



Cross section of a P95 Mask: Masks work through multiple layers as depicted above. Each layer further filters out a particular particulate component.

Photo: creativecommons

Masks: Do they really work?

Masks are the primary and most common approach to countering the effects of particulate matter. A healthy person who has to be outdoors for several hours may limit his exposure using masks

Types of Masks

As per the US National Institute for Occupational Safety and Health (NIOSH)

N Series

Used for protection against exposure to vehicular emission, smog, dust and in sterile atmospheres

P Series

Used for protection against industrial grade pollutants and particulate matter, including oily particulate matter

R Series

Similar to P series, but higher build quality and effective for longer exposure periods

Masks are to be worn only after consulting a doctor

- » The best form of protection for people with chronic lung or heart disease, elderly, and pregnant women is to **avoid or minimize outdoor activity**.
- » However, not all kinds of masks are equally helpful to everyone. The use of masks increases effort in breathing. For some people, this may **cause discomfort in breathing**, tiredness or headache.
- » Some masks have an external Exhalation valve. This makes it easier to breathe out, and reduces moisture build-up within the mask. However, it has no impact on the filtering effect of the mask.
- » N Series masks are easily available at Medical Stores and E-Commerce websites. Many commonly available masks are not effective against particulate matter. Always consult a doctor before usage.

N95

Provide protection against solid and liquid aerosol particles e.g. Dust, pollen etc.

- » Reusable for up to 2-3 uses. Not recommended for use over longer periods.
- » Not resistant to industrial particulate matter containing oil.
- » Called N95 as it filters up to 95 per cent of PM2.5.

Cost: ₹50/- onwards

N99

Provide protection against solid and liquid aerosol particles e.g. Dust etc.

- » Reusable up to 4 to 6 months.
- » Not resistant to industrial particulate matter containing oil.
- » Called N99 as it filters up to 99 per cent of PM2.5.

Cost: ₹2000/- to 3000/-

How to wear a mask effectively



Step 1: Wash your hands before putting your mask on



Step 2: Select a suitable N95/N99 mask that fits well (Available in different sizes)



Step 3: Hold the mask with a cupped hand and place it firmly over your nose, mouth and chin



Step 4: Stretch and position the top elastic band high at the back of the head and the bottom band under the ears



Step 5: Press the thin metal wire along the upper edge gently against the bridge of your nose, so that the mask fits tightly on your face

Step 6: Perform a fit check by inhaling and exhaling. During exhalation, check around the face for any leakages. **In case of any leakages or gaps between the mask and your face, effectiveness of the mask will be compromised**



Source: Ministry of Health, Singapore