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## Partha's Modified N 95 Masks To Assist Feeding In Covid 19 Patients

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### Abstract:

The corona pandemic is causing havoc around the world. The transmission chain can be broken by different methods including wearing an N 95 mask. This mask covers the nose and mouth to give complete protection. But during eating or drinking, its usually removed which increases the danger of infection. Hence, we modified the mask (Partha's modified N 95) by cutting across and suturing with free mouth. This can be used during feeding. This at least covers the nose in full and decreases the rates of transmission.

**Key words:** corona, mask, N 95, modification, nasal

### Dear editor,

The world is currently reeling under the pandemic of covid 19. The basic culprit behind it, the Corona virus enters the new person as a result of respiratory droplets spread from the other infected person, becoming more infective when the viral load expelled is due to sneezing or coughing rather than simple talking<sup>1</sup>. The entry of virus into the human body is usually through the nose and the mouth even though eyes are also reported. Recent research has proved the entry through the nose is more significant where the virus replicates in the nasal cavity proceeding to cause more damage later on<sup>2</sup>. Many times, sipping, drinking and eating needs the mask to completely removed paving way for easy transmission. This assumes dangerous proportions when there is mass gathering and combined lunch sessions which happens in marriages and hotels. Tea shops in Rural India usually are open round the clock with minimal but dangerous gathering of people. If we could create a special N 95 mask which specifically blocks the nose allowing people to drink, then it may decrease transmission. Hence, we attempted to cut the N 95 mask across half way through to decrease the height to uncover the mouth. The upper nasal portion was separated and the ear loop was stitched in the nasal portion. (Fig1) The remaining lower portion was discarded. This mask

(Partha's modified N 95 mask) will possibly be useful in preventing a nasal entry of pathogens, still allowing to drink.



Figure 1 showing Partha's modified N 95 mask

People may not be used to taking full solid diet with the mask: still drinking with a straw with the nasal mask on is likely to give maximal protection as it used to be. The inferior edge of the mask can be thickened in commercially prepared masks. This will fix the mask even when there is a possible movement of the upper lip during eating. All the so-called face masks made with cotton; other fabric is unlikely to protect against covid 19 transmission. It has been proved with scientific evidence that the N 95 masks serve as cheaper and efficacious alternative to other masks in reducing transmission<sup>3</sup>. Any alteration and modification of N95 masks are only helpful in these times. Hence, we tried to modify the mask by cutting and stitching to decrease nasal transmission during feeding times. This may also be helpful in sick covid patients in intensive care units who are normally feeding through the mouth otherwise. Even though dust filtering nasal masks are commercially available, droplet prevention is not their principle. The major limitation of our modification is that we have not studied the usefulness of the modified mask in terms of actual viral or droplet movement across because this is extensively studied earlier and we have not changed the basic cross-sectional structure of the mask.

### References:

1. Zou L, Ruan F, Huang M, et al. SARS-CoV-2 viral load in upper respiratory specimens of infected patients. *N Engl J Med*. 2020. 10.1056/NEJMc2001737.
2. Christian J. Kahler Rainer Hain Verity et al., Fundamental protective mechanisms of face masks against droplet infections. *Journal of aerosol science* 2020. 148: 105617. <https://doi.org/10.1016/j.jaerosci.2020.105617>.
3. Bartoszko JJ, Farooqi MAM, Alhazzani W, Loeb M. Medical masks vs N95 respirators for preventing COVID-19 in healthcare workers: a systematic review and meta-analysis of randomized trials. *Influenza Other Respir Viruses* 2020; published online April 4. DOI:10.1111/irv.12745.