

Which Non-Medical Face Covering Type Is Most Effective?

Melissa Jeremiah, RN, CHCE, Director of Operations

Hoosier Uplands Home Health Care & Hospice

Researchers at Florida Atlantic University conducted an experiment using 4 different types of face coverings that are available to the general public.

The results are listed from most effective to least effective; showing how far a cough or sneeze would travel through the face covering:

Stitched double-layered well-fitted homemade cotton face covering with 70 threads per inch: 2.5 inches on average

Store-bought cone-style face covering: 8 inches

Folded bandana aka no sew/Cotton face covering with 55 threads per inch: 1 foot, 3 inches

Gaiter/Elastic t-shirt material face covering with 85 threads per inch: 3 feet, 7 inches

No covering: 8 feet

The researchers concluded folded bandana aka no sew/cotton face coverings and gaiter/elastic t-shirt material face coverings, "Provide minimal stopping-capability for the smallest aerosolized respiratory droplets. Droplets leaked through the face covering material as well as out the sides, though both were still substantially more effective than no covering at all."

Researchers observed store-bought cone-style face coverings and stitched double-layered, well-fitted homemade face coverings were the most effective, "These face coverings were able to curtail the speed and range of the respiratory jets significantly, albeit with some leakage through the face covering material and from small gaps along the edges."

None of the face coverings were perfect, and the research pointed out using masks over a long period of time may lead to saturation and a potential decrease in effectiveness. Still, their conclusion was clear: even the least-effective face covering (a gaiter) had a major impact, cutting down droplet dispersal by an average of four-and-a-half feet. Despite the varying amounts of leakage, non-medical face coverings are effective in stopping larger droplets, which constitute a large fraction of the total volume of ejected respiratory fluid through coughs and sneezes.

The takeaways: wear a face covering, any face covering; make it a well-fitted one if you can; and keep social distancing.

The photos are posted from least effective to most effective:



Gaiter/Elastic t-shirt material face covering



Folded bandana aka no sew cotton face covering



Store-bought cone-style face covering



Stitched double-layered well fitted homemade cotton face covering