Will homemade cloth masks protect against disease?

Handwashing remains a critical means of disease prevention for community members. When combined with physical distancing and proper mask use, homemade cloth face masks may help slow the spread of COVID-19 in a community. Masks limit the spread of germs from the mask wearer to others by helping block large droplets from coughs and sneezes.

It is important for people who choose to use these masks to understand what type of protection they offer. Homemade cloth masks aren’t as effective as clinical masks and offer limited protection for people in close contact with someone who is sick. Whether using cloth masks or not, always practice physical distancing, avoid touching your face, use good hygiene practices, and follow guidelines to safely use face masks. Visit ProjectProtect.health to learn more.

What type of fabric works best for a homemade cloth mask?

For homemade cloth masks, cotton or a cotton blend works best. The fabric in T-shirts and pillowcases are examples of this fabric. Wash your fabric before sewing.

Can I donate homemade cloth masks to frontline healthcare workers?

Many healthcare facilities are accepting homemade cloth face mask donations. Before you sew masks to donate, find a recipient who agrees to take them. Ask hospitals, local governments, or community organizations who serve vulnerable populations if they want to receive and distribute homemade cloth face masks. Finished masks should be sterilized before use.

What about giving homemade cloth masks to family, friends, and neighbors?

If you are donating masks to family, friends and neighbors, finished masks should be packaged in a paper bag and held for three days before being given. People receiving the mask should carefully follow guidelines available on ProjectProtect.health for wearing and cleaning instructions before using.

How do I clean a homemade cloth mask?

Homemade cloth masks should be properly cleaned before they are used or reused. Launder the mask in your washing machine in HOT water using soap or detergent that leaves no residue. Dry in HOT in your dryer.

How do I properly use a homemade cloth mask?

It is important to follow guidelines about how to put on and take off a mask, what to and not to do while wearing it, and how to properly clean it. Visit ProjectProtect.health to learn more.

1. Davies, Anna & Thompson, Katy-Anne & Giri, Karthika & Kafatos, George & Walker, James & Bennett, Allan (2013). Testing the Efficacy of Homemade Masks: Would They Protect in an Influenza Pandemic? Disaster medicine and public health preparedness. 7. 413-418. 10.1017/dmp.2013.43.
Assembly Guide

Preparation

Fabric

This mask has two layers—the inner layer touching the face and the outer layer. The two layers can be made of the same fabric or different fabrics. Use 100% cotton or a cotton blend for the best filtration and breathability.

It takes two pieces of fabric about 14.5 in. x 7.5 in. (36 cm. x 18 cm.) to make one adult mask (see Figure 1).

There are three sizes: Large, Medium, and Small. Patterns are available at the end of these instructions.

Ear Loop Material

Each mask needs two strips for ear loops. Ear loop material should be less than ½ inch (1.25 cm) wide. Some options are elastic, elastic cord, string, ribbon, bias tape, or even shoelaces.

If using elastic, each piece should be 12 inches (35.5 cm.) long. For other materials each piece should be 15 inches (38 cm) long (see Figure 2).

Sewing Equipment

• Sewing machine
• Scissors or rotary cutter
• Thread
• Straight pins
• Safety pins

Work Area

Before you start sewing, ensure you are symptom free. Wash and sanitize your hands and your work area thoroughly with a disinfectant (it must indicate that it kills viruses) per the instructions on the label. Ensure there are no potential contaminants (e.g., pet hair, food, etc.) in the work area.
Assembly Guide
Sewing Instructions

Step 1—Cut out the two main mask pieces.
• Fold the fabric in half. On the folded edge of the fabric, place the pattern edge marked “place on fold” (see Figure 4).
• Pin the pattern on the fold of the fabric and cut it out.
• Repeat step 1 to cut the second piece.

Step 2—Make the chin part of the mask.
• Open one of the cutout mask pieces. Fold it in half on the fold line, with the right sides inside.
• Sew along the chin seam, stitching 1/4 in (0.7 cm) from the edge (see Figure 5).
• If desired, press the seam to the side to help it lay flat.
• Fold and sew the second mask piece in the same way.

Step 3—Join the inner and outer layers together.
• Lay the two mask pieces on top of each other, with right sides of the fabric together (see Figure 6).
• Sew the two layers together across the top of the mask, using a ¼ in (0.7 cm) seam.
• Sew the two layers together across the bottom of the mask.
Step 4—Turn the mask right-side out.
• Press with an iron.

Step 5—Topstitch along the top and bottom edges.
• Keep your stitching close to the edges.
• Do not stitch across the sides of the mask.

Step 6—Make the casing (a hollow channel) for the ear loop to go through.
On each side:
• Fold the raw side edges toward the inside of the mask about ¼ in (0.7 cm) (See Figure 10).
• Then fold over again, about 5/8 in (1.5 cm).
• Pin in place and stitch as shown in Figure 11.

Step 7—Thread the ear loop through the casing along the sides of the mask.
• Use a large-eye plastic needle or attach the end of the elastic to a small safety pin. Push the elastic through the casing on both sides of the mask (see Figure 12).

Step 8—Make loops the right size.
• Tie the loop ends loosely. The wearer can adjust the length by tying a knot (see Figure 13).
Large Face Mask

Sew with 1/4 in (6 mm) seam allowance.

Fabric and Notions Needed.

Fabric Quantity: 14.5 in x 7.5 in (36 cm x 18 cm).

The best fabric is cotton T-shirts, pillow cases, or other cotton material.

Notions: Elastic, elastic cord, string, or ribbon [Loop material must be less than 1/2 in (1.25 cm) wide.]

Place on Fold

1/4 in (6 mm) seam allowance

Large
Cut 2

2 in or 5 cm

When printed, this line should be 2 in (5 cm). Enlarge or reduce as necessary to ensure your pattern is accurate.
Medium Face Mask

Sew with 1/4 in (6 mm) seam allowance

Fabric and Notions Needed.

Fabric Quantity: 14.5 in x 7.5 in (36 cm x 18 cm).

The best fabric is cotton T-shirts, pillow cases, or other cotton material.

Notions: Elastic, elastic cord, string, or ribbon [Loop material must be less than 1/2 in (1.25 cm) wide.]

When printed, this line should be 2 in (5 cm). Enlarge or reduce as necessary to ensure your pattern is accurate.

Place on Fold

1/4 in (6 mm) seam allowance

Medium

Cut 2

2 in or 5 cm
Small Face Mask

Sew with 1/4 in (6 mm) seam allowance

Fabric and Notions Needed.

Fabric Quantity: 14.5 in x 7.5 in
(36 cm x 18 cm).

The best fabric is cotton T-shirts, pillow cases, or other cotton material.

Notions: Elastic, elastic cord, string, or ribbon [Loop material must be less than 1/2 in (1.25 cm) wide.]

When printed, this line should be 2 in (5 cm). Enlarge or reduce as necessary to ensure your pattern is accurate.