

Optimize Infant Oral Feeding Outcomes with *Zero-Resistance™* Bottle System

A report on the difference between typical disposable feeding systems and Dr. Brown's® vacuum-free, controlled-flow bottle system.

Executive Summary: Dr. Brown's® bottle system with internal vent eliminates all sub-atmospheric pressure in the bottle during feeding.

In this research project, the Dr. Brown's® *Zero-Resistance™* bottle system consistently measured no sub-atmospheric pressure. Widely-used bottle systems (Volufeed vessel and disposable nipples) in the hospital setting were tested indicating the existence of sub-atmospheric pressure during a 60-cc formula extraction using a breast pump.

As studies by Lau (2000) and Fucile (2009) have speculated, the presence of sub-atmospheric pressure in a bottle system may have negative effects on an infant's feeding, which according to this report may validate that an infant will expend more energy making the feeding experience less efficient.

More testing will be required to evaluate an actual infant feeding vs. breast pump which was used for this research.

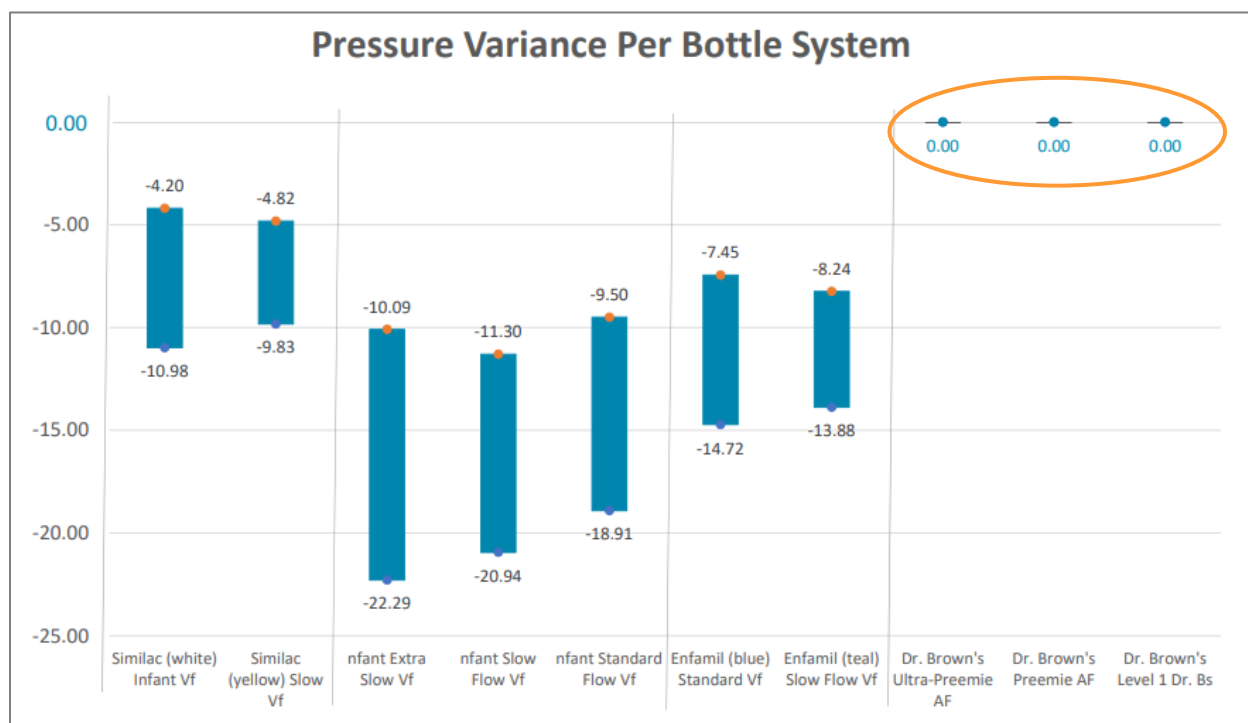


Figure 1. The chart above shows the calculations as mmHg pressure (sub-atmospheric) within the bottle type / nipple combination used. Dr. Brown's® bottles were measured using the internal vent system. All disposable nipples were tested attached to a Volufeed as typical for a feeding tool in a NICU.

