

Biology & Physiology topics 10 (Related COVID-19)

Influenza vaccines could prevent us from developing severe COVID-19!? 🤔 (05/19/2022)

I was reading an article called "[Flu vaccine could cut COVID risk](#)" on Nature website. Thank you very much. 😊 This article introduced a study that influenza vaccines could prevent the most severe forms of COVID-19. The following are quotes from this article:

A study of more than 30,000 health-care workers in Qatar found that **those who got a flu jab were nearly 90% less likely to develop severe COVID-19 over the next few months, compared with those who hadn't been recently vaccinated against flu.**

The study, which was conducted in late 2020, before the roll-out of COVID-19 vaccines, is in line with previous work suggesting that ramping up the immune system using influenza vaccines and other jabs could help the body to fend off the coronavirus SARS-CoV-2.

In the early months of the pandemic — while COVID-19

vaccines were still in development — researchers were intensely interested in the possibility that existing vaccines might provide some protection against SARS-CoV-2. **But collecting strong evidence for such an effect is difficult, because people who seek vaccination for diseases other than COVID-19 might also make other choices that reduce their risk of being infected with SARS-CoV-2.**

To minimize the impact of this 'healthy-user effect', a team led by Laith Jamal Abu-Raddad, an infectious-disease epidemiologist at Weill Cornell Medicine–Qatar in Doha, analysed the health records of 30,774 medical workers in the country. There is probably less variation in health-related behaviour among such workers than in the general population, reducing — but probably not eliminating — bias, Abu-Raddad says.

The researchers tracked 518 workers who tested positive for SARS-CoV-2 and matched them to more than 2,000 study participants who had tested negative for the virus. **Those who had received an influenza vaccine that season were 30% less likely to test positive for SARS-CoV-2, and 89% less likely to develop severe COVID-19, compared with workers who had not (although the number of severe cases was small in both groups).** The study was posted on the medRxiv preprint server on 10 May.

Günther Fink, an epidemiologist at the University of Basel in Switzerland, says the Qatar analysis reduces the odds that other studies that uncovered the same link were a fluke. **His team reported that flu vaccines were associated with a reduced risk of death in people hospitalized with COVID-19 in Brazil.**

"This is an important piece of evidence," says Mihai Netea, an infectious-disease specialist at Radboud University Medical Center in Nijmegen, **the Netherlands. The observation that influenza vaccines are linked to a reduction in not just SARS-CoV-2 infections, but also disease severity, strongly suggests that the protection is genuine, he adds.**

How long this protection lasts is unclear. Among those in the Qatar study who had the flu jab and later contracted COVID-19, **Abu-Raddad's team recorded SARS-CoV-2 infections occurring, on average, about six weeks after vaccination.** "I don't expect to see this effect lasting long at all," he says. Netea guesses that the benefits last for between six months and two years.

Maybe this is the reason why we were able to prevent the severity of this new coronavirus infection in Japan since the beginning of 2020. 🤔 I think many office workers were vaccinated against the flu before the COVID-19 pandemic. It may be said that those people escaped severity. 🤔

Keywords: Influenza Vaccine

I hope that everyone measures against the Covid-19 as usual 🤔 (05/17/2022)

As I wrote a little in the [tweets](#) yesterday, but I thought it would be better for everyone especially Japanese to think a

little about the change in the Japan Government's recent countermeasures against the Covid-19. 🙄 I was also able to do some research thanks to the [tweet](#) of "異邦人(or @Narodovlastiye)". 🙄 There is the Japanese article "[Prime Minister Kishida will review coronavirus countermeasures in June, 'I want to regain our daily life even more'](#)" on Mainichi Shimbun. The following is a quote from this article:

Prime Minister Fumio Kishida held the press conference in London at the end of a series of foreign visits on the 5th (JST), and announced a plan to review the measures against COVID-19 step by step in June. In addition to immigration control measures, he seems to be considering alleviating domestic activities, and said, "I want to regain our daily life even more."

I was checking [the Japanese page](#) about the current Coronavirus cases in Japan on the website of the Ministry of Health, Labour and Welfare. 😊 The number of deaths due to the Covid-19 since the beginning of this year is more than 10,000. In the previous two years, there were about 20,000 people. Since mutating it to the Omicron variant, the number of deaths has still increasing. 🙄 Before the Omicron variant, the number of deaths was only increasing according to the epidemic period, but it is currently on a constant increase. 🙄

