Reusable 3D-printed adult face mask

Please follow directions below for proper use

I. CREATE INDIVIDUAL FIT

Fit the mask to conform to the face and sit beneath the chin. (recommended for coverage and comfort)



Submerge edges of mask only (not filter cavity) in hot water (up to 60°C/140°F) for 1-2 minutes.



Remove and quickly mold to face. Repeat if necessary. The mask will cool and set in about 30 seconds.



Attach elastic or cord through eyelets and trim excess to adjust for individual fit.

II. ASSEMBLE THE FILTER

The replaceable non-woven materials are typically available in clinical settings.



Insert two layers of 2x2 sterile non-woven sponge into filter housing. Fold or trim to fit the cavity.



Lay 4x4 sterile non-woven gauze over filter housing and snap housing into mask. It should feel tight.



7 Trim excess gauze and discard.

III. DISINFECT THE MASK

Wear disposable gloves and thoroughly wash hands after removing gloves. Reassemble for use.



Push filter housing out of mask.

Remove sponge and gauze from filter housing and discard.



Disinfect all mask components with disposable germicidal wipes, isopropyl alcohol or bleach solution. Recommended application for Sani-Cloth Bleach Germicidal Wipes: 1 minute; Sani-Cloth Prime: 3 minutes.

For instructions on fabricating the mask, please visit: rowan.edu/mask

Important

This mask is provided "as-is" and primarily acts as a mechanical barrier. It is not a replacement for N95 masks.

Questions or comments?
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Questions or feedback?

Please visit our survey site: go.rowan.edu/3Dprintedmasksurvey or scan the QR code



Reusable 3D-printed face mask

Rowan University engineering and medical students are prototyping durable, lightweight, reusable face masks to augment the supply of face masks during the current shortage of PPE. This mask is provided "as-is" and primarily acts as a mechanical barrier. It is not a replacement for N95 masks.

Developed in collaboration with medical professionals, the mask prototype may serve in clinical and field use. The replaceable non-woven filter materials recommended for the filter housing are widely available. Users will supply the elastic or cord. If printed, used and maintained correctly, the mask provides a durable, reusable mechanical barrier.

Disclaimer and License Information

Disclaimer

The mask information is provided as research information only and has not been tested for commercial use. The design and masks made from the design have NOT been tested or approved pursuant to FDA, OSHA, or NIOSH standards. The mask Information is experimental in nature and the safety or efficacy for use in humans has not been proven or tested. Users should make every effort to use an available N95 mask if feasible.

This design is for an adult mask.

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