

RESEARCH PAPERS AND PROTOCOL CONTRIBUTIONS

1. Comparison of 17 brands of jet nebulizers to determine respirable range particles, output, nebulization time, and respirable rate.
2. A Double-Blind, Multiple-Dose, Crossover, Dose Comparison Trial of Formoterol Suspension Aerosol vs. Placebo in Patients with Reversible Obstructive Airways Disease.
3. A Multicenter, Double-Blind, Double-Dummy, Placebo-Controlled, Group-Comparative Study of the Safety and Effectiveness of Four Dose-Levels of ipredane as Compared to Beclomethasone Dipropionate in the Treatment of Adults with Moderate Asthma.
4. Comparison of the Bronchodilator Response to a Metered Dose Inhaler Alone or Combined with Either the Aerochamber or Optihaler Inhalation Devices.
5. Delivery of Glucocorticoids via Jet Nebulization: Aerosol Characteristics and Output.
6. Comparison of Commercial Ultrasonic Nebulizers (Omron Ultra-air, Omron Micro-air, DeVilbiss Traveler, and Fisoneb 1).
7. A Double-Blind, Placebo-Controlled, Parallel-Group Study of RG-12525 in Adult Asthmatics.
8. A Double-Blind, Placebo-Controlled Study of the Effects of the Clearveil Air Purifier.
9. An Efficiency Analysis of the Fisoneb 2 Ultrasonic Nebulizer.
10. Analysis of the Efficiency of Particle Size Delivery Characteristics of the Tilade Metered Dose Inhaler (MDI).
11. Analysis of the Comparison of the Cronolog and Control Inhalers in the Particle Size Delivery of Albuterol via Metered Dose Inhaler (MDI).
12. Analysis of the Output and Particle Size Characterization from the Wright Pneumatic Nebulizer.
13. Comparison of the Microstat, Omron, and Aerosonic Nebulizers at Inspiratory Flow Rates of 10, 15, and 20 Standard Liters Per Minute (SLPM).

14. Comparison of the portable Attache and Pulmo-Aide Compressors with Five Commercially Available Jet Nebulizers.
15. Comparison of the Aerochamber, Inspirease, and EZ-spacer (prototype) Spacer Devices with the Metered Dose Inhaler Alone Using Ventolin, Vanceril and Aerobid.
16. Comparison of the Battery Life of the Dura-Neb 2000 and the Traveler Nebulizer Systems.
17. Comparison of Five Compressor/Nebulizer Systems: (Inspiration HEALTHDYNE 323 w/ Salter 8900, Inspiration HEALTHDYNE 929 w/ Salter 8900, INVACARE Passport w/Sidestream, PRONEB w/PARI LC JET, and Pulmo-Aide w/Pulmo-Neb.
18. Analysis of 12 LC Disposable Jet Nebulizers.
19. Comparison of 12 LC Reusable Jet Nebulizers to Determine Efficiency Changes after Repeated Autoclaving.
20. Analysis and Consulting to Improve the Output Efficiency of the Whisperjet Nebulizer 33%.
21. Analysis of the Hudson Micromist, Intersurgical Unit and the DeVilbiss 644 (Before and after mold changes).
22. Comparison of different compressor/nebulizer systems in the delivery of Saline, Tobramycin, and Pentamidine.
23. Comparison of disposable jet nebulizers (Misty-Neb/Baxter, PARI LC-D/PARI, Updraft II/Hudson RCI, and Whisper Jet/Marquest medical).
24. A short review of the pulmonary deposition of inhaled medications using gamma scintigraphy. A comparison between Circulaire, PARI LC, and PARI IS two nebulizers.
25. Comparison of portable nebulizer systems.
26. A new technologically advanced aerosol delivery system (Star and Turbo).
27. Comparison of the PARI LC Star, PARI LC Plus, DeVilbiss PermaNeb, and Salter Ultramist.
28. Comparison of the Salbutamol delivery of the MADA, DURANEB 1000, and DURANEB 2000 nebulizer systems.
29. Comparison of the Salbutamol delivery of the Sidestream and PARI LC PLUS nebulizers using artificial human breath simulator techniques.

