DIY Protection Supplies Patterns + Resources
We continue to update this central article often as we find additional links for free patterns and other resources. We also appreciate all of you who have been commenting below with tips, suggestions, and local needs. Makers are the best! The call goes out, and we’re ready to help.

The official word has now come from the CDC and the federal government: everyone going out in public should be wearing a face mask. And, in order to insure that medical-grade masks are being saved and directed to the frontline healthcare workers who need them most, the rest of the population is encouraged to use DIY masks. It’s time to use your skills to make masks for yourself and those around you. We’ve included our own No Sew Mask project below.

We’ve also recently added in some information about DIY hair cover (scrub cap) options and gown options as we’ve gotten several emails about these being needed as well. In all cases, we understand that our DIY items are not likely to be used within critical care situations, but they can provide protection for other front line workers and even patients, freeing up the “commercial” products to be used where they are most desperately needed.

Demands are different in various areas, so please continue to posts your comments below with news from your city/town/state/country. Let us know if there are particular requests from local healthcare professionals, what you’ve heard regarding the best materials to use, where the
Why DIY?

Early on, there were a lot of concerns about whether DIY masks were even appropriate to make. There was conflicting information from news sources, the World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC), and local governments about what could and could not be used. As mentioned above, that is no longer the case. There's one big reason for the change: there is increasing evidence that this virus can be spread by pre-symptomatic and asymptomatic carriers. A face mask is one of the best ways to cut down on airborne respiratory droplet spread in public. Wearing a mask in public also keeps you more aware of not touching your own face.

Remember to save the medical grade masks for those who need them most. Many, if not most, facilities that rely on Personal Protective Equipment (PPE) are now at crisis levels. If you have any of these masks consider donating them and make your own cloth masks from one of the many tutorials listed below.

Plus, your donated DIY masks are still wanted and needed. These are unusual times that require unusual solutions, and healthcare workers and hospitals are asking for help! They are the ones experiencing the issues day-in and day-out. They know what is needed and how it can be used. If they didn’t want help, they wouldn’t ask. The DIY masks are not meant to replace PPE at the hospital level. But they can be used to cover medical grade N95 masks to extend their use or to provide coverage to people who don’t have anything. Remember – there is a wide range of workers who need the masks, so while the DIY variety is unlikely to go to surgical staff, they are more than welcome to help protect admin personnel, janitorial staff, nursing assistants, people delivering meals, and more.

Speaking of these amazing folks on the frontline, we were blown away by a recent article from the University of Florida Health’s Department of Anesthesiology. A professor there created a simple respirator mask from the sterile wrapping that is normally used to surround surgical instrument trays before they pass through gas sterilization or an autoclave. This material comes in 4’ x 4’ sheets and is typically discarded after surgical instrument trays are unwrapped and before coming into contact with patients. About 10 masks can be made from one sheet.

“The innovative mask uses Halyard H600 two-ply spun polypropylene that cannot be penetrated by water, bacteria or particles. It blocks 99.9% of particulates, making the masks about 4% more effective at blocking particulate material than the N95 masks, according to Bruce Spiess, M.D., a professor of anesthesiology in the UF College of Medicine, who made that calculation based on the manufacturer's specifications.”

The image below shows two of the prototypes created from kits being developed by UF Health. They hope to take it across the country as nearly all facilities use this same material. We don’t know when or where the kits might become available but wanted to bring this brilliant re-purposing idea to your attention so you can be on the lookout in your area. Here is a link to the full article.
Family members and friends of the Sew4Home Team are currently working on the front lines of this healthcare crisis. They mince no words when it comes to describing the turmoil, and they are just as vocal when it comes to their appreciation of the help that is coming from all corners of the country. From one nurse, “It’s so heartwarming to see how people are trying to help and understanding what we are up against…please let everyone know that it is so appreciated, not just for the physical product, but the emotional support ... beyond measure!”

In the photo above, S4H Seamstress Team Member, Debbie Guild models the latest mask she made for local donation.
Where Can I Donate?

In terms of where to donate, that is changing daily, and we will continue to search for and post any news we find. At the moment, we know that most Joann Fabric stores are acting as donation collection points. You can also follow the hashtags #millionmaskchallenge and #millionmaskmayday to find programs and projects around the USA and the world. And, if you know of donation points in your area, please comment below. The more information out there, the better!

We read a recent article in the Hollywood Reporter that explained how in Los Angeles – where most film and television projects are on indefinite hold – IATSE’s Theatre Wardrobe Locals, the Hollywood Costumers Local and Costume Designers Guild are leading an effort through which its members will sew protective masks for immediate distribution to health care facilities. That is maker re-tooling at its best!

There are social media groups popping up as clearing houses to share information and build community. Mask Makers and Face Mask Warriors on Facebook are both strong options.

Finally, if you know of people within your own circle who may have purchased commercial face masks, gowns, wipes, etc. and are keeping these extra stores for themselves - or worse, to sell at a profit — PLEASE encourage them to do the right thing and donate these supplies to healthcare facilities where they are needed the most! This is not the time for profit over people.

In the comments below is a specific request for masks in the Midland, Texas area. If you are in the area, please take a look. Thanks go out already to Cheryl Baltz to answered the call immediately.

