What is an Elastomeric Respirator?

Elastomeric respirators are reusable air purifying respirators with replaceable filters that filter 95-99+% of airborne particles, depending on filter type.[1] They can cover the nose and mouth (half face respirators) or the entire face (full face respirators). Many elastomeric respirators allow unfiltered exhaust of the user’s exhaled breath. Check with your hospital to determine if they may be used instead of N95 respirators.

Facemask: A conformable face mask is held in place by adjustable straps.

Elastomeric Seal: Air is pulled through the filters into the breathing zone due to a tight seal between the mask and the face. Fit-testing is required.[1, 8]

Filters: Replaceable filters are attached to the facemask. Filters covered by a plastic casing can be repeatedly reused, provided they are not soiled, damaged, or become difficult to breathe through.[8]

Exhalation port: Most elastomeric respirators have an unfiltered exhalation port for easier breathing. There is potential for the exhaust to contain microbial contaminants from the user’s breath.[3] It may be possible to filter exhausted air.

GENERAL INFORMATION

Half-face elastomeric respirators provide at least the same level of protection as do N95 filtering facepiece respirators.[8]

Full-face elastomeric respirators provide greater respiratory and eye protection.[8]

Respirators should be disassembled and decontaminated according to established protocols https://www.n95decon.org/implementation#other-ppe

Facemasks can be effectively cleaned and disinfected repeatedly with minimal impact on durability or fit.[12] Disinfectant should be compatible with respirator materials according to manufacturer instructions and active against SARS-CoV-2.[9]

Hard filter cases can be repeatedly decontaminated with disinfectant wipes. Do not expose the soft filters inside of them to fluids.

Viral particles are trapped in the filter and are unlikely to be released.[11] The filters are in a plastic case that should not be taken apart.

Elastomeric respirator users have reported high sense of protection with mask use, despite some challenges with communication, anxiety, or comfort.[4, 7, 10]

SUPPORTING RESEARCH


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