

Guidance for Wearing Masks

Help Slow the Spread of COVID-19

What you need to know

- When you wear a mask, you protect others as well as yourself. [Masks work best when everyone wears one.](#)
- A mask is NOT a substitute for [social distancing](#). Masks should still be worn in addition to staying at least 6 feet apart, especially when indoors around people who don't live in your household.
- Masks should completely cover the nose **and** mouth and fit snugly against the sides of face without gaps.
- Masks should be worn [any time you are traveling](#) on a plane, bus, train, or other form of public transportation traveling into, within, or out of the United States and in U.S. transportation hubs such as airports and stations.
- People age 2 and older should wear masks in public settings and when around people who don't live in their household.
- Wear a mask inside your home if someone you live with is sick with [symptoms](#) of COVID-19 or has tested positive for COVID-19.
- Wash your hands with soap and water for at least 20 seconds or use [hand sanitizer](#) with at least 60% alcohol after touching or removing your mask.
- Masks may not be necessary when you are outside by yourself away from others, or with other people who live in your household. However, some areas may have mask mandates while out in public, so please check for the rules in your local area (e.g. city, county, state). Additionally, check whether any federal mask mandates apply to where you will be going.
- CDC continues to study the effectiveness of different types of masks and update our recommendations as new scientific evidence becomes available. The most recent scientific brief is available here: [Scientific Brief: Community Use of Cloth Masks to Control the Spread of SARS-CoV-2 | CDC](#)
- CDC recently conducted a [study](#) in a laboratory that tested the performance of different mask combinations.
- There are several easy methods to improve the performance of your mask. Visit CDC's [Improve the Fit and Filtration of Your Mask to Reduce the Spread of COVID-19](#) webpage to learn more.

Evidence for Effectiveness of Masks

Your mask helps protect those around you

COVID-19 spreads mainly from person to person through respiratory droplets. Respiratory droplets travel into the air when you cough, sneeze, talk, shout, or sing. These droplets can then land in the mouths or noses of people who are near you or they may breathe these droplets in.

Masks are a simple barrier to help prevent your respiratory droplets from reaching others. Studies show that masks reduce the spray of droplets when worn over the nose and mouth.

You should wear a mask, even if you do not feel sick. This is because several studies have found that people with COVID-19 who never develop symptoms (asymptomatic) and those who are not yet showing symptoms (pre-symptomatic) can still spread the virus to other people. Wearing a mask helps protect those around you, in case you are infected but not showing symptoms.

It is especially important to wear a mask when you are indoors with people you do not live with and when you are unable to stay at least 6 feet apart since COVID-19 spreads mainly among people who are in [close contact](#) with one another.

Your mask offers some protection to you

[A cloth mask also offers some protection to you](#) too. How well it protects you from breathing in the virus likely depends on the fabrics used and how your mask is made (e.g. the type of fabric, the number of layers of fabric, how well the mask fits). CDC is currently studying these factors.

Who should or should not wear a mask

Masks should be worn:

- By people 2 years of age and older
- Any time you are in a public setting
- [Any time you are traveling](#) on a plane, bus, train, or other form of public transportation traveling into, within, or out of the United States and in U.S. transportation hubs such as airports and stations
- When you are around people who do not live with you, including inside your home or inside someone else's home
- Inside your home if someone you live with is sick with [symptoms](#) of COVID-19 or has tested positive for COVID-19




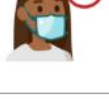








CDC recognizes there are specific instances when wearing a mask may not be feasible. In these instances, consider [adaptations and alternatives](#).

The following categories of people are exempt from the requirement to wear a mask:

- A child under the age of 2 years;
- A person with a disability who cannot wear a mask, or cannot safely wear a mask, for reasons related to the disability;
- A person for whom wearing a mask would create a risk to workplace health, safety, or job duty as determined by the relevant workplace safety guidelines or federal regulations.

Types of masks

[Some masks work better than others](#) to help slow the spread of the virus that causes COVID-19. Note: N95 respirators approved by CDC's National Institute for Occupational Safety and Health (NIOSH) should not be used outside of healthcare settings because they should be reserved for healthcare personnel.

