University Hospitals
Ventures

DIY Mask Guidelines

How-To Guide For Making and Maintaining Cloth Surgical Masks

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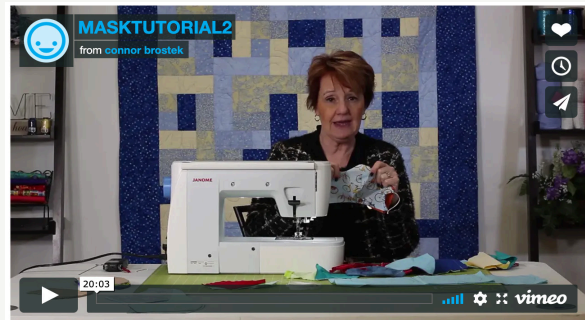Rotation method
Recommended cleaning steps

Disclaimer: We acknowledge this is less than ideal, but better than a bandana.

How to Make

This is a 2-color reversible mask with a pocket for a disposable filter to be placed prior to use.
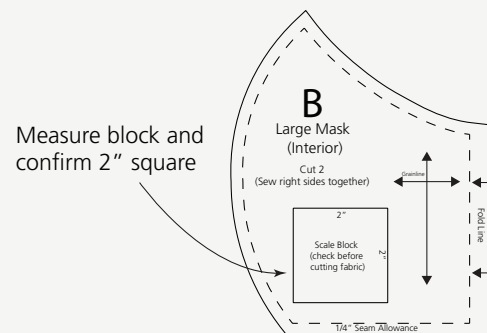
Materials & Tools

- •100% Cotton fabric scraps (Need 1 light, 1 dark)
- •1 1/3 yd or 48" Fabric or ribbon ties for head strap (bias tape, grosgrain ribbon, NO satin ribbon)
- •3" wire (thinner gauge enough to bend and hold nose for piece such as 22g floral wire)
- •Print-outs of Patterns A and B
- •Sewing machine or serger
- •Measuring tape
- •Scissors
- •Thread

Video tutorial available at link near bottom of the page.

Step-by-step process

STEP 1: Print pattern pieces A and B of the mask pattern. Measure scale block on each pattern piece to confirm each side of the square measures exactly 2". Cut pattern pieces A and B from the paper and align the grainlines printed on the pattern pieces to the fabric's grainline. Using sharp scissors or a rotary cutter, cut two of each pattern piece A and B.

Measure block and confirm 2" square

B

STEP 2: Align, with right sides together, both pattern A pieces. Using a ¼" seam allowance, sew pattern piece together along curved edge. Repeat with pattern B pieces. Clip curves taking care not to snip into stitch line. Press seam allowance open.
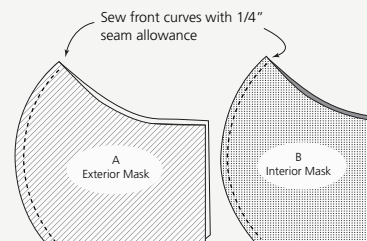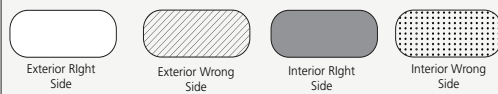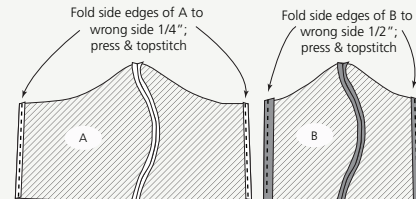
Sew front curves with 1/4" seam allowance

A
Exterior Mask

B
Interior Mask

Illustration Key:

Exterior Right Side	Exterior Wrong Side	Interior Right Side	Interior Wrong Side

Original design by Pins & Needles.
Many thanks to Carla Macklin for review of step-by-step instructions and drawings.

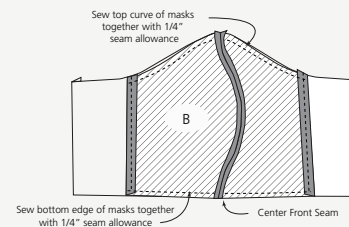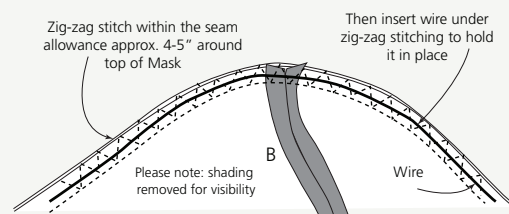For latest version of PDF and information: https://www.uhhospitals.org/healthcare-update/masks-and-donations

How to Make

Step-by-step process cont.

STEP 3: Press the sides of the exterior mask towards the center ¼" (with wrong side folded on itself). Topstitch 1/8" from folded edge to secure fold. Press the sides of the interior mask towards the center ½" (with wrong side folded on itself). Topstitch 1/8" from folded edge to secure fold.

Fold side edges of A to wrong side 1/4"; press & topstitch

Fold side edges of B to wrong side 1/2"; press & topstitch

A

B

STEP 4: With right sides together, align the center front seams of the interior and exterior mask. Sew exterior of the mask to the interior along the top and bottom edges of the mask.

