While 77% of US Residents Surveyed Wear a Mask Daily, Fewer than 38% Primarily Wear High-Filtration Masks

High-filtration (hi-fi) masks are proven to be able remove particles containing viruses from the air inhaled

San Francisco - February 5, 2021— A survey of 466 US residents ages 18-65 revealed that while 77% of respondents wear a face mask for virus protection, only 14% to almost 38% are primarily wearing masks that offer high-filtration for disease protection. The number one place people wear masks is at grocery stores according to 80% of respondents. Half of respondents said they wear a mask to protect themselves from others in their vicinity. Among the safest and most effective mask options available are N95 masks, elastomeric N95 (eN95) and others that offer these five key attributes:

1. high filtration
2. superior fit
3. durability
4. breathability
5. quality control

A short list of N95 masks and high-filtration (hi-fi) mask alternatives is available at patientknowhow.com, a site that curates patient educational content on YouTube.

The survey was of US residents age 18-65, 60% female, 40% male, designed by Patient Knowhow, a service which curates patient educational content, and fielded by Survey Monkey in December 2020.

The survey revealed that the number one most used mask by respondents is a cloth mask by 42% of respondents. Only close to 14% of respondents wear masks that meet the five-attribute criteria off the shelf: 8.1% Elastomeric Mask; 5.7% N95 Mask.

The best-case scenario could include the following:

1) surgical masks secured with a good fitter can achieve performance comparable to an N95 mask
2) KF94 and KN95 masks if they are counted as high filtration meeting the five-attribute criteria

If those two solutions are included, the use of hi-fi masking could rise to almost 38%.

However, current CDC Director, Rochelle Walensky, wrote in a co-authored piece with Caitlin Dugdale, MD in JAMA Internal Medicine that these above solutions are less than optimal. They write, "N95 masks with suboptimal fit still had comparable filtration efficiency of more than 90%. Their KN95 counterparts, millions of which have been purchased by or donated to US hospitals, performed less well, with filtration efficiency ranging from 53% to 85%. Surgical masks secured with either ties or ear loops also had much lower filtration efficiency of 37% to 69%."

According to Devabhaktuni Srikrishna, MS, founder of www.patientknowhow.com, "Although double-masking is a current trend, it is not necessarily better. If it inhibits breathing and does not form a seal with the face so air flows around the filter, it is not optimal. Proven, tested hi-fi mask designs are preferrable with the emergence of deadlier and more contagious viral mutants."

The five key attributes of a safe and effective mask are explained further below:

1. High filtration – Filtration is the ability to remove the particles containing viruses from the air inhaled (measured by the percentage of particles removed). Most high-filtration masks use electrostatic charges to capture even tiny particles just like how small socks get stuck to clothes in a dryer. In the CDC's N95 standard (NIOSH) the filtration exceeds 95% for even the smallest of particles.

2. Superior fit – Even if you're wearing a high-quality mask, if it doesn't contact your face, it's going to leak. The best masks have a very solid, tight seal so that air doesn't leak. Effectively, a low-fit equals low filtration (measured by what is known as fit factor).

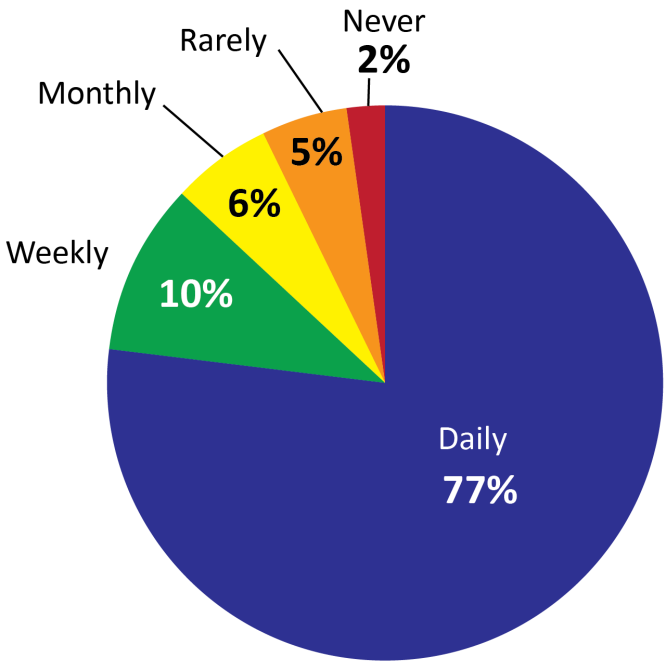
3. Durability – The filtration efficiency of filters can degrade with extended use. For example, N95 approved masks are required to pass a rigorous stress test to ensure filtration is retained after many hours of use.

