# PLEASE READ THIS FIRST!

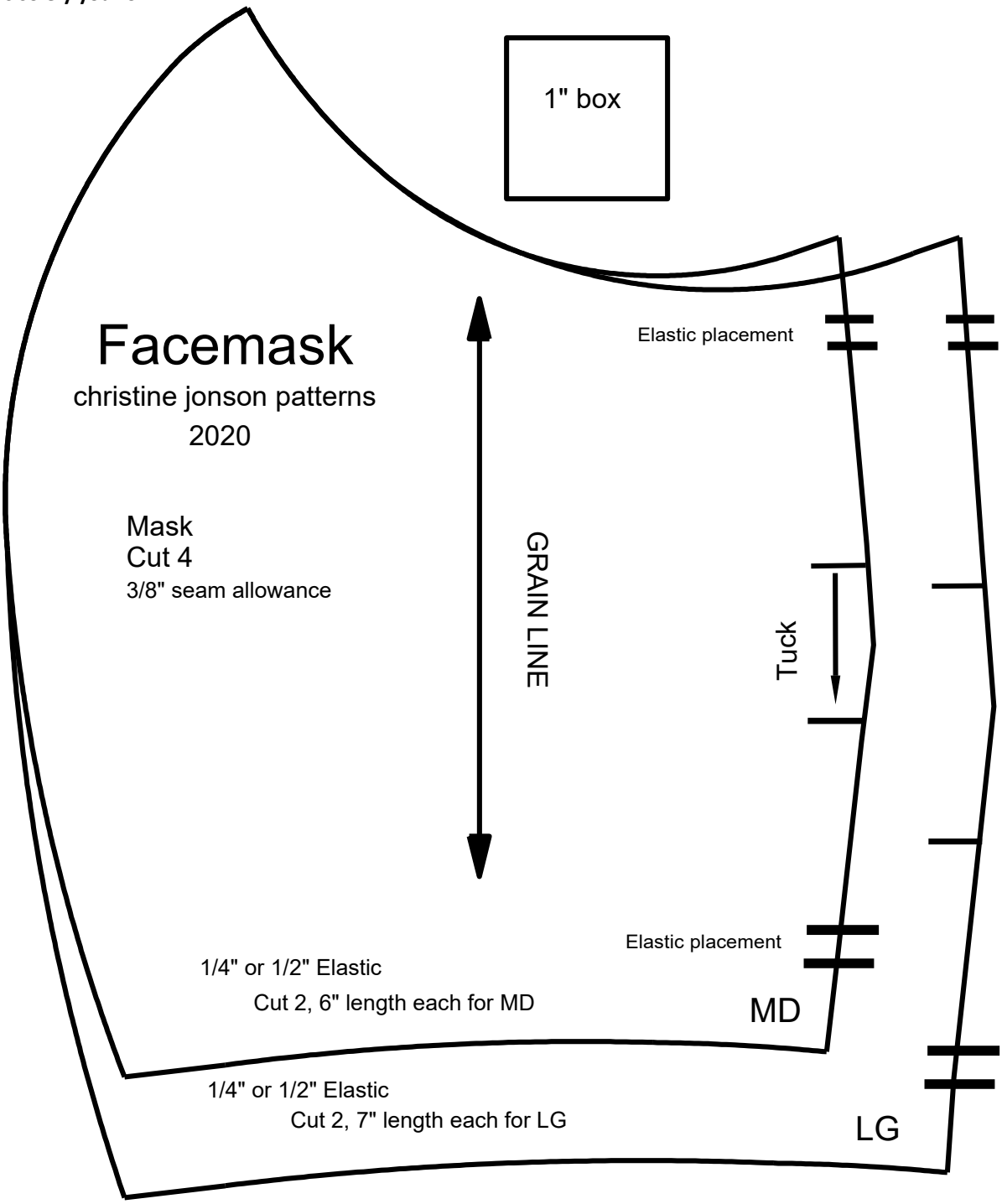
## An Important Distinction

The use of homemade face masks is:

- To respond to the hospitals' requests for emergency backup masks.
- To help community members "slow the spread" in public settings where other social distancing measures are difficult to maintain.

It is very important for everyone to understands that wearing a cloth face mask can offer some protection, but it can't protect against viruses as well as n95 masks. Homemade face masks are not as effective and are not a substitute for proper PPE in the healthcare field. As the situation continues to change, please rely on the guidance of your local, state and national health departments for the most recent recommendations.

**Disclaimer: This pattern has not been industry-tested and is intended for educational purposes only. The decision to use this device is solely your own.**



# CJP Facemask Sewing Instructions

1. Fold the fabric right sides together and trace the pattern twice onto the fabric. Cut 4. (Cut 2 pattern pieces for each layer of mask, 4 total.)  Clip/mark the notches for the tucks on all 4.
2. Single needle the center front curved seamline at 3/8. x2 (Do this for each layer).

3. Press or fold the seam allowance to one side and topstitch at ¼". x2 (Do this for each layer).
4. View of topstitch from the inside.

