



Stay Safer PRN95+ Protective Face Mask



...unique in its ability to offer a meaningful degree of protection for the wearer



All royalties to inure to the **TPA NETWORK Research Consortium**, an emerging industry-wide research initiative purpose-built to help health plan sponsors evaluate new medical technologies and health innovations.



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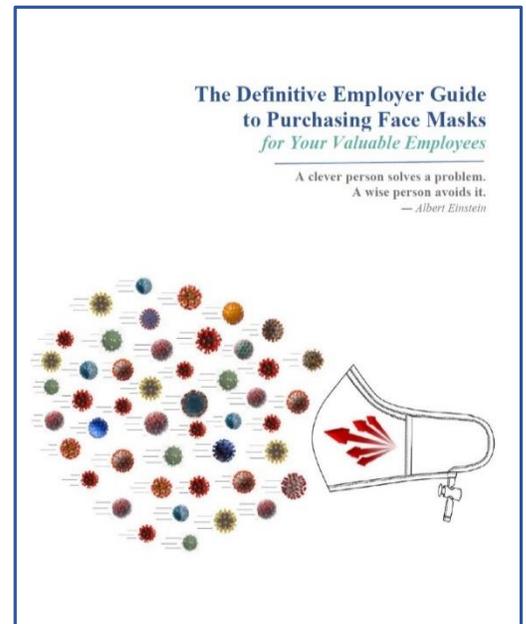
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Access Our Deep Knowledge of COVID-19, its Transmission and Face Masks ...and Learn How It Came About It

The **Research Consortium** was created by a group of healthcare industry veterans to identify and evaluate new medical technologies and innovations for health plan sponsors and to guide them on their adoption. *Who knew that we would soon be providing guidance on face masks?*

When COVID-19 emerged we refocused our efforts on sourcing a premium-quality face mask for non-healthcare employees. We conducted research on COVID-19, its transmission and face masks which resulted in a 75-page comprehensive study (having 176 cited references). It is aptly entitled **The Definitive Employer Guide to Purchasing Face Masks for Your Valuable Employees**. To read or download it click on the cover at right. →

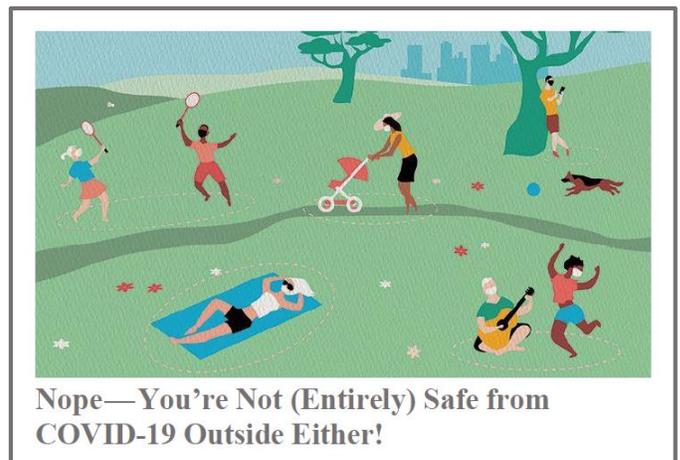
We also authored a series of short articles on a variety of coronavirus-related topics that are discussed in our study in greater detail. They are available on **Medium**. [Click here](#) to access all six articles or on the article's graphic. Each piece details our understanding about the topic or articulates our unique insight or perspective.



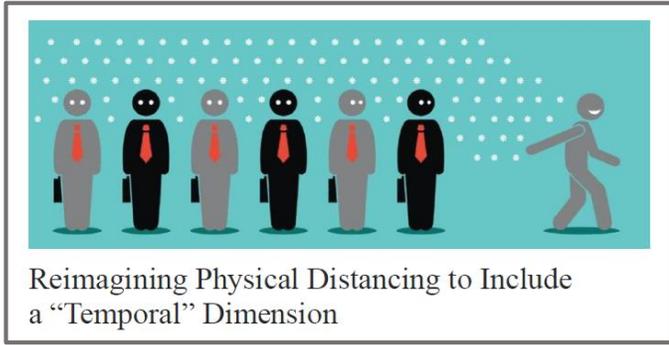
It's not *if* you will become infected with COVID-19...it's *when* and *by how much*!

