

## Supplementary Online Content

Berges AJ, Lina IA, Ospino R, et al. Quantifying particle aerosolization risk during tracheostomy surgery and tracheostomy care. Published online July 22, 2021. *JAMA Otolaryngol Head Neck Surg*. doi:10.1001/jamaoto.2021.1383

**eTable 1.** Aerosolized Particle Spread During Suction and Nebulization

**eTable 2.** Particle Reduction With Tracheostomy Coverings Compared to Uncovered Tracheostomy

This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1. Aerosolized Particle Spread During Suction and Nebulization**

<b>Experimental Condition</b>	<b>Mean ± SD Particle Concentration (counts/m<sup>3</sup>)</b>
Suction	7,300 ± 930*
Nebulization	4,400 ± 350*
Nebulization with Surgical Mask	410 ± 100*
Background Particle Measurement	3,400 ± 780

SD=standard deviation

\*denotes experimental particle concentration values which are calculated by subtracting the background particle concentration

**eTable 2. Particle Reduction With Tracheostomy Coverings Compared to Uncovered Tracheostomy**

<b>Tracheostomy Covering</b>	<b>Mean <math>\pm</math> SD Particle Concentration (<i>counts/m<sup>3</sup></i>)*</b>	<b>% particle concentration compared to uncovered tracheostomy</b>
Uncovered Tracheostomy	4,995 $\pm$ 7500	100%
Cotton Mask	1,300 $\pm$ 70	26.2%
Polyester Gaiter	1,000 $\pm$ 70	20.5%
Humidification Mask	860 $\pm$ 70	17.2%
Surgical Mask	860 $\pm$ 70	10.1%
HME	450 $\pm$ 60	9.0%
HME + Surgical Mask	100 $\pm$ 70	2.1%

SD=standard deviation

HME= heat moisture exchanger

\*denotes experimental particle concentration values which are calculated by subtracting the background particle concentration