NEWS ARTICLE: This article on a Sewing Army Making Masks appeared on 03/25/20 in The New York Times. We found it particularly heartwarming and it made us proud to be a part of the Maker Community.

REQUEST IN UTAH: We received an email on 04/08/20 from a visitor in Utah with a request for mask donations. The Gail Miller Homeless Resource Center in Salt Lake City is looking for help. In you are in this area, you can reach out for more details to: HHernandez@ccsutah.org.

Resources + Links — Fabric, Masks + Hair Covers + Gowns

Below is a chart developed by Researchers at Cambridge University who tested a wide range of household materials for homemade masks. To measure effectiveness, they shot Bacillus atrophaeus bacteria (0.93-1.25 microns) and Bacteriophage MS virus (0.023 microns in size) at different household materials. This is a helpful starting point when determining what to use for your DIY face masks.

When working with quilting cotton, we have heard suggestions to look at batiks because they have a tighter weave and a higher thread count. Yes, even with two layers, it is still breathable.
Additional Filtration Notes, Links + Comments

This fabric company in Pennsylvania produces specialty fabrics that align well with the current need for DIY masks. They have produced several informative articles about their fabrics in general and filtration fabrics in particular as they relate to mask making. We do not have direct shopping experience with this company, but found their information to be helpful, thorough, and detailed. This link takes you to their specific post about filtration materials. From there you can browse to other resources.

One of our visitors commented below about using a maxi pad as a filtering insert between the layers of a mask. Many of the patterns listed below that feature a pocket recommend interfacing as a filtering layer.

Here is an article we found by a person who tested using HEPA filter material. In this case, the person took apart a thin furnace filter. Others have suggested cutting up HEPA vacuum bags. It’s been noted to make sure you are not using a filter that might contain fiberglass as that can be harmful to your lungs.

We have not found any definitive information on paper-based filter options, such as coffee filters. Some anecdotal comments emphasize that paper might not be best because it retains moisture as you breathe.

Let us know, in the comments below, if you have tried any of these options (with success or not) and/or have heard of other positive alternatives.

The importance of caring for and cleaning your DIY Face Masks

All DIY fabric masks should be laundered in hot, soapy water after every use! Put them on AND take them off using the stretchy ear loops or ties; don’t touch the front of the mask. Then immediately wash your hands. ALL the mask tutorials are fast and easy; make several for each person in your household so there’s no temptation to wear them more than once before washing.

And remember, DIY masks are not some magical method for keeping us 100% safe. Social distancing and hand washing are still just as important.

Although the recommendation says “everyone” should be wearing a mask remember that cloth face
coverings should NOT be placed on children under age two. Never put a mask or any other face covering on an infant or an incapacitated adult who is not able to adjust or remove the mask themselves as this could compromise their ability to breathe.

Below are six of our favorite face mask static tutorials, including our own No Sew mask:

Five Minute No-Sew Mask – S4H
Hand Sewn Mask Tutorial from the New York Times
Children’s DIY Mask with Bunny Face Appliqué from Janome
Instructables Craft CIY Face Mask
Fu Face Mask from freesewing.org
Face Mask Warriors

And, here are five video tutorials we liked on YouTube + Vimeo:

DIY Covid-19 Fabric Mask with Filter Pocket and Stretchy Cord
Joann Fabrics How to Make a Face Mask
How to Make a Face Mask with Filter Pocket and Adjustable Wire
DIY Face Masks from Filtration Materials – closer to N95 options
A Surgeon’s Guide to Making a Surgical Mask, Lauren Streicher, MD

Video Credit: Images below are from the DIY Covid-19 Fabric Mask with Filter Pocket and Stretchy Cord video tutorial, showing interfacing inserted into a pocket as added filtration.

Hair Covers

Another item that is easy to pull together from fabric you have on hand is a hair cover, also known as a scrub cap or skull cap. We’re working on our own sample of this project, but also found three free tutorials for you to check out. Because elastic is rather hard to come by these days, we specifically looked for tutorials that did not specify it.

From Rob Appell of Man Sewing – Video Tutorial on Scrub/Skull Cap
Specifically for longer hair Surgeon’s Scrub Cap PDF tutorial from Larissa Fontenot – best viewed on page
Medical Student’s Personal Scrub Cap Video Tutorial

In addition, there are home healthcare workers who prefer a “buff” over a traditional scrub cap as a hair cover. We already have a great S4H project for our version of this versatile head scarf. So flexible in fact that it can also be used as a face cover. Find our project tutorial here.

Gowns

DIY gowns come in two basic styles. One is more smock-like and more likely to be used by patients or less-at-risk care staff. The other style is called an isolation gown that covers more thoroughly and tightly with elastic around the ends of the long sleeves and a much higher neckline. We were only able to source one reputable free pattern for each style. However, you can purchase commercial patterns from a variety of sources. Bear in mind that gown construction takes much more fabric – usually 2+ yards.

Free Smock Style Gown Pattern from Lazy Girl Designs

Free Isolation Style Gown Pattern from Fashion Girls for Humanity

Again, don’t forget to leave a comment below with your local information, experiences or other information to share. No negative comments, please. Our goal is collect resources not moderate disagreements. There is no one perfect solution, but if we work together, we can come up with multiple ways to help.