5. Create the tucks on the right and left sides of both outer and inner layers. The folds should face the bottom. x2 (Do this for each layer).
6. Stitch the elastic on the right and left sides of outer mask at placement notches.

7. Stitch the inner layer to the outer/elastic layer at the side seams first.
8. View of double layer mask with side seams sewn.

9. Stitch the bottom of mask leaving a 2” opening between a corner and the center front. Backstitch securely.
10. Stitch the upper seam together following the curve.


11. Reach inside and fold the corners as shown. This technique will give a crisp corner without clipping.
12. View of corner turn.


13. Turn mask right side out.
14. Tug the elastic gently to pull corners out.
15. View of the side tuck and elastic.



16. Press the seams around the mask. Press the tuck flat.
17. Press the center front curved seam over a ham to set the shape.
18. Edgestitch around the mask being sure to close the opening at the bottom.


19. A layer of washable filtration material can be added to the inside by sewing it along with one side of the mask.

**Finished Sizes - Medium and Large**

# We used the following resources when providing this information to you.

## Cloth Face Covers

**CDC > Coronavirus Disease 2019 (COVID-19) > Prevent Getting Sick (4/4/20)**

CDC recommends wearing cloth face coverings in public settings where other social distancing measures are difficult to maintain (e.g., grocery stores and pharmacies), **especially** in areas of significant community-based transmission.

CDC also advises the use of simple cloth face coverings to slow the spread of the virus and help people who may have the virus and do not know it from transmitting it to others. Cloth face coverings fashioned from household items or made at home from common materials at low cost can be used as an additional, voluntary public health measure.

Cloth face coverings should not be placed on young children under age 2, anyone who has trouble breathing, or is unconscious, incapacitated or otherwise unable to remove the mask without assistance.

The cloth face coverings recommended are not surgical masks or N-95 respirators. Those are critical supplies that must continue to be reserved for healthcare workers and other medical first responders, as recommended by current CDC guidance.

## Cloth Mask for HCP (Healthcare Professionals)

**CDC > Coronavirus Disease 2019 (COVID-19) > Healthcare Professionals > Optimize PPE Supply (4/4/20)**

**HCP use of homemade masks:** In settings where facemasks are not available, HCP might use homemade masks (e.g., bandana, scarf) for care of patients with COVID-19 as a last resort. However, homemade masks are not considered PPE, since their capability to protect HCP is unknown. Caution should be exercised when considering this option. Homemade masks should ideally be used in combination with a face shield that covers the entire front (that extends to the chin or below) and sides of the face.

**Restrict facemasks to use by HCP, rather than patients for source control.** Have patients with symptoms of respiratory infection use tissues or other barriers to cover their mouth and nose.

## The Best Fabric to Use to Make A Face Mask

Researchers at Cambridge University tested the effectiveness of a wide range of household materials for use in homemade masks. They measured how well the household materials could capture and filter small particles. Test data shows that the best choices for DIY fabric masks are cotton t-shirts, pillowcases, or other cotton materials. Using a double layer of material for your DIY mask adds a small increase in filtration effectiveness but will make the mask harder to breathe through. We recommend washing swatches, then test breathability before deciding on fabrics. You may want to use different fabrics for the inner and outer layers.

**Are Homemade Masks Effective?**

TABLE 1

**Filtration Efficiency and Pressure Drop Across Materials Tested with Aerosols of *Bacillus atrophaeus* and Bacteriophage MS2 (30 L/min)[a]**

| Material | *B atrophaeus* | | Bacteriophage MS2 | | Pressure Drop Across Fabric | |
|---|---|---|---|---|---|---|
| | Mean % Filtration Efficiency | SD | Mean % Filtration Efficiency | SD | Mean | SD |
| 100% cotton T-shirt | 69.42 (70.66) | 10.53 (6.83) | 50.85 | 16.81 | 4.29 (5.13) | 0.07 (0.57) |
| Scarf | 62.30 | 4.44 | 48.87 | 19.77 | 4.36 | 0.19 |
| Tea towel | 83.24 (96.71) | 7.81 (8.73) | 72.46 | 22.60 | 7.23 (12.10) | 0.96 (0.17) |
| Pillowcase | 61.28 (62.38) | 4.91 (8.73) | 57.13 | 10.55 | 3.88 (5.50) | 0.03 (0.26) |
| Antimicrobial Pillowcase | 65.62 | 7.64 | 68.90 | 7.44 | 6.11 | 0.35 |
| Surgical mask | 96.35 | 0.68 | 89.52 | 2.65 | 5.23 | 0.15 |
| Vacuum cleaner bag | 94.35 | 0.74 | 85.95 | 1.55 | 10.18 | 0.32 |
| Cotton mix | 74.60 | 11.17 | 70.24 | 0.08 | 6.18 | 0.48 |
| Linen | 60.00 | 11.18 | 61.67 | 2.41 | 4.50 | 0.19 |
| Silk | 58.00 | 2.75 | 54.32 | 29.49 | 4.57 | 0.31 |

[a] Numbers in parentheses refer to the results from 2 layers of fabric.

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.