Sew top curve of masks together with 1/4" seam allowance

B

Sew bottom edge of masks together with 1/4" seam allowance

Center Front Seam

STEP 5: Switch your stitch setting to a wide zig-zag stitch. Sew approximately 4-5" around the nose of the mask entirely within the seam allowance. Cut a piece of wire to 3" to 4" in length. Copper wire works very well but jewelry wire, paperclips, bag ties, garden wire, pipe cleaners, and other types of thin, flexible wire also work. Thread wire underneath the zig-zag stitches to secure it in place. Wire does not need to be perfectly aligned under every stitch, just enough to hold it in place. Turn your stitch setting back to a straight stitch.
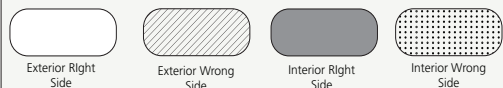
Zig-zag stitch within the seam allowance approx. 4-5" around top of Mask

Then insert wire under zig-zag stitching to hold it in place

B

Please note: shading removed for visibility

Wire

STEP 6: Turn the mask to the right side through the side openings, being mindful not to bend the wire. Press around mask at the outer edges, folding in the seam allowance along the sides of the mask.

Flip mask to right side and press

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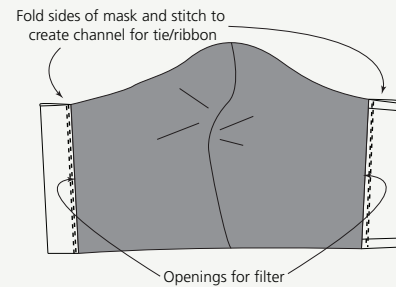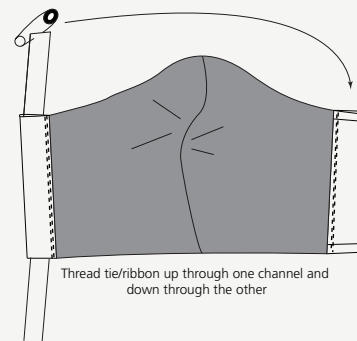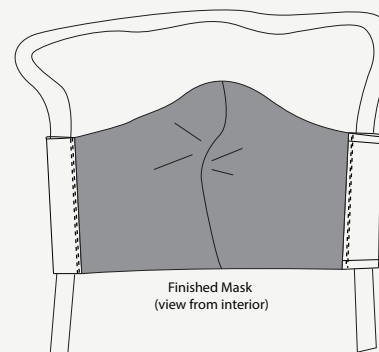| Exterior Right Side	Exterior Wrong Side	Interior Right Side	Interior Wrong Side

How to Make

Step-by-step process cont.

STEP 7: Fold the left side of the exterior mask to meet the folded edge of the interior mask. Sew 1/8" from edge of exterior mask to create a channel through which the tie/ribbon will be threaded. Take care not to catch the edge of the interior mask when sewing, as the interior mask needs to be left open for the insertion of filter material.

Fold sides of mask and stitch to create channel for tie/ribbon

Openings for filter

STEP 8: If making a fabric tie, cut a strip of fabric 1 ½" wide and approximately 48" long. Fold strip in half and press. Open strip up and fold each edge of the strip to meet in the center. Press. Then fold strip in half and press. The resulting width of the folded strip should be 3/8". Topstitch with a straight or zig-zag stitch to secure all layers of the strip.

Thread tie/ribbon up through one channel and down through the other

STEP 9: Attach a safety pin to the end of the fabric tie/ribbon. From the bottom of the mask, thread the safety pin and tie/ribbon through the channel created at the Side of the mask. Thread the safety pin and tie/ribbon from the top of the mask to the bottom on the opposite side of the mask.
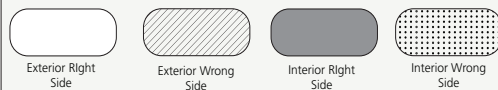
Finished Mask
(view from interior)

Add a finishing touch: Attach a small note (can be any note, card, etc - doesn't have to be fancy!) for the caregiver who will receive it (e.g. "Made with kindness by Jan B, Mayfield Heights").

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Illustration Key:

| Exterior Right Side | Exterior Wrong Side | Interior Right Side | Interior Wrong Side |

How to Maintain

These masks will be made available to: (1) Visitors to our facilities; (2) Caregivers who are not involved with direct patient care and are at low risk of catching COVID-19 from patients or transmitting to others; (3) COVID-19 patients as an alternative to surgical masks to better protect them and others around them; and (4) Cover N95 masks for extra protection for caregivers on the front lines.

Rotation method

"One to wear"
Active use for that day or shift only.

"One in the wash"
Follow recommended cleaning steps.

"One for spare"
Because you never know what might happen.

Recommended cleaning steps

STEP 1: Remove and discard the filter. Spray mask front and back with hydrogen peroxide or equivalent quality solution.

STEP 2: Gently kneed with warm, soapy water. Do not soak. If placed in washing machine, do not place with any other items.

STEP 3: Allow to dry on clean, sanitized surface that is free from high-touch areas.
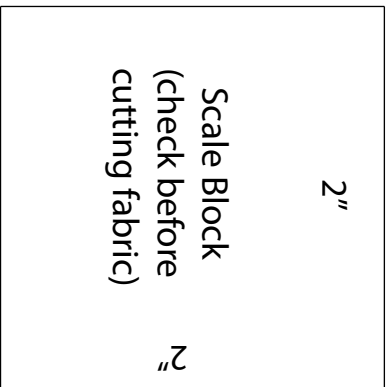
Additional resources:

DIY Masks: Worth the Risk? Researchers Are Conflicted - Medscape - Mar 20, 2020.

instructables.com/id/DIY-Cloth-Face-Mask/
@ashevillejm

A

Large Mask
(Exterior)

Cut 2
(Sew right sides together)

Scale Block
(check before
cutting fabric)

2"

2"

Grainline

1/4" Seam Allowance

Fold Pattern A to Meet
Folded Edge of Pattern B

Fold Line

B
Large Mask
(Interior)

Cut 2
(Sew right sides together)

Grainline

Fold Line

2"

Scale Block
(check before
cutting fabric)

2"

1/4" Seam Allowance