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This Is Exactly How to Wear a Homemade Mask Safely

It doesn't replace social distancing, but it might help.

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Confused about whether you actually need to wear a mask during the **new coronavirus** pandemic? We're not surprised—there's been a lot of conflicting advice. For months the word from the Centers for Disease Control and Prevention (CDC) was that you only needed a mask if you were a health care worker, otherwise taking care of someone who was sick, or sick yourself. But then cities like Los Angeles **started to recommend** that people wear nonmedical face masks when out and about. The CDC cleared the air last week when it **officially recommended** that everyone use homemade cloth face coverings in public places where **social distancing** is hard to maintain, like grocery stores and pharmacies.

Homemade is the key word here. Many U.S. communities are now facing a critical influx of COVID-19 patients and equipment shortages; some hospital workers have **reportedly resorted to** using plastic garbage bags and eye “shields” made from water bottles. Unless you're a **health care worker treating people with COVID-19** or some other type of medical first responder, you really shouldn't be trying to find surgical or N95 masks. N95 face masks are tight-fitting and have a filter that blocks at least 95% of large and small airborne particles. Surgical masks are looser-fitting (pathogens can sneak in around the edge) and don't offer reliable protection from inhaling smaller airborne particles, but they have been FDA-approved to protect against large droplets, splashes, and sprays of bodily fluids. When a pandemic reaches this level of crisis mode, **the CDC says it's essential** to reserve these modes of protection for people on the front lines treating patients. Based on what experts know so far, it seems that “the more virus you're exposed to at any given time, the more likely you are to get sick,” **Eleanor J. Murray**, Sc.D., assistant professor of epidemiology at Boston University School of Public Health, tells SELF.

While the **CDC** continues to stress that we all need to keep **washing our hands frequently** and maintaining a distance of at least six feet from people not in our household (when possible), the group says wearing a mask may offer *some* protection when you do have to go outside. But how much, exactly? And what's the best way to wear a homemade face mask for maximum protection? Here's everything you need to know.

Can a face mask really help you avoid the new coronavirus?

Experts initially hesitated to recommend masks for everyone because they believed that the new coronavirus could only be spread by sick people with symptoms. “In that situation, it's really easy to say to wear a mask if you have symptoms,” says Murray.

Data from the CDC has now shown that people can **transmit the virus at least a couple of days before they experience symptoms**. What's more, various estimates suggest that anywhere **from 25 to 50%** of all people who have COVID-19 may not have symptoms at any point in their illness. (These figures are inconclusive.) That means we could accidentally infect others even if we don't think we're sick. Masks reduce that risk. "If everyone has one on, everyone is protecting each other," **Marybeth Sexton**, M.D., assistant professor of infectious diseases at Emory University School of Medicine, tells SELF.

The general consensus is that homemade masks mainly help keep a sick person from spreading germs, explains **Marc Lipsitch**, D.Phil., professor of epidemiology at Harvard University T.H. Chan School of Public Health, pointing to **flu studies** that have shown as much. There isn't strong scientific evidence that homemade masks filter out enough particles to protect the people wearing them. Still, by preventing someone who is sick (even without symptoms) from expelling as much of the virus into the air, homemade masks may help lower new coronavirus infection rates overall. A small 2013 study in ***Disaster Medicine and Public Health Preparedness*** concluded that while surgical masks were three times more effective than cloth masks at blocking particles, homemade versions still significantly reduced how many microorganisms a person was putting into the air and were better than nothing in an emergency situation.

"It's a common-sense precaution," Lipsitch says, adding that it "should be at least partially protective." He also notes that homemade masks also remind us **not to touch our faces** and are a visible reminder of the need for good hygiene.

Is a homemade mask better than a bandanna or scarf?

"The main point is to cover your nose and mouth and not touch whatever's there," says Murray, who has seen balaclava ski masks and even jockstraps used as masks. Whatever option you use can make sense as long as the material is thick but breathable, she adds. With that said, homemade masks seem to have at least a few potential advantages over bandannas and scarves.

The general rule, according to the experts, is that the tighter the weave of the fabric, the better the protection. Making your own mask allows you to choose whichever material is available to you with the tightest possible weave. Which fabric might that be, you ask? The 2013 ***Disaster Medicine and Public Health Preparedness*** study offers some clues. First, some context: This study was looking specifically at whether homemade masks could offer some protection in the event of another influenza pandemic. Influenza viruses are about 60 to 100 nanometers in diameter, just a bit smaller than coronaviruses, which usually range from 120 to 160 nanometers in diameter. It stands to reason that materials that can block influenza viruses should be able to block larger

coronaviruses as well. To that end, the study found that vacuum cleaner bags seemed to offer the best protection against influenza viruses after surgical masks, but that tea towels, cotton T-shirts, and cotton pillowcases did a fair job of blocking particles too. Other **testing** suggests that double-layer masks of heavyweight quilter's cotton with a thread count of at least 180 are a good filter, as well as thick batik fabric.

When it comes to bandannas and scarves, it depends on what they're made of. But **preliminary lab experiments** by engineers at Missouri University of Science & Technology suggested scarves and bandannas weren't very effective at filtering out small particles. (This testing found furnace filters to be the best material for this purpose.) Bandannas and scarves also may not tie as firmly as a homemade mask, so you'll be tempted to readjust them and touch your face, Murray adds. Still, "it's likely better than nothing," says Lipsitch.

This is what to remember when making your homemade mask.