The airborne transmission of COVID-19 is enhanced by being outside in a slight breeze. **A cough or sneeze can launch 1 - 6 billion aerosol particles: experts believe less than 1,000 need to be inhaled to get infected.** Also, they can travel a long way. →

The ease and speed by which COVID-19 can be spread cannot be overstated. The primary transmission route is through droplets (rain) and tiny aerosol particles (fog) emitted into the air, not just by coughing and sneezing, but ← also by talking and simply breathing.

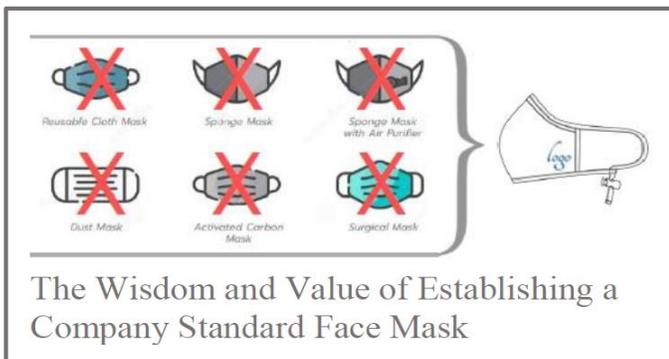


Nope—You're Not (Entirely) Safe from COVID-19 Outside Either!



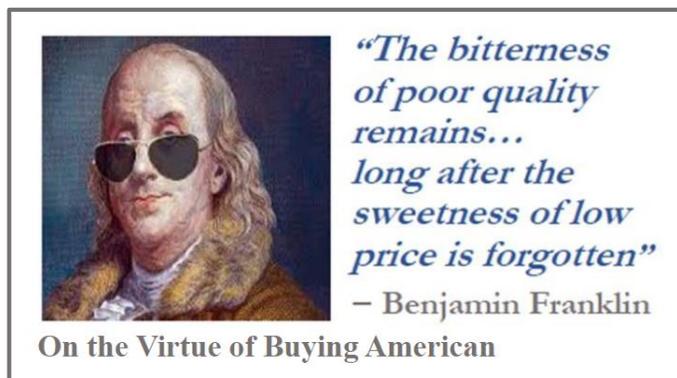
COVID-19 aerosols are light enough to remain suspended in the air for long periods. It is possible that a man could leave an active viral cloud in a room and infect a woman who enters the room long after the man left it. *Is there a need to add a third temporal dimension to the ← physical distancing construct?*

This article discusses the many reasons why face masks should do a lot more than just act as a simple barrier for outbound particles from an infected wearer. While we support their use as a means by which to inhibit community spread, *we believe that face masks should also offer the wearer a meaningful degree of protection against aerosol transmission.* →



Allowing employees to wear different types of face masks to work is potentially dangerous for the wearer and other workers. It could also carry with it unnecessary OSHA exposure. To be safe *employers would be wise to establish, and clearly communicate, a comprehensive face mask policy and use a company-standard ← face mask.*

The largest publically-traded health insurers posted a \$17 billion profit *in the last quarter*, up 79% from 2019. *Learn why the ACA (aka Obamacare) incentivizes health plans to buy face masks for your company !!!* →



If there was ever a time to *resist the urge to buy foreign goods based on their seemingly lower prices*, it is now, especially when your ← employees' health hangs in the balance.

