Cotton mask with "cupped" satin liner for increased breathability.

- **Using cloth masks does <u>not</u> reduce the supply of <u>surgical masks</u> for medical professionals**
- Cloth masks are **not at all as good as** surgical, N95, or FFP1/2/3 masks for filtering anything out of the air the wearer would breathe in.
- Satin has "low porosity" which *may* be good for filtering.
- Making this mask took 60 mins.
- Some satin, a 400 thread count cotton (sheets?), scissors, sharpie, plastic placemat, sewing machine, 1mm wire, 2mm elastic

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v5 https://cv-masks.github.io/cotton_facemask_with_satin_liner_and_plastic_retainer-v5.pdf

Plastic retainer holding satin into cotton outer and ready to wear

The retainer give a cupping effect to increase breathability

As viewed from the front. Elastic can be shortened until it is snug on the wearers face

Mask shaming?

I've not experienced it (UK : London & Edinburgh; trains, buses, underground/subway) since 2nd March.

- Not comments or questions from other people
- Not outright stares or "looks"
- Not one person nudging another to discreetly see what I was wearing
- No shakes of anyone's head in my presence.

Most of the time I'm in gloves when I'm wearing the mask. Since 20th March, I've been in goggles too.

First: print two templates pages for the fabric

Print this A4 template - https://cv-masks.github.io/cv-mask-5-template.pdf

This is too big for US "Letter" and may work on US "Legal" but you'll have to judge for yourself whether the printer for you Mac/Windows PC mangled the proportions and measurements.

Two pieces of fabric only - cotton outer, and satin liner.

Measurements: 28cm is 11 inches, 19cm is 7.5 inches. 24cm is 9.5 inches.

Satin disclaimer

https://smartairfilters.com/en/blog/best-materials-make-diy-face-mask-virus/
doesn't list **satin** as a choice, and therefore can't grade it.

I don't know how good it is as a filter and where this mask is on a scale of 1-10 (where 10 is classic surgical mask).
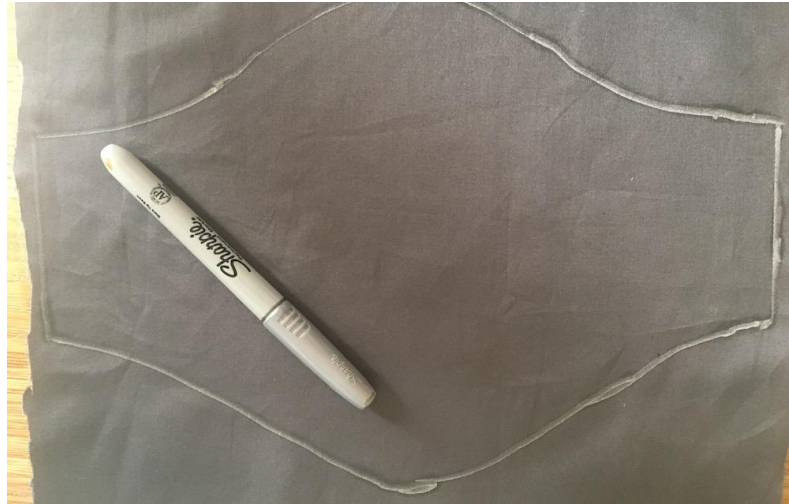
You can swap the satin fabric for anything else you may prefer to use. The reasons you're using this design is the cupping of the retainer which holds the fabric away from your nostrils/mouth as you breathe in - and thereby keep a larger surface area of fabric to do the filtering meaning "breathability" isn't trashed as you increase filtering. Just a theory.

Review video talking through the finished product

https://www.youtube.com/watch?v=zFI01B5BPX8

The first of two I made to this template and design is discussed in this 5 minute video. I had no tripod, so the phone camera is perched on top of some books, and it all feels a little zoomed in - sorry.

Cut out the paper "outer" template and use it to mark the 400 thread cotton. This was a pillowcase for me (from a supermarket), as I am experimenting.

Do dots (not a line) - less pulling of the fabric. Use scissors to cut that out.

Fold the cotton in half (left to right) and sew lines like so. You can use dots to mark where you intend to sew, but I didn't here.

Note I have a change angle of line sewed for under the chin. You could leave that for later if you want.

Cut off and discard the excess past the lines you just sewed

Iron a hem for the top of the mask. 7.5mm (5/16").

Sew that, but leave room to thread wire through from the end.

1mm "garden wire" cut into three 16cm (6 ¼") lengths. With pliers bend the ends over to protect the wearer's eyes (just in case).

Thread the three wires into the hem. Position them to the center.

Fold over the pocket, and iron it to that position then sew it into position leaving room for the plastic retainer and button-eyelets for the elastic (I didn't quite leave enough room for those at the top here)

Sew four button holes - as small as you're going to need for your elastic

Cut little holes with a craft knife onto rough wood. Do this very carefully so as cut the fabric only

Cut two pieces of elastic 24cm (9.5") long

Tie a knot and thread them through

Thread the elastic through WITHOUT CUTTING YOURSELF (nobody should risk visiting ER right now)

Cut paper template for liner, and mark the satin with dots

Then cut that out with scissors

Cut a rectangle of plastic placemat - 24cm by 4cm (9" by 1.5").

Optional: Use a drill and a small bit to make holes so you don't run past your intended stopping point with a craft knife in the next step. Run the drill backwards to make less of a mess with the plastic

Use thick leather glove, and join those dots (ER trip: bad)

Just three velcro dots each side <- cotton outer

Just three velcro dots each side <- liner

That was my second one the same, and here's proof!

Mask #1 was done correctly, but mask #2 has a defect:

I didn't place the button-hole right. I should not be under the retainer as that could make for a bad seal, meaning unfiltered air into your lungs