






Understanding Masks to Protect Children Against COVID-19

Less Protective

Most Protective

	Cloth Cover	Surgical Mask	Surgical + Cloth	KF94, KN95, FFP2 <i>Filtration Mask*</i>	N95 <i>Filtration Mask**</i>
<i>Images: Centers for Disease Prevention and Control (CDC)</i>					
Sizes for <12 yrs?	Yes	Yes (ASTM Level 3)	Yes	Yes	No (Adult small available.)
What is this mask designed to protect against?	Droplets (e.g. spray from a cough, sneeze or spit)	Droplets	Droplets	Droplets and up to at least 94-95% virus aerosols (i.e. very small particles).	Droplets and up to at least 95% virus aerosols.
Benefits	Comfortable, readily available. May have adjustable ear straps or metal nose band to improve fit. Washable	Comfortable, readily available. Has metal nose band to improve fit.	Comfortable, readily available. Surgical mask <u>under</u> cloth face covering applies gentle pressure around edges of surgical mask helping to make a better seal. Two layers impedes more virus particles than a single mask.	Readily available. Better fitting for children and youth. Has metal nose band; some brands have adjustable ear loops to improve fit. Different styles available; some may find one style more comfortable than another.	Readily available. Most protective. May fit high school aged children. Has metal nose band to improve fit. Straps go behind head to make a better seal than ear loops.
Drawbacks	No performance standards exist. Unknown filtration performance. No seal around edges. May allow virus to get through fabric & around mask edge.	Better than cloth but filtration performance depends on the design standard. No seal around edges. May allow virus to get through & around mask edge.	Probably better than a surgical mask or cloth face covering alone. Filtration performance depends on the design standard of surgical mask. No seal around edges. May allow virus to get through & around mask edge.	Possibly somewhat less comfortable. More expensive.	May be less comfortable. More expensive.
				<i>*Complies with Korean, Chinese, or European medical device standards.</i>	<i>**Complies with US CDC/NIOSH N95 standard.</i>

Key points when choosing and using masks:

- The more people who wear masks, the more we will all be protected. If a mask wearer has a virus (flu, cold, COVID-19), keeping an infected sneeze and breath covered will benefit everyone.
- If your child is old enough to wear an adult mask, NIOSH-certified N95 respirators offer the best protection. Some manufacturers offer size small, which may fit some children.
- If you select the more protective masks--N95, FFP2, KF94, or KN95—check to make sure the package says it is certified. Some masks are called N95, FFP2, KF94, or KN95 but are not certified to the relevant standard.
 - N95 – U.S. NIOSH standard
 - FFP2 – European standard
 - KF94 – Korean standard
 - KN95 – Chinese standard
- Regardless of mask type, it must fit snugly to provide the best protection.
 - Headbands (straps that go around the whole head) provide a tighter fit than ear bands.
 - You can knot the mask’s ear bands or head band to achieve a tighter fit.
 - Nose bands should be adjusted for a tight fit across the bridge of the nose.
- Double masking (surgical mask under cloth covering) probably offers better protection than either used alone. Some manufacturers offer ASTM Level 3 surgical masks in child sizes.

Useful references:

<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/about-face-coverings.html>

<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/mask-fit-and-filtration.html>

FAQs:

Q: What is mask **filtration**?

A: The ability of a mask to trap and hold droplets and aerosols so they are not inhaled.

Q: When we talk about **virus aerosols**, what does that mean?

A: For COVID-19, the aerosol is a suspension of tiny infectious virus particles that can drift around in the air. They are easily inhaled. Aerosols are harder to filter, that’s why the more protective masks (N95, FFP2, KN95, KF94) are preferable.

Q: What is a **droplet**?

A: A droplet is larger in size than an aerosol, for example the spray from a cough, sneeze, or spit. Droplets remain in the air for a shorter time and travel much shorter distances than aerosols.

Q: What are the **safer masks**?

A: Look for masks approved for medical use. For any mask, protection relies on proper adjustment for a good tight fit.

Most Protective	N95*
	FFP2, KN95 & KF94
	Surgical mask <u>under</u> cloth cover
	Surgical mask**
Less Protective	Cloth face covering

Q: Where can I buy protective masks?

A: Counterfeits can be a problem especially with the N95 and KN95. One source worth considering is: ProjectN95.org

*look for “NIOSH Approved”

**look for “ASTM Level 3” to ensure you are buying a high quality surgical mask

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Images: CDC

The more people who wear masks, the more we will all be protected.

Guidance for respiratory protection for children is still evolving. This is to help you understand different types of face coverings & masks and their benefits and shortcomings, so you can make a more informed choice as your children return to school.

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Who are we? The authors are researchers and parents and this pamphlet summarizes how we choose masks for our families. We received no funding and are not affiliated with or endorsing any companies or products. This does not represent opinions of our employers or funding agencies.

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