The Essential Elements of the Ideal Reusable Face Mask *for Non-Medical Wearers*

An underlying objective of our research on COVID-19, its transmission and face masks was to identify, evaluate and assess the best face mask for non-medical employees. Based on our research, we identified these *essential characteristics and attributes of the ideal face mask*:

- **Dual Purpose: *Wearer Protection and Source Control***

Cloth face masks are intended to block the outbound transmission of infected *droplets* from the wearer to others. *Most are < 70% efficient at filtering inbound pathogenic microbes and provide little in the way of wearer respiratory protection. This is an unacceptable limitation.*

- **Inhibits Dangerous Bio-Burden Build-Up: *Reduces Contamination Risk***

Coronaviruses can remain active on many surfaces for extended periods and a mask's outer layer can become a petri dish for bio-burden build-up and cross-contamination. *Face masks must have at least one safe, effective and lasting means by which to kill pathogenic microbes.*

- **Facilitates a Snug Fit and Seal: *Ensures Maximum Adjustability***

Less than a 2% gap in a face mask's seal can reduce its effectiveness by half. *A truly snug fit and seal can only be achieved with both a flexible nose form and adjustable ear loops.*

- **Balances Effectiveness, Comfort and Breathability: *Enables Extended Safe Wear***

Correct materials selection, excellent design and quality construction are needed to *meet the competing requirements of filtration efficiency and breathability (while being comfortable).*

- **Safe, Healthy, All-Natural and Ecofriendly: *No Toxic Materials***

Odorless, hypo-allergenic, latex-free, all-natural, environmentally safe, sustainable – and *free of metal-based antimicrobial treatments* – to enable healthy, extended wear by all.

- **Made in the USA / State of California: *Play the Long Game***



Buying American not only *supports our economy, national security and jobs*, it symbolizes quality. Buying Californian shows you care.



- **A Genuine Value: *Affordable and Cost-Effective***

Fairly priced considering its dual purpose, useful life and cost-to-wear; noting the keen distinction between the mask's initial price, its cost-of-use and both buyer *and* wearer value.

Given the critical importance of fabric face masks as source control devices — and their capability to provide a meaningful degree of wearer protection — ALL of these requirements must be satisfied. Don't unnecessarily expose your workers to the adverse effects of wearing an unhealthy, unsafe or ineffective face mask that might foster a false sense of security or worse. ***Research. Evaluate. Purchase.***

Leveraging Proven Science and Technology

Why Most Face Masks Can Be Dangerous

N95 Respirators are popular because of their perceived *filtration* protection. What actually makes them effective is not their barrier capability but an electrostatically-charged center layer that attracts and electrocutes negatively-charged microbes. Unfortunately, N95s are built for short-duration one-time use, and they are not available to the public (See discussion below).

Surgical Masks prevent a surgeon's germs from passing to the patient and limit OR sprays and slashes. They're loose-fitting, single-use and offer no electrostatic or antimicrobial protection.

Medical/Procedure Masks are barrier devices for non-OR use with patients. They too are loose-fitting, single-use and offer no electrostatic or antimicrobial protection.

- **Barrier Protection:** Surgical, medical and procedure masks are intended to serve as barrier devices against *droplet*-size particles: they aren't intended/built to filter nano-size microbes.
- **Respiratory Protection:** These masks are not intended to provide the wearer with respiratory protection from inhaling viral *aerosols*. A single droplet (rain) can have 200,000 aerosol particles (fog) and it takes only ~ 1,000 to get infected. Most masks are < 70% efficient.
- **Dangerous Bio-Burden Build-Up:** COVID-19 can remain active on non-woven/paper masks for several days; fueling dangerous bio-burden and contamination risk (even with disposal).
- **Inappropriate Use:** Available and cheap, despite being one-time use, many wear them for days, creating dangerous bioburden / contamination risk and a false sense of wearer security.

These masks are not inexpensive either. Used correctly, even foreign-made KN95s (at ~ \$3 ea.) cost ~ \$100/month. The other masks (at ~ \$.80 ea.), would represent a ~ \$25 monthly burden.

The *Stay Safer PRN95+* *Protective Face Mask* Difference

Leveraging science and technology, our *patent-pending* protective face mask's design come in part from a study conducted by researchers at the University of Chicago and the world-renown Argonne National Laboratory. More than just offering ineffective barrier protection, our mask features *two proven redundant means to attract, secure and kill gram-negative viral microbes*.



All cotton barrier layer with a QAC-based antimicrobial created by *Dow Chemical* that kills enveloped gram-negative microbes
Dual real silk chiffon center layers that create a triboelectric air filter to attract, secure and electrocute gram-negative microbes
Supima® cotton inner layer, with antimicrobial, for soft, snug fit

Able to be safely worn for 90+ days, our face mask offers meaningful microbial filtration protection for the wearer and curbs dangerous bioburden build-up and contamination risk.