Recommended	Not Recommended
 <p>Medical procedure masks (sometimes referred to as surgical masks or disposable face masks)</p>	 <p>Masks that do not fit properly (large gaps, too loose or too tight)</p>
 <p>Masks that fit properly (snugly around the nose and chin with no large gaps around the sides of the face)</p>	 <p>Masks made from materials that are hard to breathe through (such as plastic or leather)</p>
 <p>Masks made with breathable fabric (such as cotton)</p>	 <p>Masks made from fabric that is loosely woven or knitted, such as fabrics that let light pass through</p>
 <p>Masks made with tightly woven fabric (i.e., fabrics that do not let light pass through when held up to a light source)</p>	 <p>Masks with one layer</p>
 <p>Masks with two or three layers</p>	 <p>Masks with exhalation valves or vents</p>
 <p>Masks with inner filter pockets</p>	 <p>Wearing a scarf/ski mask</p>

Cloth masks

More effective fabrics for cloth masks are

- Tightly woven fabrics, such as cotton and cotton blends
- Breathable
- Two or three fabric layers

Less effective fabrics for cloth masks are

- Loosely woven fabrics, such as loose knit fabrics
- Single layer

CDC is currently studying the effectiveness of various cloth mask materials. Refer to our [Scientific Brief: Community Use of Cloth Masks to Control the Spread of SARS-CoV-2 | CDC for more information.](#)

Medical procedure masks (sometimes referred to as Surgical Masks or Disposable Face Masks)

Medical procedure masks are single-use masks that are not made of cloth and are not designed to be washed or laundered. They are sold online and through large retail stores. These are not the same as other medical masks.



You may prefer using medical procedure masks in situations where your mask is likely to get wet or dirty. As with cloth masks, make sure your medical procedure mask fits close to your face without large side gaps and completely covers your nose and mouth. Bring extra medical procedure masks with you in case you need to change out a dirty or wet mask.

Masks with exhalation valves or vents

CDC **does not recommend** using masks with exhalation valves or vents. The hole in the material may allow your respiratory droplets to escape and reach others. Research on the effectiveness of these types of masks is ongoing.



NIOSH-approved N95 respirators

Do not use NIOSH-approved N95 respirators that are meant for healthcare workers. NIOSH-approved N95 respirators are critical supplies that should be reserved for healthcare workers and other medical first responders to prevent supply shortages.

Clear masks or cloth masks with a clear plastic panel

Clear masks or cloth masks with a clear plastic panel are an alternative type of mask for people who interact with



- People who are deaf or hard of hearing
- Young children or students learning to read
- Students learning a new language
- People with disabilities
- People who need to see the proper shape of the mouth for making appropriate vowel sounds, e.g., in singing

If you use this type of mask, make sure

- You can breathe easily
- Excess moisture does not collect on the inside of the mask
- You remove the mask before sleeping, since the plastic part could form a seal around your mouth and nose and make it hard to breathe

The FDA recently approved a [transparent pdf icon\[186 KB, 3 Pages\]external icon](#) medical mask. These transparent medical masks should be reserved for use by healthcare workers and patients who require them.

There are several easy methods to improve the performance of your mask. Visit CDC's [Improve the Fit and Filtration of Your Mask to Reduce the Spread of COVID-19](#) webpage to learn more. You can also learn more by reading about a [CDC study](#) conducted in a laboratory that tested the performance of different mask combinations.

Other Types of Face Protection

CDC does [not recommend external icon](#) using face shields or goggles as a substitute for masks. Goggles or other eye protection may be used in addition to a mask. Do NOT put a plastic face shield (or a mask) on newborns or infants.



Face shields and goggles are primarily used to protect the eyes of the person wearing it. Goggles do not cover the nose and mouth. Face shields are not as effective at protecting people around you from your respiratory droplets. Face shields have large gaps below and alongside the face, where your respiratory droplets may escape and reach others around you. However, wearing a mask may not be feasible in every situation for some people.

Face shields and goggles

For example, people who interact with those who are deaf or hearing impaired may find that a face shield is better than a mask when communicating. If you must wear a face shield instead of a mask:

- Choose a face shield that wraps around the sides of your face and extends below your chin or a hooded face shield. This is based on the limited available data that suggest these types of face shields are better at preventing spray of respiratory droplets.
- Wash your hands after removing the face shield. Avoid touching your eyes, nose, and mouth when removing it.
- Clean and disinfect reusable face shields according to the manufacturer's instructions or by following [CDC face shield cleaning instructions](#). If you use a disposable face shield, wear it once and throw it away according to the manufacturer's instructions.

