**COVID-19 Protective Cuff Materials and Directions**

**Materials:**

* $\frac{2}{3} $yard Polyprene (bio-medical fabric available from Penn Medicine Emergency Management and Safety Department)
* $\frac{1}{2} $yard of $\frac{1}{4} $inch-wide elastic (if you have elastic that is wider, you can cut it down to the right width)
* $40 $inch, #5, separating, plastic (jacket) zipper

**Directions:**

1. Cut out pattern pieces and elastic.
2. Separate the zipper into its two parts. Discard part that DOES NOT have the actual zipper slider on it.
3. Unfold the cut-out pattern piece.
4. Align the tape (fabric side) of half zipper along the “zipper” side of the pattern piece. It should be aligned so that the teeth of the zipper \*slightly\* hang over the long edge of the pattern piece.
5. Pin the now aligned half zipper to the main pattern piece.
6. Sew zipper to pattern piece. *Optional*- Surge seam.
7. Now focus on the “elastic” side.
8. Pin elastic to “elastic” side of pattern piece. You should have to really stretch the elastic in order to get it to fit the entire length of the pattern piece.
9. Sew elastic to pattern piece. Now, the elastic side should look very gathered/bunchy. *Optional*- Surge seam.
10. Fold pattern piece in half, with right-sides facing together. Align notches on the curved edges.
11. Pin the now aligned curved edges.
12. Sew the curved edges together. *Optional*- Surge seam.
13. Once completed measure approximately 3” down from where the ends of the zippers meet and approximately 1/2“ to the right of the center stitch and sew a 5/8” button hole. This is where a small power will be fed from a waist mounted battery to the fan inside the PAPR helmet the cuff will zipper to.
14. Turn pattern piece right sides out.

**Notes:**

* All materials (bio fabric, elastic and zippers) currently supplied by Penn Medicine Emergency Management and Safety Department reachable via HUP Volunteer Services.
* Available Zipper lengths vary. Zippers 40” in length are not readily available so it is important that the zipper being sewn onto the cuff (zippers supplied are 48” & 60”) is 40” because the opposing zipper to which this cuff will fasten measures 40”. Excess length should be cut off at 40” and a dab of hot glue should be delivered at the zipper tooth end as to prevent the cut end from detaching when fully fastened.

**Resources:**

Video tutorial on how to sew the cuff (by Veronica Fenton) **UPDATED: 4/5**

<https://www.youtube.com/watch?v=srsg7wosvaU>

Penn Medicine video depicting Powered Air Purifying Respirator (PAPR) Components and operation. Video shows the zipper cuff that you will be making and how it attaches.

<https://youtu.be/yXlE5PwG3Rg>