The History and Origins of the *Stay Safer PRN95+ Protective Face Mask*

Our original search was for a face mask that not only served as effective source control but also provided a meaningful degree of protection for the wearer. It had to have all of the elements that we identified as essential, knowing that, as it relates to viral spread and wearer protection, “droplets” aren’t the key transmission source: “aerosol” transmission is far more widespread.

Unable to find a reusable face mask that offered significant wearer protection, based on our research, and a study conducted by researchers from the University of Chicago and the renown Argonne National Laboratory, we created a new *type* of reusable fabric face mask. Leveraging proven science and technology the *Stay Safer PRN95+ Protective Face Mask* is unique in its use of two *redundant* and highly-effective methods to *capture, secure and kill* viral microbes.

The graphic below details several of its many features:

Premium cotton outer layer made with molecularly-bonded QAC antimicrobial; kills enveloped, gram-negative microbes

No unsafe synthetic fabrics, metal-based antimicrobials, carbon filters

Fabrics support optimal air-flow, ventilation, breathability

Dual silk chiffon center layers create a tribo-electric filter to attract, secure and kill gram-negative encapsulated microbes

Inhibits dangerous bioburden build-up; cuts risk of wearer, work and home contamination

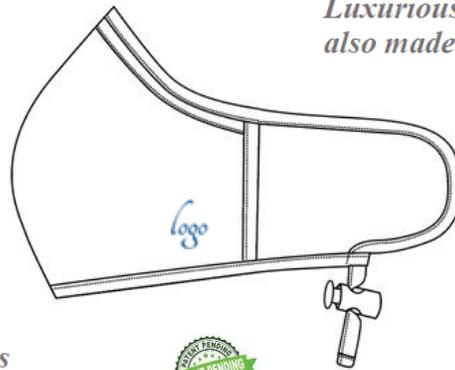
Nose form for snug fit, tight seal and comfort

Luxurious Supima® cotton inner layer also made with QAC antimicrobial

Adjustable ear straps facilitate snug, tight and comfortable fit

Odorless, latex-free, hypoallergenic and ecofriendly

Safely reusable for 90 days with no need to wash daily



Color and Customization Options

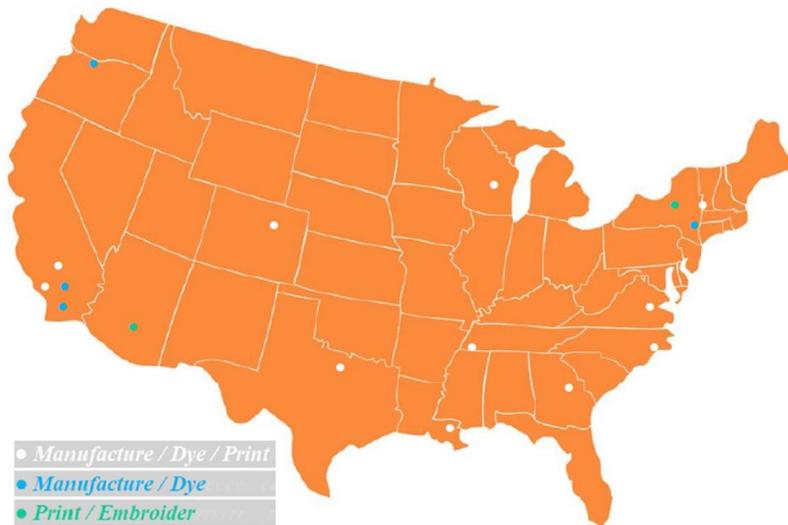
Based on order size and available production lead time, we offer many mask customization options.

Our face masks are produced in white fabric and then dyed, printed or otherwise customized at regional facilities by custom printers / high-speed embroiders. It can be produced in almost any color (combination) and emblazoned with an organization's name, logo, tagline, slogan, etc. Even its ear straps, and the adjustable push-button locks, may be customized.



