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Mask study published by NIH suggests N95 Covid masks may expose wearers to dangerous level of toxic compounds linked to seizures and cancer

- A study published in April found disposable masks can have toxic chemicals
- Experts said this could make newly instated mask mandates ineffective
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The surgical N95 mask has been held up as the gold standard when it comes to protecting against **Covid**.

But a study quietly re-shared by the National Institutes of Health in spring suggests the tight-fitting mask may expose users to dangerous levels of toxic chemicals.

Researchers from Jeonbuk National University in **South Korea** looked at two types of disposable medical-grade masks, as well as several reusable cotton masks.

The study found that the chemicals released by these masks had eight times the recommended safety limit of toxic volatile organic compounds (TVOCs).

Inhaling TVOCs has been linked to health issues like headaches and nausea, while prolonged and repeated has been linked to organ damage and even cancer.



A study published in April found that several disposable masks contain more than eight times the US recommended limit of toxic volatile organic compounds (TVOCs)

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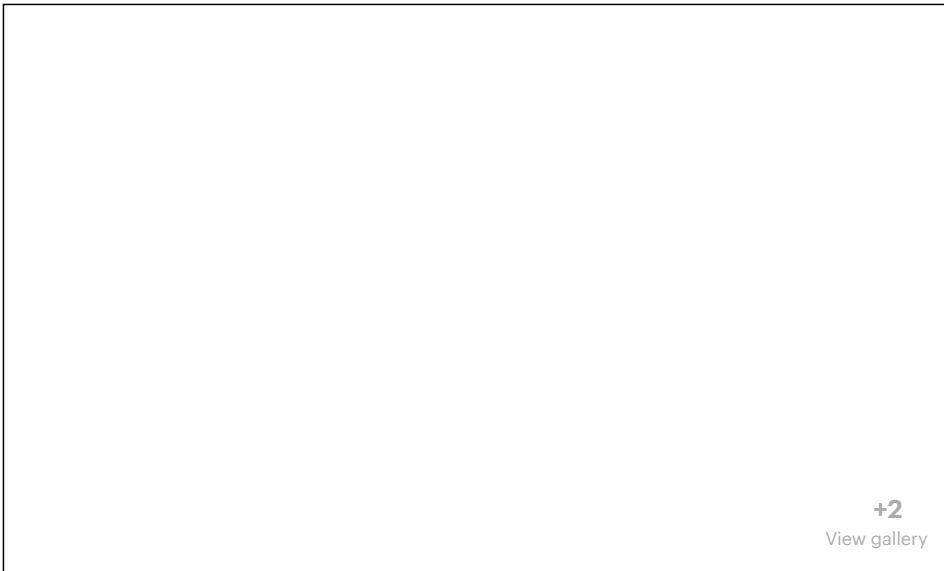
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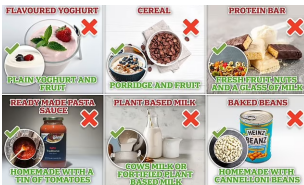
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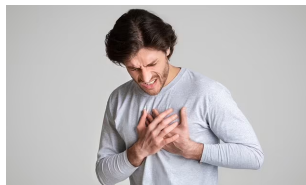
Samples A1 through B3 represent disposable masks, whereas samples C1 through E4 are cloth masks. Disposable masks had up to 14 times more TVOCs than cloth masks

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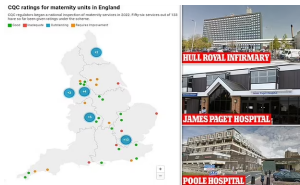
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'It is clear that particular attention must be paid to the VOCs associated with the use of KF94 [medical] masks their effects on human health,' the researchers wrote in the study published April.

However, there are ways to reduce the danger, they said. 'Exposure can be significantly reduced if a mask is opened and left to sit for at least 30 min,' the researchers wrote.

This suggests that the packaging of these masks could play a role in the amount of chemicals they have.

The study was published in the journal Ecotoxicology and Environmental Safety and on the NIH's website.

The NIH said: 'Inclusion in an NLM database does not imply endorsement of, or agreement with, the contents by NLM or the National Institutes of Health.'

The researchers found that the levels of TVOCs were 14 times lower in cloth masks and didn't pose a risk to human health.

However, the study did not measure the effect of people actually wearing the masks.

