

FACE THE FACTS:



WHAT YOU NEED TO KNOW ABOUT MEDICAL FACE MASKS IN DENTAL SETTINGS.

Q&A with Wava Truscott, PhD, Director Medical Sciences & Clinical Education; Halyard Health, formerly Kimberly-Clark Health Care

Why do I need a fluid-resistant mask?

If your mask is not fluid resistant, you are not adequately protected against splashes or sprays. Dental power instruments and air-water syringes create a visible spray that contains droplets of water, saliva, blood, microorganisms, and other debris which can land on the dental healthcare worker, nearby surfaces or the patient.¹ Wearing a fluid resistant mask helps protect the wearer from mucosal contact with, or inhaling these potentially infectious splashes and sprays.⁴

Is there a meaningful difference between a mask that offers a 95% BFE versus 99.7% BFE?

A higher percentage indicates higher filtration efficiency; e.g., 95% BFE indicates 5% of the aerosolized bacteria used in testing passed through the mask material, while 99.7% BFE indicates only 0.3% passed through.

What type of medical face mask does the CDC recommend for dental professionals?

The CDC recommends that dental professionals wear a surgical mask that protects against microorganisms with >95% bacterial filtration efficiency, and also protects from droplet spatter that might contain bloodborne pathogens or infectious microorganisms.¹

What is a surgical mask?

In the U.S., surgical masks are cleared for marketing by the U.S. Food and Drug Administration (FDA). According to the FDA, surgical masks may be labeled as surgical, laser, isolation, dental or medical procedure masks.²

What is ASTM?

ASTM International is one of the world's largest standards developing organizations.

What are the ASTM Test Methods and why are they important?

• BFE and PFE:

Describe mask performance for bacteria filtration efficiency (BFE) and particle filtration efficiency (PFE). The higher the percentage, the more the mask prevents the passage of bacteria or particles.³

• Fluid Resistance:

Face masks are challenged with synthetic blood at various levels of pressure (80, 120, 160 mm). The higher the pressure withstood, the greater the fluid spray and splash resistance.

• Delta P/Differential Pressure:

Measures the effort it takes to force air through the mask material...the lower the Delta P, the more breathable and comfortable the mask.

• Flammability:

The mask material is subjected to flame. The rate at which the material burns determines the level of flammability.

How do I know if my current face mask is providing adequate protection?

Look at the package! The new ASTM F2100-11 standard requires a graphic display on the packaging stating the mask performance level. The new standard also changed mask classifications from performance class (low, medium, high) to levels (1,2,3). This rating level is determined based on the ASTM test methods listed above.³

How often should I change my mask?

The CDC recommends changing masks between patients, because the mask can become contaminated with infectious materials. If the mask becomes wet, it should be changed even during patient treatment, when possible.¹

Sources/References:

- 1 Center for Disease Controls. Guidelines for Infection Control in Dental Health-Care Settings, 2003 <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm>
- 2 Center for Devices and Radiological Health. Guidance for Industry and FDA Staff. Surgical Masks - Premarket notification [510(k)] submissions 2004.
- 3 ASTM International. Standard Specification for Performance of Materials Used in Medical Face Masks. Vol ASTM F2100-11. West Conshohocken, PA: ASTM International; 2011
- 4 Siegel JD, Rhinehart E, Jackson M, Chiarello L. 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Health Care Settings. Am. J. Infect. Control. Dec 2007;35(10 Suppl 2):S65-164.

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