Intelligent Production Approach

— “As they come, we will build it”



In the past, manufacturers estimated demand, and large cash investments were needed to mass produce and store inventory. Unsold items and materials became waste. Many manufacturers still follow this old production model.

Not surprisingly, the emergence of COVID-19 created a worldwide surge in demand for the raw materials and components used in face masks. In turn, this created global shortages, inflated costs and unmet orders.

Production of the *Stay Safer PRN95+ Protective Face Mask* is managed by **Privy Label**, an award-winning, high-tech private label clothing design firm that’s forging new ground in an outdated industry with a fresh vision of it. Specializing in curating designs for targeted audiences, it has mastered the nuances of product development and boutique custom products.



The *Stay Safer PRN95+ Protective Face Mask* is made by a digitally connected, localized network of ten domestic MTS/MTO manufacturers, custom printers and high-speed embroiders; each with a history of high-quality production, cost-effectiveness and on-time delivery. *We are pleased to accommodate orders for masks made only in California.*

- We have embraced on-demand sourcing and production, to reduce waste and expense and better manage delivery speed, lead times and demand volatility. We leverage make-to-order production to avoid maintaining large inventories and to optimized capacity utilization.
- Our mask is made in the US / CA with domestically-sourced materials*. We eliminate the waste created by traditional overseas mass production; the unneeded carbon footprint of oceanic shipping; and the harm done by using unhealthy and non-ecofriendly materials.
- Guided by a sophisticated digital spec/tech pack, our network includes large-scale facilities to handle base demand, mid-sized overflow facilities and small-batch cut-make-trim shops.
- Working together, we can meet most production volumes and schedules, minimize waste and deliver consistent customer satisfaction. We have full redundant production capabilities.

* To create a tribo-electric air filter, our mask's center layer is silk chiffon. Because silk has not been made in the US since the 1990s, we source it from a US-owned textile company in India.

Pricing, Subscription Plans and Financing Options

An Exceptional Value on a Price, Cost-per-Use and Useful Life Basis

The emergence and persistence of the COVID-19 crisis continues to have a profound financial and societal impact on organizations of all types and sizes. To help ensure that every employer is able to provide their valued employees with the very best face mask available, we offer the *Stay Safer PRN95+ Protective Face Mask* with easy purchase terms and finance options.



Special Pricing and Financing Options

First	1,000	Face Masks	\$ 11.75 /ea.
Next	5,000	Face Masks	\$ 10.75 /ea.
Next	20,000	Face Masks	\$ 9.25 /ea.
Next	50,000	Face Masks	\$ 8.50 /ea.
Next	100,000	Face Masks	\$ 7.75 /ea.

Production partnering / cost-plus pricing available on volumes of 175,000+ masks

We are offering **Safely Making California** purchasers that are CMTA members a 5% cash discount and other **Safely Making California** buyers a 2% cash discount. For large, creditworthy organizations we offer 30-day, low-interest financing through an established source.

*Minimum Order: 1,000 Face Masks
(As a Single Purchase or Subscription Plan basis)*

Subscription Plan Arrangement

We believe health plans should give their members face masks; but that's another topic: click *Posting Unconscionable Profits, Shouldn't Health Plans Cover Face Masks for their Members?*

Employers fund their health plans on a *per employee per month* basis and masks must be replaced regularly. Buyers can enjoy the peace of mind of knowing they have a scheduled, consistent supply of replacement masks on a timetable that works for them with our subscription plan that features PEPM payment terms and scheduled (quarterly) replenishment.

As illustrated at right,

Subscription Pricing Ex: 7,500 employees. Quarterly replacement.
Total annual face mask purchase: 30,000

Est. Annual Face Mask Budget:	1,000 @ \$11.75 = \$ 11,750
	5,000 @ 10.75 = 53,750
	20,000 @ 9.25 = 185,000
	4,000 @ 8.50 = 34,000
	<u>\$ 284,500</u>
Less Deposit: ~ 20% = \$58,000	<u>- 58,000</u>
Remaining Subscription Fee:	\$ 226,500
PEPM Fee Payable (11 Months):	\$ 2.75
Price per Face Mask: \$ 9.50	

- 1) a face mask replacement schedule is selected (e.g., bi-monthly, quarterly);
- 2) a deposit is made equal to ~20% of the est. mask budget over the subscription term; and
- 3) the remaining balance is paid in equal amounts over the following 11 months.