Mask adaptations and alternatives

CDC recognizes that wearing masks may not be possible in every situation or for some people. Those who cannot wear a mask are urged to prioritize virtual engagement when possible. For in-person activities, we have provided a few examples of what you can do to make wearing a mask more feasible and how to reduce the spread of COVID-19 if you cannot wear a mask.

Situations where wearing a mask may not be possible

- Make sure to maintain physical distance from others when you cannot wear a mask.

Dining

- CDC recommends wearing a mask while dining in a restaurant, particularly indoors and when speaking with restaurant workers and servers, except when actively eating or drinking. The risk of COVID-19 spread [increases in a restaurant or bar setting](#) as interactions within 6 feet of others increase. Masks may reduce the risk of COVID-19 spread when worn in any of these risk scenarios.

Water activities

- Do not wear a mask when doing activities that may get your mask wet, like [swimming at the beach or pool](#). A wet mask can make it difficult to breathe and may not work as well when wet.

High intensity activities

- Masks should always be used in public settings, but if you are unable to wear a mask because of difficulty breathing during high intensity activities, choose a location with greater ventilation and air exchange (for instance, outdoors versus indoors) and where you can keep at least 6 feet of distance from others during the activity. If such a location is not available, opt for low-intensity activities such as walking or yoga that allow for mask wearing.
- If you are able to wear a mask, remove your mask if it gets moist from sweat and replace it with a clean mask.
- Opt for an activity that does not require using mouth guards or helmets. Wearing a mask with these types of protective equipment is not safe if it makes it hard to breathe.
- Supervise children who are wearing a mask while playing sports.

Certain groups of people who may find it difficult to wear a mask Some children 2 years and older, and people of any age with certain disabilities

Appropriate and consistent use of masks may be challenging for some children and for people of any age with certain disabilities, including people who have high sensitivity to materials on their faces, difficulty understanding why wearing a mask is protective (such as those with an intellectual disability), or those who have problems controlling their behavior.

When determining if children and people with certain disabilities should wear a mask, assess their ability to:

- [Use a mask correctly](#)
- Avoid frequent touching of the mask and their face
- Limit sucking, drooling, or having excess saliva on the mask
- Remove the mask without assistance

Those caring for children and people with certain disabilities who may need assistance with wearing masks should

- Ask their healthcare provider for advice about the person you are caring for wearing a mask. If they are unable to wear a mask, ask their healthcare provider about alternative ways of reducing transmission risk
- Ensure proper mask size and fit

- Remove their mask before sleeping, napping, when they may fall asleep (such as in a car seat or stroller), and in situations when continual supervision is not possible
- Consider prioritizing wearing a mask in public settings and when around people who don't live in your household, particularly when indoors. Masks may not be necessary when you and the person you are caring for are outside and away from others, or with other people who live in the same household. However, some localities may have mask mandates while out in public and these mandates should always be followed.

Masks should **not** be worn by:

- - By a child under 2 years of age
- By [someone who cannot wear a mask safely](#), such as someone who has a disability or an [underlying medical condition](#) that precludes wearing a mask
- In a situation when wearing a mask would create a risk to workplace health, safety, or job duty as determined by the [workplace risk assessment](#) [external icon](#)

People who are deaf or hard of hearing, and those who will interact with people who are hearing impaired

If you interact with people who rely on reading lips, you may have difficulty communicating while wearing a mask.

- Consider wearing a clear mask or a cloth mask with a clear panel
- If you are not able to get a clear mask, consider using written communication, closed captioning, or decreasing background noise to make communication possible while wearing a mask that blocks lips

People with certain underlying medical conditions

Most people with underlying medical conditions can and should wear masks.

- If you have respiratory conditions and are concerned about wearing a mask safely, discuss with your healthcare provider the benefits and potential risks of wearing a mask.

- If you have [asthma](#), you can wear a mask. Discuss with your healthcare provider if you have any concerns about wearing a mask.

Outdoor workers

If you work in a setting where masks could increase the risk of [heat-related illness](#) or cause safety concerns (for example, straps getting caught in machinery):

- Discuss with an occupational safety and health professional what mask would be suitable.
- Prioritize wearing masks indoors and when in close contact with other people, like during group travel or shift meetings. Some localities may require wearing masks in public while outdoors, and these requirements should be followed.
- In cold weather, wear masks under winter gear such as scarves and ski masks. If masks become wet from breathing or snow, replace them with dry ones. Keep one or more backups for this purpose.

