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HEALTH

Will A Surgical Mask Keep You Safe In A Viral Outbreak?

June 22, 2015 · 3:47 PM ET

SUSAN BRINK



The outbreak of Middle East respiratory syndrome is slowing down in South Korea, but people were still wearing surgical masks around Seoul on Monday.

Ed Jones/AFP/Getty Images

An outbreak of Middle East respiratory syndrome in South Korea has sent sales of surgical masks soaring.

When the deadly virus first appeared in the country in May, people started wearing masks just about everywhere — on the metro, at crowded malls and even at weddings — despite the fact that the virus doesn't spread easily outside of hospitals and clinics.

This isn't the first time people have covered their faces to try to stay safe in an outbreak. Folks used scarves in the worldwide flu epidemic in the early 1900s. In 2003, surgical masks became a common sight in China and Hong Kong during the SARS outbreak.



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The masks come in a range of colors, patterns and styles. Some are stiff with elastic ear bands. Some are soft and pleated, made of synthetic or natural fibers. And some masks even have built-in respirators.

In Japan, the wearing of surgical masks by people coughing and sneezing has long been a common sight, perhaps out of politeness — it's rude to risk spreading your cold to strangers.

But do these masks work?

Here's what we do — and don't — know about how well surgical masks help prevent the spread of diseases at clinics, as well as in crowded malls and subways.

1. Masks can be helpful for protecting health workers from a variety of infectious diseases, including MERS.

The U.S. Centers for Disease Control and Prevention recommends health care workers wear a mask with a respirator, called an N95 mask, to protect against MERS. N95 masks filter out 95 percent of infectious particles, the CDC says. In health care settings, these masks are individually fitted to the wearer to make sure the fit is tight.

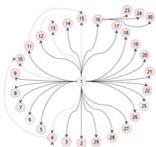
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But the effectiveness of regular surgical masks against MERS is still up for debate.

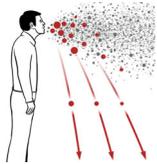
At least one study found surgical masks to be just as good at stopping influenza as N95 masks are. A head-to-head comparison, published in *JAMA*, the journal of the American Medical Association, found both masks worked equally well in preventing transmission of the flu in a hospital, when the masks were also used with disposable hospital gowns, gloves and other protections.

2. But either type of mask is less likely to do much good for the average person on the street.

N95 masks require a tight, proper fit. They also don't work on people with facial hair. And those with breathing problems, such as asthma patients, wouldn't tolerate them well, says Dr. Carol McLay, infection prevention consultant and CEO of Infection Control International.

The standard surgical mask is more convenient, and a thick, pleated mask offers the best filter. The standards organization ASTM International ranks surgical masks for their levels of protection. "Level three offers the highest protection. It's printed on the side of the box," McLay says.

Wearing a mask might make people feel better. After all, MERS has killed about a third of the people known to be infected.



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But there are no good studies looking at how well these masks prevent MERS transmission out in the community, says Geeta Sood, an infectious disease specialist at Johns Hopkins University.

"On the street or the subway, for MERS specifically, they're probably not effective," she says. One problem is that the masks are loose fitting, and a lot of tiny airborne particles can get in around the sides of the masks.

3. If you're sick yourself, wearing a mask might be a good idea.

The polite Japanese person who must be out and about with a cold or flu is right to think a surgical mask might protect strangers from picking up a pathogen. After all, the masks were originally designed to protect patients from the coughs and sneezes of a surgeon.

But better yet, stay home from work or school, and avoid crowds, Sood says.

4. If you find yourself in a situation where MERS is spreading, there are other strategies.

First, relax a bit. MERS isn't very contagious. A study, published last year in the *New England Journal of Medicine*, looked at 26 MERS patients in Saudi Arabia and followed 280 of the patients' household members to see if they caught the virus. Only 12 of the people were infected after two weeks, the study reported. That's a transmission rate of less than 5 percent.

And there are things people can do to cut their risk further, such as "very frequently hand-washing with soap and water, or using an alcohol-based hand rub," Sood says.

Also, don't hug and kiss people who are obviously sick or share plates and utensils. Regularly disinfect surfaces that are touched often, including doorknobs and faucet handles. And avoid touching your own eyes, nose and mouth.

Out on the street, try to observe a "social distance" rule of about 3 feet, McLay says. "You want to stay about a meter away from other people," she says. That's about the distance large particles in a sneeze can travel before hitting the ground.

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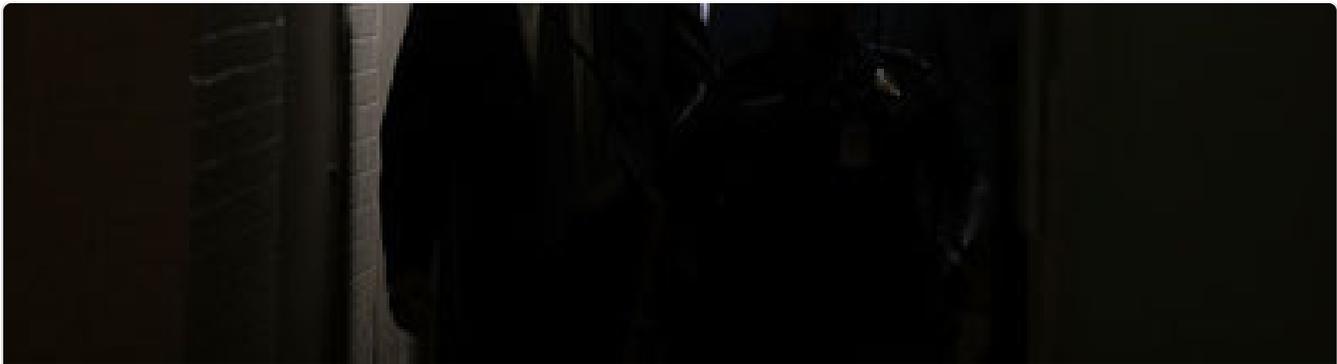
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