

COVID-19 OCULAR ASSOCIATIONS IN THE SCIENTIFIC LITERATURE: SYNOPSIS 25

The COVID-19 pandemic began in December and has affected people in nearly every country in the world. We provide a summary of ocular-related associations with COVID-19 in the literature, and we plan to update this as we become aware of new manuscripts. Thus far, it appears that approximately 1-5% of COVID-19 patients experience conjunctivitis and very few COVID-19 patients exhibit virus in their tears.

Ong SC, Razali MAB, Shaffiee L, et al. Do Slit-Lamp Shields and Face Masks Protect Ophthalmologists Amidst COVID-19? *Ophthalmol.* 2020

- Experimental modeling
- Aerosols = smaller light particles that remain suspended in the air because of slow settling velocity
- Large droplets = heavier particles that fall rapidly after a downward trajectory
- Setup = mannequin face at oculars represented doctor and spray bottle at chin rest represented patient
 - Particle peak velocity of 4 m/s, max horizontal distance of 2.35 m; comparable to coughing or sneezing
- Camera captured 1000 frames/s; repeated three times under each condition
- Condition 1: no slit lamp shield or patient mask
- Condition 2: slit lamp shield
- Condition 3: patient masks
 - Five types of masks: an N95 respirator, three surgical masks with filtration efficiencies from 95 to 99%, and a cloth mask

- Two trained graders counted number of particles within a 31.2 × 19.6 mm area

	# (SD) particles	Qualitative hyperfluorescent areas
No protection	42.7 ± 34.5	lower half of the mannequin, slit lamp, and table
Slit lamp shield	12.3 ± 5.7	mannequin's neck, the shield, the slit lamp, and the table
Patient mask	0.0 ± 0.0	inner surface of the masks

- Conclusion: "Our study showed that all five types of face masks on patients provided the most complete protection against aerosol and droplet transmission."



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