What to do if you find wearing a mask uncomfortable?

- It may help to practice wearing a mask at home for short periods to get used to the feeling and try different styles and fabrics recommended above.
- Try relaxation techniques such as breathing in and out deeply or listening to soothing music while wearing a face mask, which can help to keep you calm.

Mask use and carbon dioxide

Wearing a mask does not raise the carbon dioxide (CO₂) level in the air you breathe

A cloth mask does not provide an airtight fit across the face. The CO₂ completely escapes into the air through the cloth mask when you breathe out or talk. CO₂ molecules are small enough to easily pass through any cloth mask material. In contrast, the respiratory droplets that carry the virus that causes COVID-19 are much larger than CO₂, so they cannot pass **as easily** through a properly designed and properly worn cloth mask.

Cold Weather

- In cold weather, masks may become wet from breathing, snow, or other precipitation. Change a mask when it becomes wet. A wet mask is harder to breathe through, is less efficient at preventing your respiratory droplets from reaching others, and allows for more respiratory droplets to escape around the edges of the mask. It is especially important to have one or more replacement masks during cold weather. If your reusable mask becomes wet, put it in a sealed plastic bag until you can [wash it](#).
- Scarves and other headwear such as ski masks and balaclavas used for warmth are usually made of loosely knit fabrics that are not suitable for use as masks to prevent COVID-19 transmission. They can be worn over a mask.
- If you wear glasses, find a mask that fits closely over your nose or has a nose wire to help reduce fogging. Consider using an antifogging spray that is made for eyeglasses.

References

- Brooks JT, Beezhold DH, Noti JD, et al. Maximizing Fit for Cloth and Medical Procedure Masks to Improve Performance and Reduce SARS-CoV-2 Transmission and Exposure, 2021. MMWR Morb Mortal Wkly Rep. ePub: 10 February 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7007e1external iconexternal icon>.
- Mueller AV, Eden MJ, Oakes JM, et al. Quantitative Method for Comparative Assessment of Particle Removal Efficiency of Fabric Masks as Alternatives to Standard Surgical Masks for PPE (July 2020). <https://doi.org/10.1016/j.matt.2020.07.006external iconexternal iconhttps://www.sciencedirect.com/science/article/pii/S2590238520303647external iconexternal icon>
- Anindita M, Das K. COVID-19 Pandemic: Is Cloth Mask Really Protect Public From SARS-CoV-2? (The way of handling to get Results) (May 2020). <https://www.ijisrt.com/assets/upload/files/IJISRT20MAY228.pdfpdf iconexternal iconpdf iconexternal icon>
- Lustig SR, Biswakarma JJH, Rana D, et al. Effectiveness of Common Fabrics to Block Aqueous Aerosols of Virus-like Nanoparticles (May 2020). <https://pubs.acs.org/doi/abs/10.1021/acsnano.0c03972external iconexternal icon>
- Sousa-Pinto B, Fonte AP, Lopes AA, et al. Face masks for community use: An awareness call to the differences in materials (August 2020). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7361409/external iconexternal icon>

