

# QUESTIONS AND ANSWERS REGARDING REICHERT® NON-CONTACT TONOMETER DISINFECTION AND OTHER SAFETY INFORMATION.

## 1. What level of cleaning is required for a Reichert® Non-Contact Tonometer?

All Reichert Non-Contact Tonometers are classified as non-critical devices because they do not contact the mucous membrane. As such, Non-Contact Tonometers require low-level disinfection. Note: Goldmann tonometers and prisms are classified as semi-critical and require high-level disinfection.

## 2. What is the proper cleaning and low-level disinfection procedure for a Non-Contact Tonometer?

INSTRUMENT PART	FREQUENCY	CLEANING & DISINFECTION PROCEDURE
Forehead Rest and Front Bezel	After Each Patient	The forehead rest and the surrounding front bezel plastics may be cleaned with a clean cloth moistened with a mild detergent solution (1 cc of liquid dish soap to one liter of clean, filtered water [filtered below 5 microns]) or a sterile 70% isopropyl or ethanol alcohol wipe. Note: Depending on model and serial number, replacement forehead rest pads may be purchased through your local authorized Reichert distributor.
External Surfaces	As Necessary	Clean the external surfaces of the instrument using a soft cloth moistened with a mild detergent solution (1 cc of liquid dish soap to one liter of clean, filtered water [filtered below 5 microns]).
Operator Display	As Necessary	Clean the operator display of the instrument using a soft cloth moistened with mild detergent, or a sterile 70% isopropyl or ethanol alcohol wipe.
Optical Windows and Air Tube	As Necessary	Regular cleaning of the alignment and applanation optical windows is required. The air tube should also be cleaned at regular intervals. Do not use fluids to clean the air tube. Consult the user manual or contact Reichert Technical Support for instructions specific to your instrument.

## 3. Is there a risk of air tube contamination that can spread infections to other patients?

There is no evidence to suggest that contamination can enter the Non-Contact Tonometer's air tube and cause harm to other patients.<sup>1</sup>

## 4. Is Non-Contact Tonometry an aerosol generating procedure (AGP)?

There is no material evidence that Non-Contact Tonometry is an aerosol generating procedure. The only publication on this subject is from 1991 by Britt et al. The authors used fluorescence photography to capture visible tear film splatter from the air puff in eyes with increased fluid volume due to instillation of topical fluorescein or artificial tears.<sup>1</sup> However, this photographic method is not capable of capturing "aerosolization" as aerosols are particles that are not visible to the eye. Today, it is agreed that the authors used incorrect terminology in describing their findings as "micro-aerosolization." It should also be noted that the air pulse technology utilized in the study applied 4 to 6 times more force than modern Non-Contact Tonometers, making the tear film splatter much more substantial.<sup>2</sup>

## 5. Is the SARS-CoV-2 virus present in tears?

The primary path of infection is through droplets produced by and entering into the mouth, nose, and lungs.<sup>3</sup> Numerous studies evaluated the presence of SARS-CoV-2 in tears and found the risk to be low (0-5.2%) and only present in patients with ocular manifestations such as chemosis, conjunctival hyperemia, or conjunctivitis.<sup>4-6</sup>

## 6. What are the risks of spreading the virus through the eye?

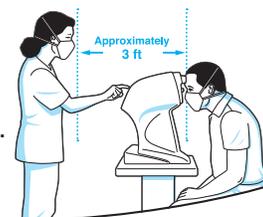
It has been suggested that the eyes might be a portal of entry for the virus because of the presence of ACE receptors, but there is currently no clinical evidence for this theory (and the dermis also contains ACE receptors).<sup>7</sup> In addition, there is no evidence that viral particles can be implanted into the eye during Non-Contact Tonometry. The air pulse generating mechanism in Reichert Non-Contact Tonometers is almost completely shielded by the plastic housing of the instrument, making it unlikely for respiratory droplets from patients or clinicians to enter the device.

## 7. Is there any evidence of infection spread by use of a Non-Contact Tonometer?

No, the Non-Contact Tonometer has a 50-year record of safety. There are no documented instances of infection being spread by use of a Non-Contact Tonometer.

## 8. Does Non-Contact Tonometry provide a safer working distance between clinician and patient, compared to other forms of tonometry?

Yes, the typical clinician-patient distance is approximately 3 feet and rarely requires the clinician to touch the eyelid.



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