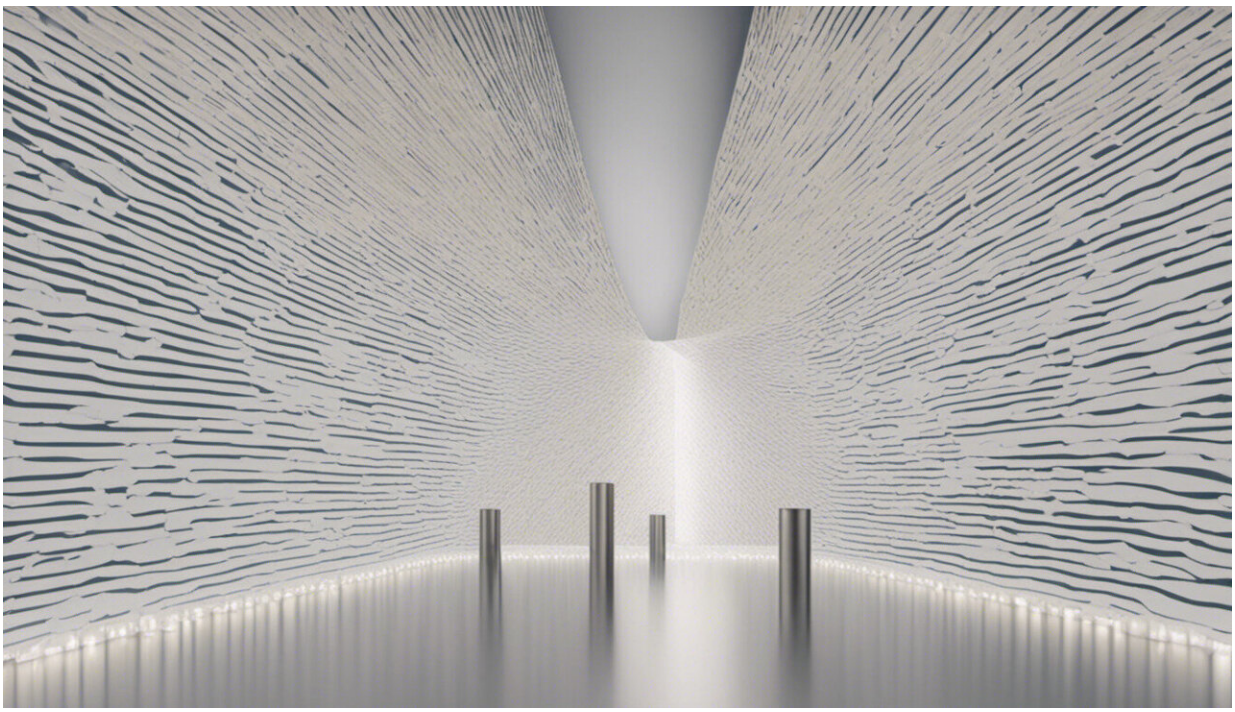
Medical Xpress

We expected people with asthma to fare worse during COVID, but it turns out they've had a break

November 23 2021, by Bruce Thompson



Credit: AI-generated image (disclaimer)

There were fears at the beginning of the COVID pandemic that people with asthma would fare much worse than those without it. Intuitively, a disease that attacks the lungs should put asthma sufferers at much greater risk.

But this hasn't been borne out.

Firstly, it's turned out people with asthma are at slightly lower risk of acquiring COVID, being hospitalized with it or indeed dying from it compared to people without asthma. Though, someone with asthma who is hospitalized with COVID is slightly more likely to require ICU admission.

In addition, asthma attack rates have substantially reduced in many parts of the world.

What explains this?

Asthma sufferers aren't getting sicker from COVID

Asthma is an umbrella term for a range of diseases of the airways, which have similar outcomes—constriction of the airways causing difficulty breathing. In some forms of asthma the constriction is a result of inflammation, or rash, within the lung.