Supporting Science and Enabling Technology

A clever person solves a problem. A wise person avoids it. — Albert Einstein

I. Self-Sustaining Triboelectric Air Filter

While N95 respirators are considered by many to be the “gold standard” as it relates to face pieces designed to protect the wearer, what makes them effective is not widely known.

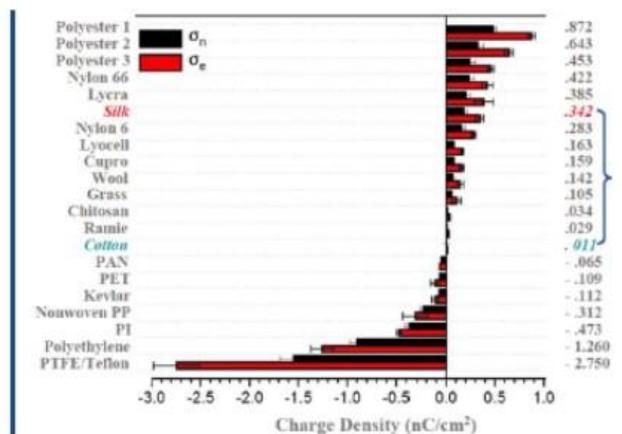
How N95 Respirators Actually Work

- N95s are effective at viral filtration, capturing 95% of particles as small as .3 microns.
- While aerosolized coronavirus-family microbes are far smaller than .3 microns they don't travel alone; they hitch a ride on larger carriers that are caught by its barrier layers.
- Despite this, N95s actually filter smaller particles better than larger ones. Nanosized particles fall subject to the phenomenon of Brownian Motion and are propelled at high speed in random directions. *In motion, negatively-charged microbes (e.g., coronaviruses) are attracted to the N95's positively-charged center layer (by electrostatic induction).*
- *The viral microbe's gram-negative protein shell is deactivated (killed) by electrocution.*

Creating a Self-Sustainable, Self-Powered Electrostatic Charge

- A team of University of Chicago and Argonne National Laboratory researchers found that snug-fitting, multi-layer masks made from a combination of cotton with either silk or chiffon fabric can filter nanosized microbes at levels that can exceed 95% efficiency.
- These fabric combinations create a tribo-electric air filter – similar to the electrostatic layer of an N95 device – to attract, secure and electrocute gram-negative microbials.
- The *Stay Safer PRN95+ Protective Face Mask* recharges with rubbing it for only a few seconds and by the aerodynamic friction created by the wearer breathing through it.

sample/fabric	<300 nm average ± error	>300 nm average ± error
N95 (no gap)	85 ± 15	99.9 ± 0.1
N95 (with gap)	34 ± 15	12 ± 3
surgical mask (no gap)	76 ± 22	99.6 ± 0.1
surgical mask (with gap)	50 ± 7	44 ± 3
cotton quilt	96 ± 2	96.1 ± 0.3
quilter's cotton (80 TPI), 1 layer	9 ± 13	14 ± 1
quilter's cotton (80 TPI), 2 layers	38 ± 11	49 ± 3
flannel	57 ± 8	44 ± 2
cotton (600 TPI), 1 layer	79 ± 23	98.4 ± 0.2
cotton (600 TPI), 2 layers	82 ± 19	99.5 ± 0.1
chiffon, 1 layer	67 ± 16	73 ± 2
chiffon, 2 layers	83 ± 9	90 ± 1
natural silk, 1 layer	54 ± 8	56 ± 2
natural silk, 2 layers	65 ± 10	65 ± 2
natural silk, 4 layers	86 ± 5	88 ± 1
hybrid 1: cotton/chiffon	97 ± 2	99.2 ± 0.2
hybrid 2: cotton/silk (no gap)	94 ± 2	98.5 ± 0.2
hybrid 2: cotton/silk (gap)	37 ± 7	32 ± 3
hybrid 3: cotton/flannel	95 ± 2	96 ± 1



Some key design influences derive from a study conducted by researchers at the University of Chicago and the world-renown Argonne National Laboratory. It found that cotton/silk and cotton/chiffon fabric combinations filtered best by creating a triboelectric air filter (exhibit at left). The exhibit at right (by physicist/scientist Ron Kurtus) illustrates the charge differential between cotton and silk. To improve upon this, our face mask's center layer — silk chiffon — amplifies this friction-generating capability.

