

# The effects of PPE on the eyes of regular mask users

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Eye problems caused by frequent use of PPE (personal protective equipment) including masks have recently increased amongst individuals using masks for an extended period of time.

Individuals using masks regularly appear more likely to develop **ocular irritation** and **dry eye** symptoms.

## – The mechanism

The air blowing upward from the mask into the eyes leads to an accelerated evaporation of the tear film, which, if prolonged for an extended period of time, can result in irritation and subsequent ocular discomfort.

In addition, taping the mask to prevent the air flow towards the eyes can interfere with the physiological mechanical movement of the lower eyelid, potentially resulting in the eyelid to be turned outward (ectropion). The subsequent exposure of the surface of the inner eyelid can potentially cause eye dryness and irritation.

## – The risk

The ocular discomfort derived from dry eye can increase eye rubbing and face touching behaviours, potentially increasing the risk of transmission of COVID-19.

## – What can be done?

- Lubricant eye drops and ointment can be used by frequent mask users to prevent ocular irritation
- Eye protection, such as goggles, could be used together with masks when prolonged mask wear is unavoidable
- Additional care should be taken if previous history of dry eye disease, recent ophthalmic surgery or surface inflammatory diseases
- Individuals experiencing dry eye symptoms from prolonged mask wear should remove the mask every few hours to allow the eyes to recover and use lubricant eye drops regularly. Care should be taken when touching the external surface of the mask to avoid contamination and the mask should be replaced if possible
- If the mask is taped at the top to prevent airflow towards the eyes, be sure that the lower lid movement is preserved