Many people with asthma take asthma preventers, which are a type of steroid drug we lung experts call "inhaled corticosteroids." These drugs reduce the amount of inflammation in the lungs.

Interestingly, another steroid, dexamethasone, is being used as a treatment for COVID for this same reason.

Asthmatics might be inadvertently reducing the risk of severe COVID if they contract it by regularly using their preventers, because they are "pre-treated" if you like.

Indeed some preventers are thought to be "anti SARS-CoV-2," that is, they have some ability to kill the virus that causes COVID.

What's more, some good evidence from Australia demonstrates that patients with asthma have decreased "ACE2 gene expression." ACE2 is the point of entry for the SARS-CoV-2 virus to get into our cells.

If you have less ACE2 then there are fewer gateways for the virus to enter our cells, and there's less opportunity for the infection to take hold.

Why have asthma attacks declined?

There a number of possible reasons why asthma attacks have declined.

Asthma is a chronic condition which can flare up when sufferers are exposed to their "triggers." Common ones are pollens, chemicals, dust mites, pets, mold, smoke, or viruses.

Social distancing and locking down millions of people around the world has been a real time case study in what staying at home would do to asthma rates.

Because people in lockdown go outside a lot less, it could reduce their exposure to pollen and other allergens and irritants outdoors such as smoke, thereby reducing asthma attacks.

> Asthma attacks unexpectedly dropped during the pandemic. Now doctors are rethinking long-held assumptions about one of the biggest public health problems in the U.S., reports @sarahzhang: https://t.co/ipG0veTRYG
>
> — The Atlantic (@TheAtlantic) July 10, 2021

What's more, social distancing and lockdowns also significantly reduce the number of interactions between people, thereby reducing the spread of infectious diseases. We've been able to reduce COVID cases this way,

and flu cases too.

In 2019, there were 302,084 flu cases notified to health departments in Australia. And that was with a significant proportion of the population vaccinated.

In 2021, up to November 7, there have been just 598 flu cases.

Along with this, we can presume there have been far fewer common colds and other types of infectious diseases.

Viruses can cause asthma flare ups, which is known by lung experts as "viral exacerbation of asthma." So fewer people with colds and the flu could also contribute to lower asthma attack rates.

There have also been reports of fewer people seeking medical care for fear of contracting COVID in health-care settings, which may be another reason for fewer people seeking care for asthma.

What will happen to asthma post-COVID?

We're used to tolerating a certain level of many infectious diseases in the community, particularly things like common colds, strep throat, even glandular fever and the flu.

For many of us, this is no big deal and the only effects are feeling not great for a few days or weeks of the year.

But for many others, these sorts of common infectious illnesses can be deadly. Think about someone with cystic fibrosis, which severely damages the lungs and digestive system. If they get a cold or the flu, it can seriously knock them around, or even kill them. Same with someone who takes medications to depress their immune system, for example

people with rheumatoid arthritis.

These infections result in many hospitalisations, which puts pressure on the whole hospital system.

From COVID, we know there are simple measures we can take to substantially reduce the transmission of these seemingly "benign" diseases, including wearing masks, not going to work or socializing when you're sick, and washing/sanitizing your hands regularly.

We've reached the milestone of having more than 80% of Australians over 16 fully vaccinated against COVID, and international travel is resuming. Returning travelers are likely to bring with them new flu strains that we're totally unprepared for.

Usually flu vaccines for Australia are designed to tackle strains from the Northern Hemisphere winter so we're prepared for when the new strain arrives in our winter.

But there has been such little flu overseas, and with the understandable focus on COVID, our vaccines for flu and other existing conditions may need to be revisited.

Not revisiting existing vaccines for flu and other previously common conditions may lead to a wave of flu and many other diseases, given we'll have limited immunity to them.

So we may soon see asthma attacks take off again, exacerbated by viruses.

Provided by The Conversation