Indonesia. Latest update: 7 September 2021. Available from: <https://www.pom.go.id/new/view/more/pers/615/Badan-POM-Terbil-kan-EUA-Moderna-COVID-19-Vaccine-Sebagai-Vaksin-Pertama-dari-Platform-mRNA.html>.

5. Centers for Disease Control and Prevention. Moderna. Latest update: 19 Aug 2021. Available from: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/Moderna.html>.