

## Surgical mask Pattern for teens and adults

**Disclaimers:** This mask will NOT protect you from direct exposure to viruses or other pathogens including coronavirus. It is simply not possible, using DIY materials, to replicate the level of protection needed to filter out viral particles. This mask will help you avoid touching your face and will give you some protection from dust and particles. It is very important to remember that the surface of the mask, both the outer and inner parts, should be considered contaminated when they are worn, and should not be touched. If you touch the mask, wash your hands immediately. Once the mask has been worn, it should be laundered in hot water and the wearer and launderer should thoroughly wash their hands. This mask is NOT your primary line of defense!! Good handwashing is!! As a physician, I have made every effort to make this mask as protective as possible, but you should always seek the advice of your own physician when making medical decisions.

### Supplies:

- 2 pieces of fabric around 8 inch square. These need to be tightly woven fabrics such as good quality quilting cotton, cotton and cotton blend poplin or other tightly woven fibers. Prewash your fabric in hot water, as that is how you will need to launder your completed mask. I do not recommend knit fabrics for this project as they are far more open in their construction.
- Nonwoven interfacing, an 8 inch square. A midweight fusible is what I am using. It should be the papery type of interfacing. Again, you want it to prevent the flow of particles, but not completely inhibit air flow.
- Bias tape for binding. Extra wide double fold is the easiest to work with. If you are making the style with elastic ear loops, you will need around 25 inches. For the style that ties on, you will need around 3 yards.



- A 6 inch wire twist tie (like for bread bags). This will provide structure around the nose and should not be omitted! In a pinch, straighten out one from a bread bag. They can be purchased on amazon.

- Elastic for ear loops, if you are making this style. Either  $\frac{1}{8}$  inch elastic or elastic cord would be the best choice.  $\frac{1}{4}$  inch elastic is a bit bulky and uncomfortable.

- Thread, pins, scissors, a sewing machine, a hot iron

### Tutorial:

Cut your fabric and interfacing per the pattern. Fuse the interfacing to your outer fabric if you are using a fusible product. If not, layer the interfacing with your outer fabric and treat them as one. Feel free to baste them together if needed.



Layer the fabric wrong sides together and pleat it per the pattern. You should fold out (with the insides of the mask together) along the top line of each pleat, and fold in on the lower line. The upper fold should come down to the dotted line. Your pleats should meet together along the mask. Press your pleats firmly with a hot iron. Trim the edge to even it out.



Apply binding to the pleated, short sides of the mask and sew it in place. I use a zigzag stitch to make sure I'm capturing both the front and back edges in a single pass.



Trim the binding across the top and bottom edge, trimming the edges cleanly at the same time. A rotary cutter is great for these trimming steps, but not essential.



If you are making the style with elastic loops, cut your elastic to the desired length. About 6.5 inches is what seems to work for the average adult. Align the binding along the top edge, tucking under the raw ends at each edge. You can baste it in place if you need to. Place the ends of each piece of elastic along the top edge and fold the binding over it. Tuck the wire twist tie under the binding in the center area of the mask. If you need to, glue or tape this in place so it doesn't slip around.



Pin the binding in place. Stitch down the binding, being sure to stitch across the ends to secure the elastic.



Repeat this step on the bottom edge, omitting the twist tie, this time looping the elastic from the top down to the bottom on the same side, and enclosing the elastic in the same way as the top.



Stitch as for the top.



If you are making the style with ties, you will apply your binding to the top and bottom similar to the way you applied it on the sides, but this time, leaving long tails to form your ties. Cut a 48 inch piece of binding. Measure out your binding to 20 inches, then open the binding and

sandwich the mask in place. Tuck the wire twist tie under the binding in the center area of the mask. If you need to, glue or tape this in place so it doesn't slip around.



Pin the binding in place. Measure the second tie again to 20 inches past the other edge of the mask and cut your binding. Now stitch the entire length of the binding. You can tuck under the edges to finish them if you wish, or just stitch across them.



Do the same for the bottom edge, omitting the twist tie.



To wear the mask with ties, tie the upper ties around the head first, wrapping them securely to the back of the head, then tie the lower ties upward, ensuring a snug fit under the chin. Tie the ties on top of the head.



This mask is actually demonstrating poor fit as well. The mask is too large for her face, as you can see from the large gaps on either side. She also has a significant gap around her nose because the mask is too tall.

In order to create a mask that fit her petite face, I printed the pattern piece at 90% scaling and followed the same process to assemble the mask. With a





smaller mask, she has a snug fit that will protect her much better. When the mask is worn, it should fit snugly around the nose and face. Use the wire on the top to fit the mask to your nose, and open the pleats to tuck the mask under your chin.

You're done! Wear your mask in good health. And wash your hands!

Upper edge

center

↓ pleat

$\frac{3}{4}$ "

↓

↓ pleat

$\frac{2}{5}$ "

↓

↓ pleat

$\frac{3}{16}$ "

↓

$7\frac{1}{2}$ "

$7\frac{1}{4}$ "

