

Face shields are easier to talk in, but are they safer than masks?

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Face shields may not be commonplace in all public spaces just yet, but as the novel [coronavirus](#) pandemic continues, more Canadians are considering the plastic protective face wear.

Plastic face shields are typically used in medical settings to protect health-care workers but are now being used in [schools](#), restaurants and [grocery stores](#) in both Canada and abroad to help curb the spread of [COVID-19](#), the disease caused by the virus.

“With face masks, there’s this lack of human connectivity and sense of anonymity when you only see the top part of someone’s face,” said Xenia Chen, founder of [Threads](#), a tights company that sells non-medical masks.

“Face shields solve that issue.”

Using plastic face shields

In a recent [opinion article](#) published in the medical journal JAMA, three doctors out of Iowa argued that plastic face shields should be added to community COVID-19 prevention measures alongside contact tracing, handwashing and social distancing.

The doctors wrote that face shields “offer a number of advantages,” which include the fact that many models can be

reused indefinitely and easily cleaned with household disinfectants.

Plastic face shields cover the eyes, nose and mouth — all areas where the novel coronavirus can enter the body. Droplets, expelled by sneezing or coughing, transmit the virus, meaning it's important those areas are covered from both a spreading and exposure perspective.

“They are comfortable to wear, protect the portals of viral entry and reduce the potential for autoinoculation by preventing the wearer from touching their face,” the authors wrote.

“People wearing medical masks often have to remove them to communicate with others around them; this is not necessary with face shields.”

Research on face shields

While there is a lot of justified interest in face shields right now, said Dr. Lynora Saxinger, an associate professor of infectious diseases at the University of Alberta, Canada, it's too early to suggest they be swapped for masks.

“There are a few droplet studies but no actual viral transmission studies that I have seen that clarify whether the face shield, with an open bottom and with airflow around the shield, is as protective as a mask,” Saxinger said.

“There are no studies comparing them (face shields) to masks because most real-world data we have is from health-care workers who are wearing both masks and eye protection.”

Saxinger points to a 2016 [review](#) on face shields for infection control.

The review concluded that due to the lack of a good peripheral facial seal, plastic face shields can allow for aerosol penetration. The paper concluded the equipment should not be used on its own, but rather alongside other personal protective equipment, like face masks.

Researchers found that a face shield reduced the inhalation exposure by 96 per cent immediately after the cough. But when a smaller cough aerosol was used, the face shield was less effective, blocking only 68 per cent of the cough.

“In the period from one to 30 minutes after a cough, during which the aerosol had dispersed throughout the room and larger particles had settled, the face shield reduced aerosol inhalation by only 23 per cent,” the researchers wrote.

Based on these findings, Saxinger said, it appears that “smaller particles can remain in the air and flow around the face shield,” meaning they should not be used as a “stand-alone measure in a space with an ill person but likely are quite helpful if someone is coughing in your face.”

“Face shields are bulkier and less convenient for the general public,” she said.

“Another piece of feedback we’ve received from customers who wear glasses was that they needed a solution to prevent their glasses fogging up when breathing while wearing a mask. As a result, we’ve added more ruching near the nose bridge to help fix that by ‘trapping’ the air below the nose bridge.”

Saxinger says more research is needed on plastic face shields to determine their effectiveness in community COVID-19 prevention. In high-risk environments, she said, “a mask and eye protection would be is safest.”

“My take-home is that the evidence we have is in masks — and we need to study face shield more before recommending them as a mask alternate,” she said.

“If you were using them for fleeting contacts, they have potentially plausible usefulness, so I earnestly hope we can support good studies.”