

---

## Understanding the Differences Between Respirators and Surgical Masks

The COVID-19 pandemic has led to a shortage of respirators and surgical masks, two types of personal protective equipment (PPE) used in numerous industries, such as construction, manufacturing, and medicine. Surgical masks and respirators provide some protection against airborne particles and liquid contaminants. If used correctly, they can limit the transmission of or prevent exposure to viruses or environmental pollutants. However, respirators and surgical masks do not provide the same level of protection, nor can they be used interchangeably. Both types of PPE must be worn consistently and correctly to be effective.

### Respirators

A respirator is meant to limit a worker's exposure to airborne contaminants and is best suited for people working closely, within 6 feet, of contaminants. The respirator must be properly fitted to the wearer's face and have a tight seal, so air is forced through the mask instead of seeping in around the sides. Respirators are labeled by the percentage of particles measuring 0.3 microns or larger they block during testing. An N95 respirator blocks 95% of small particles, while an N99 mask blocks 99% of small particles.

The use of a respirator should be part of a comprehensive respiratory protection program that entails a medical evaluation to ensure employees can perform work duties safely while wearing the respirator, as well as fit testing and proper training on respirator usage. Respirators should meet standards provided by the National Institute for Occupational Safety and Health (NIOSH) outlined in Title 42 Code of Federal Regulations (CFR) Part 84 and should bear a NIOSH approval label. For more information about proper respirator selection, fit, and usage visit, <https://www.cdc.gov/niosh/topics/respirators/default.html>.

### Surgical Masks

A surgical mask is a loose-fitting PPE that provides a physical barrier between the wearer's mouth and nose and potential contaminants in the immediate environment. These masks are designed to filter out large particle droplets that may contain germs; however, they do not protect from small particles in the air, such as those transmitted by coughs or sneezes. The CDC does not recommend that healthy people wear surgical masks to protect themselves from respiratory diseases, like COVID-19. People who are ill can wear surgical masks to prevent the spread of respiratory secretions (i.e., saliva, nasal droplets). Soiled masks should be placed in a plastic bag and discarded. Hands should be thoroughly washed before placing a clean mask on, after touching the mask, and after discarding the mask.

Surgical masks come in different thicknesses and are regulated by 21 CFR 878.4040. They're not to be worn more than once, nor should they be shared. Different thicknesses provide different levels of protection; however, the thicker the mask, the more difficult it is to breathe through it. Masks are labeled as surgical, isolation, dental, or medical procedure masks.

### What This Means for Counties

Wearing either a respirator or surgical mask will not be effective against the spread of COVID-19 unless the masks are worn and handled correctly. Mask wearers should be aware of the limitations of each type of PPE and choose the right kind of mask, depending on the risk of exposure. For more information, contact CTSI at (303) 861 0507. [ctsi](https://www.ctsi.org)