- Chughtai AA, Seale H, Macintyre CR. Effectiveness of Cloth Masks for Protection Against Severe Acute Respiratory Syndrome Coronavirus 2 (July 2020). <https://europepmc.org/article/med/32639930>[external icon](#)[external icon](#)
- Bagheri MH, Khalaj I, Azizi A, et al. Filtration Efficiency, Breathability, and Reusability of Improvised Materials for Face Masks (July 2020) PREPRINT. <https://engrxiv.org/nrtgb/>[external icon](#)[external icon](#)
- Gandhi M, Beyrer C, Goosby E. Masks Do More Than Protect Others During COVID-19:
- Reducing the Inoculum of SARS-CoV-2 to Protect the Wearer. *J Gen Intern Med*. DOI: 10.1007/s11606-020-06067-8
- Wang H, Wang Q, Lin YL, Kilinc-Balci FS, Price A, Chu L, Chu MC. Household materials selection for homemade cloth face coverings and their filtration efficiency enhancement with triboelectric charging. *Nano Letters*. 2020 Jun 2."
- Rothe C, Schunk M, Sothmann P, et al. Transmission of 2019-nCoV Infection from an Asymptomatic Contact in Germany. *The New England journal of medicine*. 2020;382(10):970-971.
- Zou L, Ruan F, Huang M, et al. SARS-CoV-2 Viral Load in Upper Respiratory Specimens of Infected Patients. *The New England journal of medicine*. 2020;382(12):1177-1179.
- Pan X, Chen D, Xia Y, et al. Asymptomatic cases in a family cluster with SARS-CoV-2 infection. *The Lancet Infectious diseases*. 2020.
- Bai Y, Yao L, Wei T, et al. Presumed Asymptomatic Carrier Transmission of COVID-19. *Jama*. 2020.
- Kimball A HK, Arons M, et al. Asymptomatic and Presymptomatic SARS-CoV-2 Infections in Residents of a Long-Term Care Skilled Nursing Facility — King County, Washington, March 2020. *MMWR Morbidity and mortality weekly report*. 2020; ePub: 27 March 2020.
- Wei WE LZ, Chiew CJ, Yong SE, Toh MP, Lee VJ. Presymptomatic Transmission of SARS-CoV-2 — Singapore, January 23–March 16, 2020. *MMWR Morbidity and Mortality Weekly Report*. 2020; ePub: 1 April 2020.
- Li R, Pei S, Chen B, et al. Substantial undocumented infection facilitates the rapid dissemination of novel coronavirus (SARS-CoV2). *Science (New York, NY)*. 2020.
- Furukawa NW, Brooks JT, Sobel J. Evidence Supporting Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 While Presymptomatic or Asymptomatic [published online ahead of print, 2020 May 4]. *Emerg Infect Dis*. 2020;26(7):10.3201/eid2607.201595. [Link](#)
- Oran DP, Topol Prevalence of Asymptomatic SARS-CoV-2 Infection: A Narrative Review [published online ahead of print, 2020 Jun 3]. *Ann Intern Med*. 2020;M20-3012.
- National Academies of Sciences, Engineering, and Medicine. 2020. Rapid Expert Consultation on the Possibility of Bioaerosol Spread of SARS-CoV-2 for the COVID-19 Pandemic (April 1, 2020). Washington, DC: The National Academies Press. <https://doi.org/10.17226/25769>[external icon](#)[external icon](#)
- Schwartz KL, Murti M, Finkelstein M, et al. Lack of COVID-19 transmission on an international flight. *CMAJ*. 2020;192(15):E410.
- Anfinrud P, Stadnytskyi V, Bax CE, Bax A. Visualizing Speech-Generated Oral Fluid Droplets with Laser Light Scattering. *N Engl J Med*. 2020 Apr 15. doi:10.1056/NEJMc2007800.

- Davies A, Thompson KA, Giri K, Kafatos G, Walker J, Bennett A. Testing the efficacy of homemade masks: would they protect in an influenza pandemic? *Disaster Med Public Health Prep.* 2013;7(4):413-8.
- Konda A, Prakash A, Moss GA, Schmoldt M, Grant GD, Guha S. Aerosol Filtration Efficiency of Common Fabrics Used in Respiratory Cloth Masks. *ACS Nano.* 2020 Apr 24.
- Aydin O, Emon B, Saif MTA. Performance of fabrics for home-made masks against spread of respiratory infection through droplets: a quantitative mechanistic study. *medRxiv preprint* doi: <https://doi.org/10.1101/2020.04.19.20071779>, posted April 24, 2020.
- Ma QX, Shan H, Zhang HL, Li GM, Yang RM, Chen JM. Potential utilities of mask-wearing and instant hand hygiene for fighting SARS-CoV-2. *J Med Virol.* 2020.
- Leung, N.H.L., Chu, D.K.W., Shiu, E.Y.C. *et al.* Respiratory virus shedding in exhaled breath and efficacy of face masks. *Nat Med.* 2020.
- Johnson DF, Druce JD, Birch C, Grayson ML. A quantitative assessment of the efficacy of surgical and N95 masks to filter influenza virus in patients with acute influenza infection. *Clin Infect Dis.* 2009 Jul 15;49(2):275-7.
- Green CF, Davidson CS, Panlilio AL, et al. Effectiveness of selected surgical masks in arresting vegetative cells and endospores when worn by simulated contagious patients. *Infect Control Hosp Epidemiol.* 2012;33(5):487-494.
- Lindsley, WG, FM Blachere, BF Law, DH Beezhold and JD Noti (2021). Efficacy of face masks, neck gaiters and face shields for reducing the expulsion of simulated cough-generated aerosols. *Aerosol Sci Technol:* 1-9. <https://doi.org/10.1080/02786826.2020.1862409>