# THE GLOBAL LEADER IN AEROSOL DELIVERY MOVES INTO THE UPPER AIRWAY



## PARI'S SINUSTAR™ AEROSOL DELIVERY SYSTEM

FOR INTRANASAL DELIVERY OF AEROSOL



PARI's SinuStar<sup>TM</sup> Aerosol Delivery System is an effective nebulizer system for aerosol delivery to the upper airway.¹ Aerosol therapy has been used effectively to treat chronic sinusitis, rhinitis, and allergies. PARI SinuStar<sup>TM</sup> is the only nebulizer system which has been FDA cleared for aerosol treatment to the upper airway. Benefits of intranasal nebulized medication include direct topical administration for maximum rapid therapeutic effect, minimal systemic side effects, and is now an accepted additional treatment option for patients who have not responded to oral or intravenous treatment.6

#### MAKING THE MOST OF YOUR THERAPY

The SinuStar<sup>™</sup> Aerosol
Delivery System is most
effective when...



...the nasal cavity is rinsed before treatment. Nasal irrigation is an inexpensive, patient controlled therapy that flushes the nasal cavity with saline solution, facilitating a wash of the structures within.<sup>2</sup>

The PARI Montesol™ Nasal Wash's patent pending design is a gentle and effective way to cleanse the nasal passages of:

- · Dirt, dust, and pollen
- · Airborne allergens
- · Excess mucous
- Crust associated with post-operative nasal and sinus surgery





### **AEROSOL** CHARACTERISTICS

#### SINUSTAR PARTICLE SIZE ANALYSIS<sup>3</sup>

Mass Median Diameter (MMD):  $2.9 \mu m$ 

Total Output Rate (TOR): 180 ml/min

Percentage Under 5µm: 79%

Average Treatment Time: 12-14 minutes

Particle size is an important factor in the deposition of aerosol in the upper airway. Particles  $<5\mu m$  are the optimal size to deposit into the paranasal sinus and the nasal mucosa in sufficient concentration. ⁴,5 The PARI SinuStar™ delivers 79% of particles less than  $5\mu m^3$  and is the only FDA cleared device for upper airway aerosol delivery.

1 Scheinberg, Philip A., Otsuji, Alan. Nebulized antibiotics for the treatment of acute exacerbations of chronic rhinosinusitis. ENT Journal. September 2002 Vol. 81 No.9.

2 Rabago, D. Barnett, B. Nasal Irrigation to Treat Acute Bacterial Rhinosinusitis American Family Physician, November I 2005.

3 Measured with Malvern Spraytec at 42% Relative Humidity, 0.9% NaCl Solution, inspiratory flow 4-6lpm, 23°C, fill volume 2.5ml. December 2005

4 N.H. Tiffin, A.N. Wiegand, J. Zimmerman and H. Mentzel. A Novel Compressor/Nebulizer System to Delivery Aerosol to the Paranasal Sinuses. Proceedings of the American Thoracic Society. Vol 3:A573 Abstract Issue April 2006

**5** Guevara J, Pascual B, et al.: Ambulatory aerosol therapy in the treatment of chronic pathology in the ORL sphere. An Otorrinolaringol Ibero 1991, 18:231-238

<sup>6</sup> Sato Y: A review of aerosol therapy in otorhinolaryngoloy. Journal of Aerosol Medicine, Vol I, No 2, I33-I45,I988.



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