Total Coronavirus Deaths in Japan

死亡者数（累積）

情報更新日：2022年05月15日

死亡者数（累積）

30,053 人

前日比

↑ 22 人

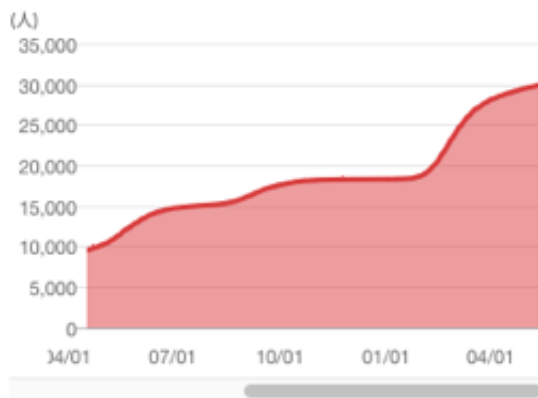
グラフ表示期間

1週間

1か月

3か月

1年



▶ 注釈・コメント

Severe Cases in Japan

重症者数の推移

情報更新日：2022年05月15日

重症者数

134 人

前日比

↓ 5 人

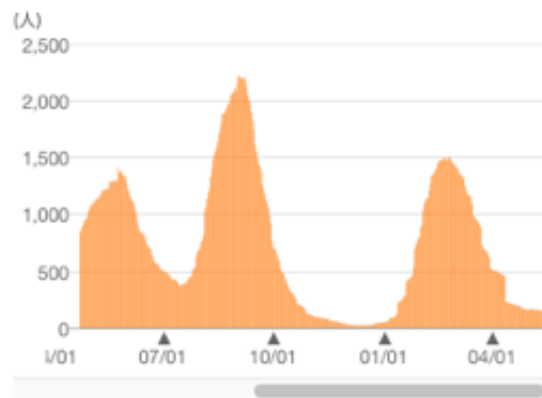
グラフ表示期間

1週間

1か月

3か月

1年



▶ 注釈・コメント

However, the number of active cases and the number of severe cases have been now low. Therefore, people who have not received medical treatments have recently passed away.

🙄 If you have any concerns, I'd like you to have the free [test: Japanese only](#). Thank you very much. 🙏

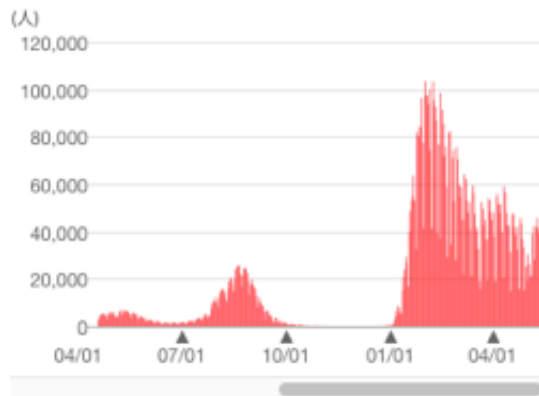
Daily New Cases in Japan 新規陽性者数の推移（日別）

情報更新日：2022年05月15日

新規陽性者数	1週間平均	前週平均
34,895 人	38,821 人	28,576 人
前日比 ↓ 4,444 人		

グラフ表示期間

1週間 1か月 3か月 1年



▶ 注釈・コメント

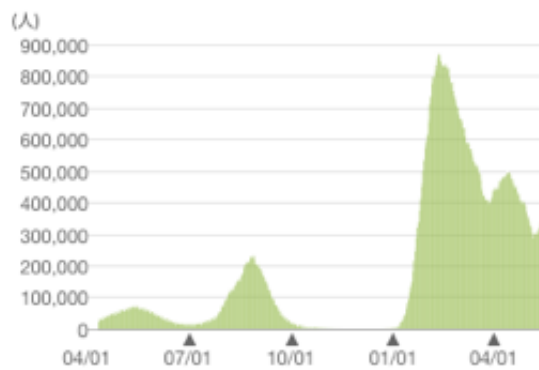
Active Cases in Japan 入院治療等を要する者等推移

情報更新日：2022年05月15日

入院治療等を要する者	344,529 人	↑ 5,804 人
退院又は療養解除者数	7,962,784 人	↑ 27,961 人
確認中	28,741 人	↑ 1,745 人

グラフ表示期間

1週間 1か月 3か月 1年



Ref: [Coronavirus Cases: Japan](#)

You may think that the epidemic is calming down now, but it can be said that a certain number of people in Japan are always asymptomatic. In addition, many cases of Long COVID and other unknown childhood hepatitis have been reported. From now on, Japan will be summer, so you should take care of yourself as much as possible, so I think it's better to take your own measures as before. 🙏

In the current situation where there is still a risk of infecting the coronavirus again, I think we have to reduce the number of it as much as possible. I hope the next epidemic season will not come from now on, but I think it will probably come. 😞

Keywords: Omicron variant, Countermeasures Against the Covid-19

Immune cells infected with COVID-19 may be the cause of severe COVID-19 🤔 (04/23/2022)

I was reading an article called "[What triggers severe COVID? Infected immune cells hold clues](#)". Thank you very much. 😊

This article introduced a study that immune cells infected with SARS-CoV-2 can trigger a massive inflammatory response that contributes to severe COVID-19. The following are quotes from this article:

The latest studies implicate two types of white blood cells — macrophages in the lungs, and monocytes in the blood — which, once infected with the virus, trigger the inflammation. The studies also provide conclusive evidence that the virus can infect and replicate in immune cells — and reveal how it enters those cells. Evidence of such infections has been mixed until now.

The researchers also looked at another type of immune cell, macrophages, in the lungs of people who had died of COVID-19. Because macrophages collect cellular garbage, including viral debris, it has been difficult to show whether macrophages were infected with SARS-CoV-2 or just sopping up this debris. **The team found that about a quarter of macrophages had activated inflammasomes, and a fraction of those had indeed been infected with the virus. Other infected lung cells, epithelium, did not display the same response.**

The results align with those of the second study, posted on bioRxiv² and yet to be peer reviewed, by Esen Sefik, an immunologist at the Yale University School of Medicine, New Haven, and her colleagues. **They also found that the virus could infect and replicate in macrophages in human lung cells and in a mouse model of the human immune system.** The macrophages displayed the same inflammatory response described by Lieberman, and eventually died.

But Stanley Perlman, a virologist also at the University of Iowa, says follow-up studies will be needed to work out how important infected immune cells are in inducing severe COVID-19 compared with other possible mechanisms.

I assume that if immune cells are infected with SARS-CoV-2, the immunity in the body is difficult to function. I hope we can figure out exactly how it is. 🙄

Keywords: Immune Cell, Inflammatory Response, Macrophage, White Blood Cell