

CORONAVIRUS CLOTH MASK RECOMMENDATIONS

RECOMMENDATIONS (BASED ON BEST CURRENTLY AVAILABLE EVIDENCE) :

- Use of cloth masks and other fabric materials confers marginal protection against nanoparticles as compared to an n95, but can be used in the absence of other available PPE
- Double layering the cloth mask or adding a layer of particle filter in between the layers (such as n95 or HEPA or even lower grade) may increase filtration and confer added protection.
- Care should be taken while using cloth masks with regards to extended use of cloth masks. Touching, cross contaminating or poor sterilization techniques increase the chance of infection. If possible the mask should be changed more than once in an 8 hour shift.
- Heat sterilization (boiling) at 65°C (149F) for 30min is recommended as an adequate sterilization technique
- Repeated washing and drying cycles decrease the efficiency of cloth masks, care should be taken to gently wash and allow to air dry to avoid stretching and distortion of pores. If possible the mask should be discarded after the 4th wash cycle.

EVIDENCE BASE:

Rengasamy et al., 2010 established that common fabric materials may provide marginal protection against nanoparticles including those in the size ranges of virus-containing particles in exhaled breath. Specifically cloth masks and other fabric materials tested in the study had 40–90% instantaneous penetration levels against polydisperse NaCl aerosols employed in the National Institute for Occupational Safety and Health particulate respirator test protocol at 5.5 cm s⁻¹. Similarly, varying levels of penetrations (9–98%) were obtained for different size monodisperse NaCl aerosol particles in the 20–1000 nm range, which is significantly higher than as provided by n95 masks. (1)

MacIntyre et al., 2015 discussed that Moisture retention, reuse of cloth masks and poor filtration may result in increased risk of infection. They found that the rates of all infection outcomes were highest in the cloth mask arm, with the rate of Influenza like illness (ILI) statistically significantly higher in the cloth mask arm (relative risk (RR)=13.00, 95% CI 1.69 to 100.07) compared with the medical mask arm. Cloth masks also had significantly higher rates of ILI compared with the control arm (which was defined as standard practice). An analysis by mask use showed ILI (RR=6.64, 95% CI 1.45 to 28.65) and laboratory-confirmed virus (RR=1.72, 95% CI 1.01 to 2.94) were significantly higher in the cloth masks group compared with the medical masks group. (2)

Leclercq et al., 2014 reported 56°C, which is the common temperature used for inactivation of enveloped viruses, such as influenza viruses, and serum de complementation, almost 25