

## How to Prevent Glasses from Fogging Up while Wearing a Mask and Performing Intracytoplasmic Sperm Injection Treatment (ICSI) in ART during Covid-19 Pandemic?

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### Abstract

The use of a surgical mask is a preventive measure to ensure transmission of airborne diseases (viral respiratory diseases like Covid-19) is minimized. A medical or surgical mask can be either flat or pleated and are placed over the nose and mouth.

**Keywords:** Microscopic; Intracytoplasmic Sperm Injection

### Introduction

Decreased eye vision is a common complaint that disturbs almost two out of three persons around the globe. These people have to wear therapeutic eyewear in order for improved vision. And recently, many of us have the same complaint: that wearing a mask makes our glasses foggy.

The World Health Organization (WHO) has announced COVID-19 a global pandemic. It suggests much measure in which a person can safeguard themselves. These measures include wearing a mask, washing your hands frequently, covering your mouth (ideally with a tissue) when sneezing or coughing, avoid touching your eyes, nose and mouth, sanitize your hands frequently and avoid coming into close nearness with persons who are already coughing, sneezing or have a fever. Covid-19 can blowout with a wide system of air, ground and sea conveyance centers, one can travel comparatively flawlessly one place on the other globe within fair a limited days of era [1,2]. The CDC has delivered an authorized declaration that endorses healthcare experts to only use masks for the care of patients [3].

One of the most commonly inquired issues was regarding the fogging dilemma during microscope work, or advanced cells surgical treatment like intra cytoplasmic sperm injection (ICSI) in ART procedure in reproductive medicine. While this trouble is comparatively new to the lay man, it is an everyday challenge for healthcare employees during scanning and other procedures that involve especially a sophisticated inverted microscope.

### Intra cytoplasmic sperm injection and microscopic visualization in reproductive technology

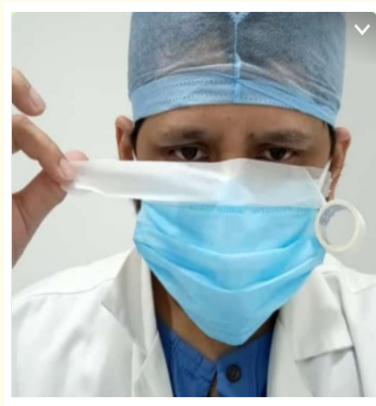
Microscopic, intracytoplasmic sperm injection (ICSI) [4] includes the straight inoculation of nominated spermatozoa into a matures eggs after focusing on I-PB location obtained or focus on perfect position of meiotic spindle location aligned under an inverted microscope with the help of Micromanipulator. ICSI has supported men with short sperm number and excellence to have their own biological offspring [5].

**Why does my mask cause my glasses to fog during a procedure?**

The huge inhabitants that wear glasses already comprehend that wearing any kind of eyewear fogs when you step out of a warm environment like your house into the rough outdoor air, or when you open an oven door. When we wear a mask, the warmth from our breath flees through the edges of the glasses, along the exterior part of the cheeks. When this warm air lands on the cooler lenses of the glasses, it creates moisture on the surface thus forming a foggy film colder climates worsens this delinquent. There are many quality mask available including N95 Mask, N95 type masks are made by numerous industrialists under diverse trade names. The term 'NIOSH N95' relates to a filter efficiency assessment that means the mask materials block about 95% of particles that are 0.3 µm in size or larger [6].

**Use of a surgical mask, safety inside ART set up and sterilized cello tape sealing on the edge**

The use of a surgical mask is a preventive measure to ensure transmission of airborne diseases (viral respiratory diseases like Covid-19) is minimized. A medical or surgical mask can be either flat or pleated and are placed over the nose and mouth. They are fastened to the head with elastic straps that aid in the prevention of the mask from moving. According to the WHO guidelines, these masks have to be tested rendered to standard test measures (ASTM F2100, EN 14683, or equivalent) which focus on preventing fluid penetration, allows for high filtration, and adequate breathability. Disposal of masks is another important point to remember which will avoid transmission of the disease. For healthcare workers, it is mandatory that they use medical masks and avoid the use of non-medical masks inside the ART procedure area including Andrology laboratory, Embryology and Ovum pick up area sterile area. There may be differences in bacterial growth and recolonization on the hands of compared to those of health care workers, due to their frequently performed preoperative hand disinfection and frequent exposure to virulent bacteria [7]. So, touching spectacles without sanitizing hands and scrubbing glass is not a decent indication always.



**Figure 1:** Sealing edge of the mask with sterile sellotape from left to right.



**Figure 2:** Wide glass which cover air circulation through cornea and prevent fogging on glass.

## **Conclusion**

When it comes to people with reduced vision, exhausting a surgical mask and spectacles can lead to fogging of their lenses which in turn reduces their vision. The reason behind foggy lenses is due to condensation. When a person exhales air out, the warm air finds its way towards the upper portion of the mask and then cools down when it hits the cooler lenses. This is what causes fogging of the glasses. Continuously take away spectacles with naked hands and wipes or other protective eyewear in surgical procedure or any phases leads to a threat to infection with COVID-19. There are many different methods that can be adopted to minimize condensation on the lenses, which includes using a commercially carried de-misting spray from pharmacy or Smear a tinny coating of shaving cream to the inside portion of your spectacles and then moderately rub it off. Whatever shaving cream is left behind as residue will aid in defensive your glasses from fog over. Additional way of avoiding your protective eye gear from fogging is by using autoclaved medical grade tape. Place the tape on the top portion of the mask to seal the gap so that warm air cannot reach your lenses.

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