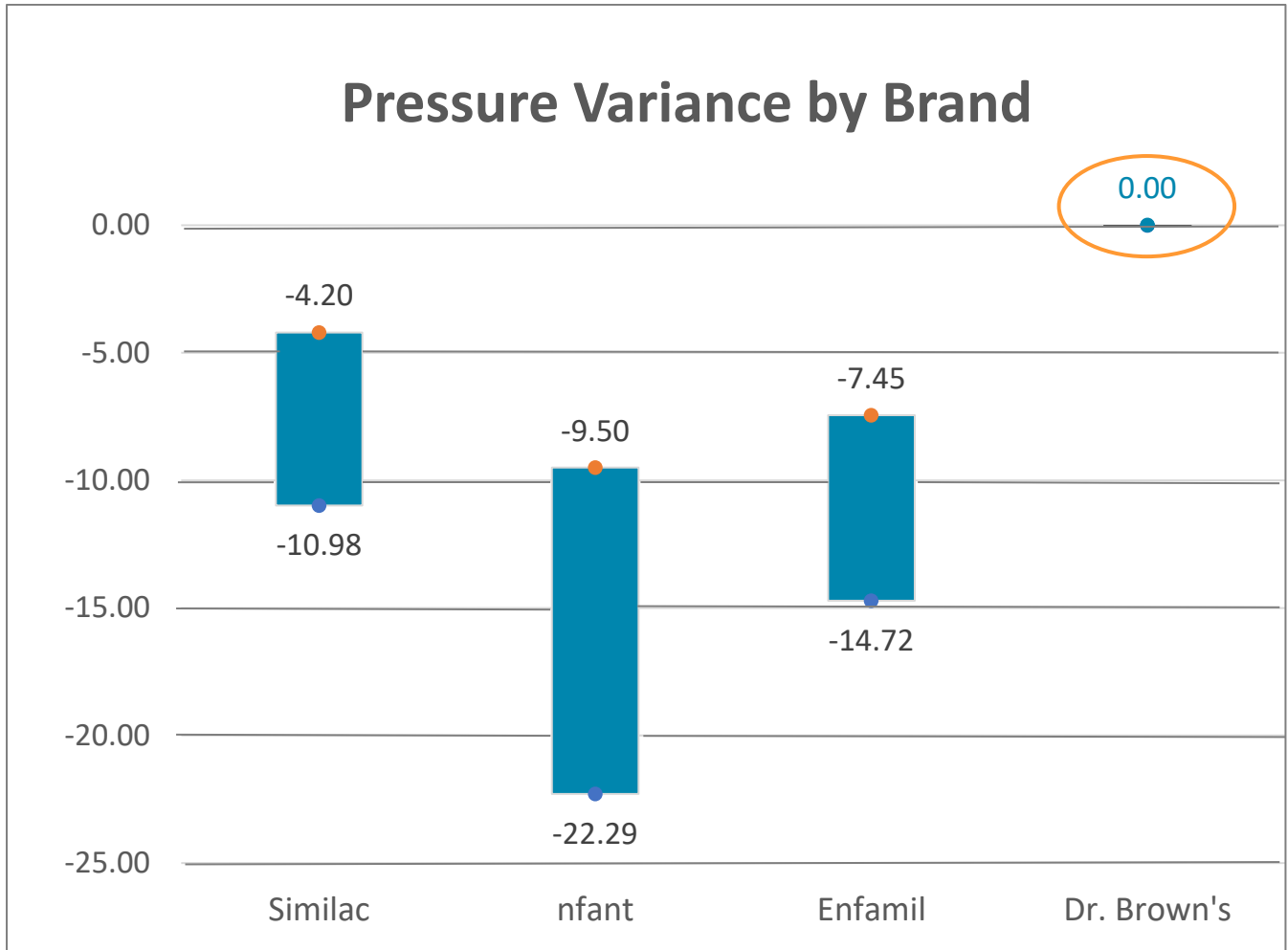


Figure 2. The chart above illustrates the average mmHg pressure (sub-atmospheric) within the bottle type /nipple by brand.

References

Fucile S, Gisel E, Schanler RJ, Lau C. A controlled-flow vacuum-free bottle system enhances preterm infants' nutritive sucking skills. *Dysphagia* 2009; 24:145-151.

Lau C, Schanler RJ. Oral feeding in premature infants: advantage of a self-paced milk flow. *Acta Paediatrica* 2000; 89: 453-9.

Detailed Methodology is available upon request: medical@handi-craft.com