4. Breathability – breathing resistance from masks (measured in millimeters of water) can cause discomfort but some masks can offer both superior filtration and tight fit while being very breathable at the same time.

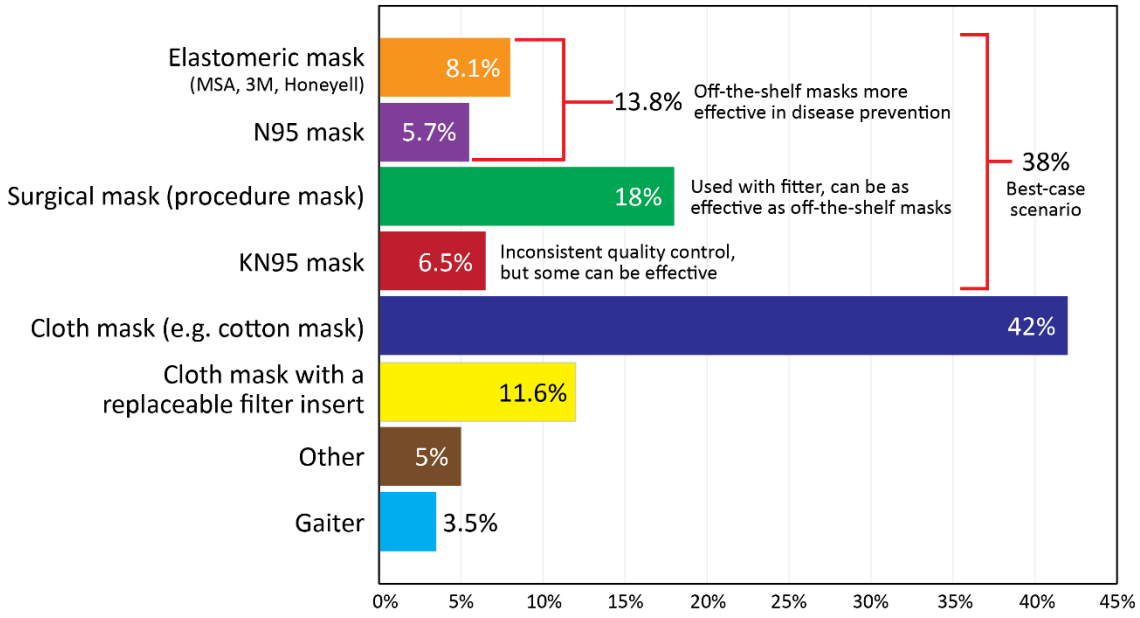
5. Quality control – Defects or irregularities in masks that may not be apparent to the end-user can result in large reductions in either filtration efficiency or fit making them unsafe. Homemade masks or double masks do not undergo any kind of testing and present risks from a quality control standpoint. Whereas mass manufactured masks, that are N95 approved, are required to demonstrate rigorous quality control so that each new mask is reliable.

Survey results are below:

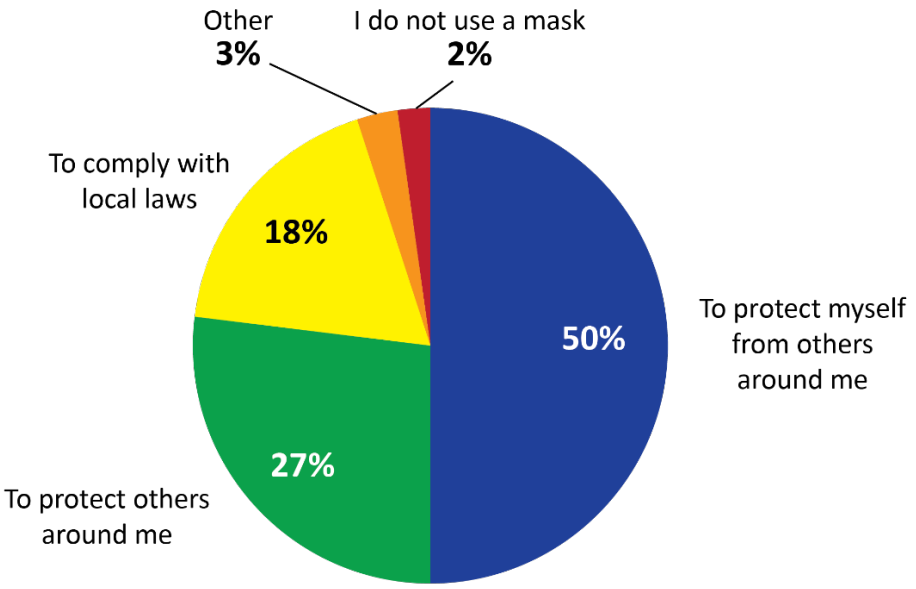
How often do you use a mask to protect yourself or others around you?



