

# COVID-19 vaccination

## 15 - question



These answers are based on the opinions of Professor Hiroshi Kakeya, Department of Infection Control Science, Osaka City University Graduate School of Medicine, and Associate Professor Yasutoshi Kido, Department of Parasitology

### Q What types of vaccines are administered at OCU and OPU?

#### Why this vaccine?

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A The vaccine everyone receives at OCU and OPU is called an RNA vaccine, which is made by Moderna in the United States.

It is a new process that has been shown to be highly effective.

The Ministry of Health, Labor and Welfare has decided to send it to us.

### Q What is a vaccine? What's in it?

2

A The leading role is played by messenger RNA, a gene that produces a specific protein in the protruding part of the new coronavirus. The immune response to this specific protein occurs and when the new coronavirus enters the body, it attacks and eliminates the virus. This substance is said to be safe because it is a blueprint that only conveys genetic information and is destroyed after a while.

### Q What are the benefits of the vaccine? How effective is it?

3

A Clinical trials have shown that vaccination is effective in preventing 94% of cases. In other countries where vaccination is already underway, the number of infected and severely ill people has been decreasing. In some countries, life has almost returned to normal.

### Q Is the new vaccine effective against the mutated strains?

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A At the very least, it is likely to be effective against the mutated strains that are currently prevalent or likely to become prevalent in Japan.

**Q** Do I need the vaccine even if I have already been exposed to the new coronavirus once?

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**A** Vaccination is recommended. In the case of natural infection, the immune response is weaker and the duration is shorter than that of vaccination. Some people believe that only one vaccination is necessary. However, considering the necessity of issuing a certificate, you should receive two doses of vaccination as usual according to the instructions of the Ministry of Health, Labor and Welfare.

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**Q** What kind of reaction is an "adverse reaction"?

**Q** How common are they, and who is prone to them?

6

**A** After the first vaccination, soreness at the vaccination site occurs in 6 to 7 out of 10 people. Sluggishness, muscle aches, and fever are seen in about 1 to 2 out of 10 people. Most people recover within 3 days. After the second vaccination, these reactions tend to be more severe. In addition, allergic reactions such as hives may be seen in rare cases. Serious adverse reactions such as anaphylaxis are extremely rare (2.5 times in a million, or 0.00025%). Even if they do occur, there is nothing to worry about as appropriate measures are in place. Incidentally, serious adverse reactions are reported to be 1 in 1 million for influenza vaccines, which is a little higher, but still extremely rare. Adverse reactions tend to occur more often in young people and women. Vaccination does not cause a coronavirus infection. If you have any symptoms other than fever, such as abnormal sense of taste or smell, or cough, you should seek medical attention.

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**Q** What are the other disadvantages?

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**A** There have been no reports of any other disadvantages that are causally related to the vaccination, with a maximum follow-up of one year.

Q

## I had a hard time with the flu vaccination before...

8

A

Adverse reactions such as mild fever, general malaise, and redness/swelling at the injection site are also experienced after the influenza vaccine.

If you are not clearly allergic to the flu vaccine, you may be able to receive the new coronavirus vaccine, but please consult with your family doctor or the interviewing physician at the vaccination site before deciding whether to receive the vaccine.

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## How long does the effect last?

Q

### Do I have to be vaccinated every year?

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A

Using the antibody titer of neutralizing antibodies that block the activity of the virus as an indicator, the Moderna vaccine is expected to be effective for about one year, although it decays slowly. In addition, the effect of activated cellular immunity is also considered. Long-term effects beyond one year will be better understood in the future.

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Q

## Why do I have to be vaccinated twice?

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A

The first time, the body's immune system remembers the virus and the immune response begins to work.

In the second session, this memory is awakened and the immune response is dramatically enhanced. There are individual differences, but in most cases, the first time is not enough.

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Q

## Is there anything I should be aware of before I get vaccinated?

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A

It is common knowledge, but please make sure you are in good physical condition.

Also, after the vaccination, it may be hard to move around, so please plan your schedule so that you can avoid straining yourself on the day of or the day after. For the second vaccination, please manage your health and schedule better than the first time.

## Is there anything I should be careful about

**Q** on the day of vaccination?

12

**A**

Since your body is undergoing an inflammatory reaction, you should rest and refrain from strenuous exercise or drinking alcohol on the day you receive the vaccine.

Also, try to keep the vaccination site of your body clean.

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**Q** Is it safe to get vaccinated even if I have hay fever or allergies?

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**A**

You can get vaccinated in the same way as people without allergies. If you are concerned, please consult with the doctor at the vaccination site.

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**Q** Do I have to wear a mask after I get the vaccine?

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**A**

Antibodies gradually increase from the end of the second vaccination and reach their peak two weeks to one month later.

The efficacy of preventing the onset of the disease in those vaccinated with two doses of the vaccine has been reported to be about 90%, but not 100%. It is also thought that if many people are vaccinated, they will acquire herd immunity and the overall preventive effect will be higher.

However, since vaccination is still not widely available in Japan, please continue to take basic infection prevention measures such as masks, hand washing, and alcohol disinfection.

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**Q** Will I get a certificate of vaccination?

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**A**

After you have been vaccinated, the date and place of your vaccination and the information about the vaccine you received will be recorded.

The municipality where you live will issue a vaccine certificate upon application. This certificate will tell you when, where, and which vaccine you received.