II. Safe and Effective Antimicrobial Protection

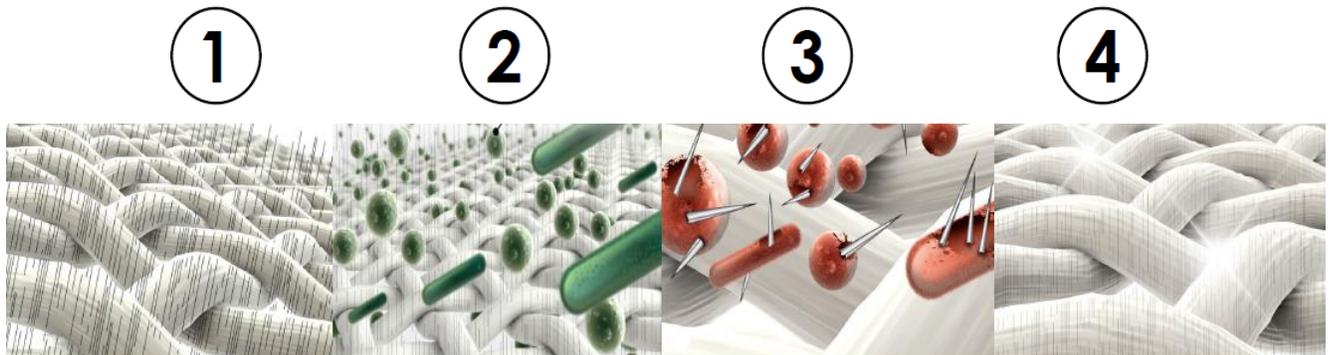
Antibacterials and *antimicrobials* differ regarding the microbes they act upon and how they work. Most are ineffective, many are unhealthy and some are toxic and outright dangerous.

Antimicrobials Are Not All Alike – Avoid Metal-Based Products

- The antimicrobials most commonly used to treat face masks use unhealthy heavy metal active ingredients such as silver, copper, cobalt or zinc that are toxic/biocidal/poisonous.
- These toxins are harmful to humans and the environment, unsafe and to be avoided.
- The metal's toxins are actually released to penetrate the microbe's shell and *poison* it.
- Metal-based antimicrobials are added to fabrics post-construction and wash off in time.
- As the fabric's toxin reservoir diminishes, the antimicrobial becomes less effective. Ergo, face masks treated with metal-based antimicrobials have a fairly short useful life.

A Proven, Safe, Highly-Effective and Eco-Friendly Antimicrobial

An alternative, more effective and much safer chemical antimicrobial exists in the form of a quaternary ammonium compound (QAC), a technology pioneered by *Dow Chemical*.



1. QACs molecularly bond to fabric *at manufacture* and become a permanent part of it.
2. Positively-charged QACs attract gram-negative enveloped viruses very effectively.
3. QACs *stab* and *electrocute* pathogens; there is *no toxin reservoir* to deplete with use.
4. QACs actually kill pathogens to inhibit bioburden build-up / contamination risk.

Our QAC's active ingredient is Dimethyloctadecyl (3-trimethoxysilylpropyl) ammonium chloride. DTSACI has an enviable forty-year safety / efficacy profile (available upon request). To see two-minute video entitled *How the Si-Quat Biostatic Antimicrobial Works* click [here](#).

The fabric used on the *Stay Safer PRN95+ Protective Face Mask*'s outer and inner layers, as well as its ear straps, is made with a highly-effective DRSACI-based QAC antimicrobial.

N95 devices do not use a chemical antimicrobial. Because they rely only on the electrostatic layer to kill pathogens and curb bioburden build-up their frame / ear straps have no protection.