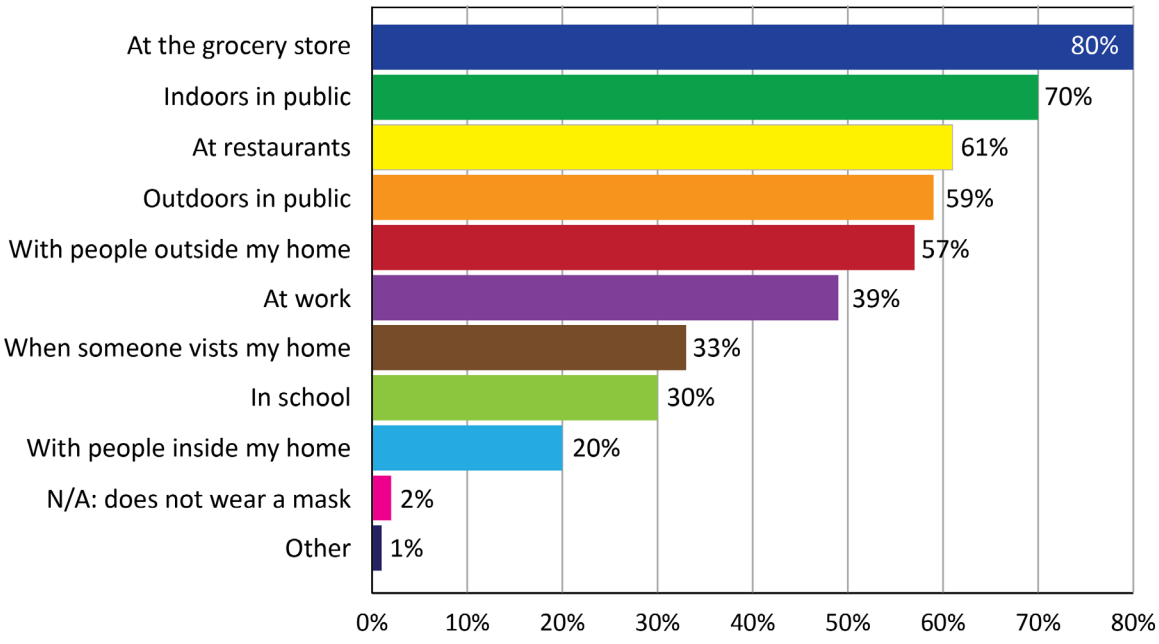
What is the PRIMARY mask you use to protect yourself from Coronavirus (Covid-19)?



Why do you use a mask?



When do you use a mask?



About Patientknowhow.com
PatientKnowhow.com is a service which curates patient educational content on YouTube, including a list of N95 masks and hi-fi mask alternatives. Its mission is to uncover the most reliable and easy-to-use information about disease prevention, transmission, causes, and treatment. For more information go to www.Patientknowhow.com

About Devabhaktuni Srikrishna:
Founder of www.patientknowhow.com, Devabhaktuni Srikrishna, is a published expert in pandemics and frequently speaks and writes about the high-filtration mask options available today for purchase by end-users (consumers) and employers of essential workers. He is available to speak about the N95 masks and hi-fi mask alternatives available online. He advised the Ebola response in Guinea during the 2014 West African Ebola epidemic. He conducts research on “flattening the curve” of novel viruses including Ebola, Zika, and most recently Coronavirus. Previously he was CTO/founder of Tropos Networks which builds municipal Wi-Fi mesh networking devices deployed in 1000 cities around the world. He has a master’s degree from MIT (Electrical Engineering and Computer Science). Twitter: @sri_srikrishna

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