The CDC has **online tutorials** for making sewn and no-sew homemade face masks using materials like T-shirts, hair ties, bandannas, and coffee filters. The *New York Times* and **CNN** also offer helpful mask-making tutorials.

Whichever instructions you follow when making your mask, be sure to incorporate these tips:

- **Test the straps.** Your mask should fit snugly against the sides of the face. You might find you prefer loops behind your ears or double ties behind your head. Either way, just make sure the elastic is the right length so it's snug but comfortable.
- **Try it at home first.** Give your finished mask a test run for at least half an hour to see how much you're tempted to fidget with it. "If you're going to touch your face more than when you're not wearing a [mask], it's not a good idea," says Murray.
- **Don't be afraid to experiment.** Test out a few designs to find the most comfortable one, suggests Lipsitch, whose 13-year-old daughter, Gabriella, has actually sewn more than 30 masks so far for friends and family. "Give yourself time to experiment and find what works for you," says Murray.

Here's how to wear your homemade mask safely.

Even though the CDC specifically recommends wearing a face mask in crowded spaces like **grocery stores**, you may decide to wear one every time you're outside if you live in a densely

populated city where it's hard to maintain a six-foot distance from others. (In fact, large cities like Nice, France, **have begun** requiring masks in public.) If you're going for a **walk or run outside**, air is circulating and there's less infection risk than if you're standing with others in an enclosed space. "The quicker you pass that person and go on your way, the less likely you are to be exposed," **Gabriela Andujar Vazquez**, M.D., an infectious disease physician and associate hospital epidemiologist at Tufts Medical Center, tells SELF. Still, it's not a bad idea to wear a mask if you're not sure you can maintain your distance.

If you think you're going to need a mask at any point, put it on before you leave home. Here are other tips you should follow to protect yourself and others.

When you put on your mask:

- **Tie back your hair if you need to.** This reduces the temptation to brush it out of your face later.
- **Wash your hands.** Before you touch your mask, **wash your hands** with soap and water for at least 20 seconds to remove as many germs as possible.
- **Position your mask while looking in a mirror.** This increases the odds you'll get a better fit on the first try.
- **Make sure your mouth and nose are covered.** "You can shed virus out of both," notes Dr. Sexton.
- **Check the fit.** Your mask should feel snug and comfortable, without visible gaps between the fabric and your face. Murray suggests placing your hands around the outside of the mask (without actually touching it) and puffing a mouthful of air. "If you feel air on the top, side, or bottom, you need to figure out a way to tighten your mask," she says.
- **Wash your hands again.** If you're sick and don't know it, you may have breathed the virus onto your hands during this process and could infect others.
- **Don't touch your mask or your face while you're out.** Anything you touch outside could be contaminated with the virus, and you could theoretically infect yourself if you touch your face afterward.
- **Always follow other preventive guidelines.** Experts are concerned that wearing a mask might create a false sense of security that encourages people to skip **the precautions we know work** (handwashing, social distancing, and the like). If you don't follow these precautions, "a mask isn't enough," says Murray.

When you remove your mask:

- **Wash your hands before touching your mask.** All of the safety measures you've taken fly out the window if you somehow got the virus on your hands and then touch your face.
- **Remove your mask carefully using the straps.** Virus droplets that your mask blocks from your mouth and nose can sit on the outside of it, so be extra cautious as you remove it. Take off both ear hooks at the same time, or if your mask has head ties, untie the bottom set before the top set. "If you start with the top set, the mask will flop down onto your neck or chest and can contaminate your shirt," says Murray.
- **Store it if necessary.** It's best to keep your mask on the whole time you're outside, but if for some reason you have to take off your mask before you get home, store it in a disposable bag. Just note that the mask can bunch up on itself and **contaminate** the inside portion that goes over your nose and mouth, making it a potential source of infection if you re-wear it without washing it first, says Murray.
- **Wash your hands.** Need we repeat?
- **Wash and dry your mask.** Using a washing machine and dryer would be ideal, but hot soapy water can do the trick if you need to handwash, explains Murray, since soap breaks up the envelope on the outside of the virus that it needs to survive. "The advantage of coronaviruses is they're relatively easy to kill," says Dr. Sexton. Let your mask fully dry before you put it on again. Dr. Sexton notes that damp surfaces can make the virus easier to transmit.
- **Re-wear an unwashed mask with caution.** It's best to have a rotation of masks so you can wash the ones you've worn before wearing them again. But Dr. Sexton says it's likely okay to re-wear one mask for an entire day if you need to. "We do that in health care settings now because of **supply shortages**," says Dr. Vazquez. When you're not wearing your mask but are going to put it back on soon, set it on a piece of paper so it can air out. (Then you can throw the paper away rather than putting the mask directly on a surface like your countertop.) Be careful not to touch the front when you put it back on.

A couple of last tips: Avoid using a mask like this if you're having trouble breathing, and don't put one on kids under two years old. Finally, please, do your best to **stay inside if you know you're sick**. Masks may offer some protection, but they aren't foolproof. "If you're sick and have symptoms, you should not be out in public unless it's to seek medical care, regardless of whether you have a mask on," says Dr. Sexton.

Related:

- [How to Know If You Need to Go to the E.R. With Coronavirus](#)
 - [How to Keep Your Home as Clean as Possible From Germs Right Now](#)
 - [Yes, You Can Spread Coronavirus Even If You Don't Have Symptoms](#)
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