

# **Filtration Efficiency of Surgical Masks and N95 Filtering Facepiece Respirators**

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The choice of personal protective equipment (PPE) to be used against infectious diseases depends on the suspected route of transmission. The Centers for Disease Control and Prevention (CDC) has specified “standard, contact, droplet and airborne” precautions for various diseases. Droplet precautions are for particles larger than 5  $\mu\text{m}$  that may contact the conjunctivae or the mucous membranes of the nose or mouth of a susceptible person. Airborne precautions are for particles smaller than 5  $\mu\text{m}$  that could remain suspended in air for extended durations and be inhaled.

Many articles have been published regarding the filtration efficiency of surgical masks and particulate respirators. Research suggests that a surgical mask is an inappropriate choice against airborne hazards. They have against submicron particles and are not designed to seal tightly to the face. Approved particulate respirators have shown filtration efficiency of biological and non-biological aerosols commensurate with their approval ratings. Workplace protection factor studies have also been published regarding the level of protection achieved by properly fitted and trained respirator wearers. A review of the literature will be presented.