Dr Stuart Fischer, an internal medicine physician in New York, told DailyMail.com that strong conclusions couldn't be drawn from the study.

However, he did say that increasingly evidence has shown the drawbacks of mask-wearing. He added that 'there seems to be diminishing returns on the need for masks.'

In the latest study, researchers tested 14 disposable and cloth masks purchased online by measuring the amount of TVOCs in them. The disposable masks were KFAD

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and KF94 models, which were made from thermoplastics polypropylene and polyurethane nylon.

These masks have been popularized in South Korea, where the study was conducted, whereas KN95s are more popular in the US.

However, their differences are miniscule. KFADs and KF94s filter 94 percent of particles, while KN95s filter 95 percent.

The cloth masks were made from cotton, ramie - a vegetable fiber - and polyurethane.

'These TVOC concentration levels corresponded to a level that is harmless to the human body (no relevant health-related concerns),' the researchers wrote.

However, the disposable masks contained up to 14 times the TVOCs than cotton masks.

The Environmental Protection Agency (EPA) recommends keeping TVOC levels below 0.5 parts per million in indoor air.

The sample with the highest amount of TVOCs had 4,808 cubic meters per microgram, which is about 4.8 parts per million.

That's more than eight times the recommended limit.

TVOCs are a large group of odorous chemicals, many of which are released by cleaning and beauty products, burning fuel and cooking.

Sources of TVOCs in the home include aerosol sprays, cleansers and disinfectants, moth repellents, air fresheners and automotive products.

Other sources include building materials and furnishings, office equipment such as copiers and printers, permanent markers, correction fluids, carbonless copy paper and craft materials including glues and adhesives.

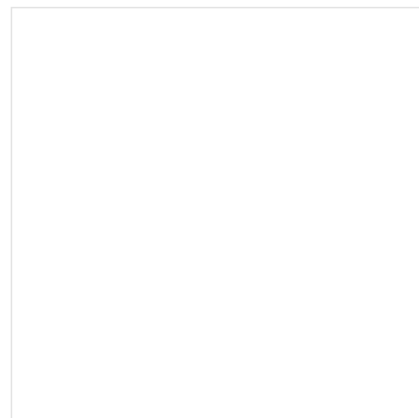
TVOCs have been shown to irritate the eyes, nose, and throat, cause difficulty breathing and nausea, and damage the central nervous system and organs like the liver, according to the American Lung Association (ALA).

Some are even considered human carcinogens, meaning they can cause cancer.

The researchers specifically flagged the chemicals dimethylacetamide (DMAc) and dimethylformamide (DMF) for being linked to liver and reproductive damage.

The team acknowledged that the sample size was small and that they did not test several other popular disposable masks like KN95s.

Mask mania sweeps America... AGAIN



Covid masks are creeping back into American life again with hospitals, Hollywood and colleges mandating their use — and there are rumors they could return on planes.



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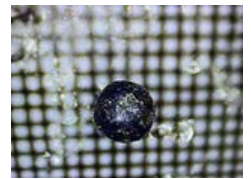
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The study builds off previous research suggesting that mask wearing could cause more harm than good.

Research carried out by the Cochrane Institute, for example, suggested that face masks made **'little to no difference'** in Covid infections and deaths.

The researchers said harms caused by masks - including hampering children's schooling - were poorly measured in the studies, meaning any small benefit on infection rates may be outweighed.

And a controversial study suggested that wearing face masks **raises the risk of stillbirths**, testicular dysfunction, and cognitive decline in children.

However, experts have criticized the study for drawing conclusions without proper evidence.

'It is indeed possible that certain masks have side effects, just as certain helpful medications (anti-histamines, psychotropic drugs, antibiotics) have side effects,' Dr Fischer said.

'Almost everything in healthcare has a benefit/side effect profile.'

Though the findings were published in April, the study could have new relevance as Covid **variant BA.2.86 spreads across the US**.

Several universities, hospitals, and even the Hollywood studio Lionsgate have reinstated mask mandates amid the surge.

But the newly found dangers of masks typically considered the most protective could make mask mandates ineffective.

'I think following the general recommendations might be helpful, but it's not clear yet if we need the sweeping edicts of three years ago,' Dr Fischer said.

'Extreme fears about the lethality of Covid may have led to decisions that were counterproductive.'

'Covid won't be going away for a long time, if ever. We desperately need policies that do not fracture our society while providing minimal protection.'

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