30. Comparison of the LC PLUS and AeroTech II nebulizers using the PRONEB TURBO compressor and a O₂ tank @ 12 LPM.
31. Salbutamol delivery and laser analysis of the Heart, Miniheart, and Uniheart nebulizer systems.
32. Double masked in-vivo comparison of the LC STAR and Micromist nebulizers using Albuterol and placebo.
33. Comparison of 19 commercially available jet (pneumatic) nebulizers and the recommended compressor used to operate each nebulizer.
34. Determination of the free flow and psi from 25 nebulizer compressor systems.
35. Comparison of the amount of Salbutamol in the dead volume of the Sidestream and PARI LC PLUS.
36. Comparison of all new commercial jet (pneumatic) nebulizers available in 1997-1998.
37. Comparison of 12 LC Reusable Jet Nebulizers to Determine Efficiency Changes after Repeated Autoclaving (50x @ 135°C for 15 minutes).
38. Comparison of the output and percent Respirable Range for two LC PLUS nebulizers using the insert placed incorrectly (backwards) and using the insert placed correctly (forwards).
39. Three papers accepted for open forum presentation at the AARC conference 11/'98. 1) Comparison of the LC PLUS and LC STAR Nebulizers using the Pulmo-Aide, Pari Master, and Proneb Turbo compressors; 2) Comparison of the LC STAR and Aerotech II nebulizers using the Proneb Turbo and an O₂ tank @ 6 LPM for compressor flow; and 3) Comparison of various Pneumatic jet nebulizers.
40. Comparison of the following compressor/nebulizer systems: Duraneb 1000/LC PLUS, Duraneb 2000/LC PLUS, and MADA/UPMIST. Will be presented at the World Asthma meeting in Barcelona, Spain (12-'98).
41. Salbutamol delivery and laser analysis of the Heart, Miniheart, IV Heart, and Uniheart nebulizer systems using both the PRONEB TURBO compressor and a O₂ tank @ 6 LPM.
42. Double masked in-vivo comparison of the LC STAR/TURBO and Micromist/Pulmo-Aide nebulizer/compressor systems using Albuterol and placebo. Completed at National Jewish Hospital.

43. Particle characterization of the PARI STAR nebulizer with oxygen tank at 48 and 26 psi.
44. Analysis of 6% saline solution to determine the best compressor/nebulizer combination in terms of time of delivery and Respirable Rate.
45. Research conducted on different gas compositions in reference to particle size.
46. A review of papers comparing the deposition efficiencies of inhaled medication. A comparison between Airlife Misty-Neb, Circulaire, and PARI nebulizers.
47. Analysis of LC Star with Turbo nebulizers that have been cleaned (3x and 12x) by the new Steris system.
48. Analysis of Baby Star nebulizer with Turbo compressor with Saline, Intal, Salbutamol, and Metaproterenol for FDA submission.
49. Analysis of the NebuTech (Salter Labs) and the Vixone nebulizers.
50. Analysis of the NebuTech (Salter Labs) and the PARI LC+, LC Star, LC-D (PARI Respiratory Equipment), and DeVilbiss 700 (DeVilbiss Healthcare) nebulizers.
51. Analysis of in-vitro aerosol delivery testing station for efficiency and reproducibility.
52. Developed test procedure for analysis of aerosol delivery devices in-vitro to maintain a consistent recovery of 99% of starting dose using any of the diseased breathing patterns. This brings the science to the level of In-vitro/In-vivo synergism.
53. A review of the equipment and procedures used in Salter Labs to determine comparative studies with other different nebulizers (submitted to RT).
54. Development of an assay for the linear regression line for Albuterol sulfate to provide the formula for calculating actual amount of drug being recovered.