

ACHES & CLAIMS

JANUARY 10, 2012

Building a Better Bottle By Going Back to Nature

By LAURA JOHANNES

Buying a baby bottle used to be easy. Now there are bottles in a plethora of designs that aim to prevent colic, improve nutrition, reduce risks of ear infections and even delight babies by mimicking breast-feeding.

But are these bottles actually healthier for babies?



F. Martin Ramin for The Wall Street Journal

From left to right: The 9-ounce Playtex VentAire, mimijumi's 8-ounce Very Hungry bottle, the 8-ounce Dr. Brown's Natural Flow bottle, which have vents that keep air away from a baby's mouth.

The Very Hungry 8-ounce bottle for \$14.99 from mimijumi LLC, Nashville, Tenn., has a nipple shaped and textured to simulate a real breast. It creates the "most natural bottle-feeding experience possible," according to the box.

The \$4 Playtex VentAire 9-ounce bottle from St. Louis-based Energizer Holdings Inc.'s personal-care unit, causes "less gas, spit-up, colic and other discomforts," according to its label. The company also claims on the label that the bottle's design "helps prevent ear infections." And for \$6 an 8-ounce bottle or \$15 for a pack of three, Dr. Brown's Natural Flow from Handi-Craft Co., St. Louis, reduces colic and fluid buildup in ears as well as "helps preserve vitamins," according to the box.

At the heart of many of the specially designed bottles is a "venting" system. A vent is needed in baby bottles to prevent the infant from sucking out all the air, resulting in a vacuum that collapses the nipple and frustrates the baby. Standard bottles have vents in or on the sides of the nipple, which, according to makers of alternate systems, bring air into the portion of the milk the baby is drinking, causing gas and colic.

The Playtex VentAire and the mimijumi solve the problem by venting through the base of the bottle so air comes in further away from the baby's mouth, the companies say. The Playtex VentAire's bent design helps prevent ear infections by making it easier to feed babies upright, Energizer says. An older design, the \$4 Playtex Nurser, eliminates the need for venting with a one-time use plastic pouch, which shrinks as the baby drinks.

Dr. Brown's bottle has a patented system involving a vent at the top of the bottle that directs air through a strawlike "reservoir" and releases it at the base. Handi-Craft says Dr. Brown's venting system helps prevent a "vacuum" that can lead to buildup of ear fluid.

Mimijumi hasn't performed any clinical studies, but the company says customer surveys recorded that its bottle is accepted by "picky" babies. Unpublished internal Playtex studies found that mothers asked to switch in a variety of patterns from their usual bottles to the VentAire and Nurser bottles reported fewer colic symptoms when the babies were using the Playtex bottles.

At least two bottles have been studied for possible benefits in preventing colic, a catchall designation that describes crying and fussiness—generally for more than three hours a day. A 2006 Indiana University study of the Dr. Brown's bottle found it reduced crying in 21 colicky infants over a two-week period compared with a control group using a bottle designed to look similar. Study author Marsha L. Cirgin Ellett says the university received funds from Handi-Craft to cover the cost of the study.

Two published company-funded studies of the Dr. Brown's bottle found that vitamin C and other nutrients stayed in milk during a 20-minute feeding, while they degraded in rival bottles. The company says that is because air from nipple venting oxidizes milk.

Some physicians are skeptical about the health claims. "There's really no evidence that feeding with one bottle over another will make a difference" for better nutrition or any health issues, says Jatinder Bhatia, professor and chief of neonatology at Georgia Health Sciences University in Augusta, Ga., and chairman of the American Academy of Pediatric's nutrition committee. As for the claims that the Dr. Brown's bottle preserves vitamins, Dr. Bhatia says he wouldn't be convinced of a health benefit unless the company could show nutritional deficiency in non-Dr. Brown's fed infants.

The causes of colic aren't known, but Bryan Vartabedian, a pediatric gastroenterologist at Baylor College of Medicine in Houston says that even if breathing in air during feeding contributes to colic, it is not the only factor. Babies may be crying due to gastrointestinal reflux, allergies to milk proteins and other digestive issues unrelated to the bottle used, Dr. Vartabedian says.

There's also no proof that any baby bottle can reduce the chances of ear infections, says Richard Rosenfeld, chairman of otolaryngology at SUNY Downstate Medical Center in Brooklyn, N.Y. Preliminary research does suggest babies feeding while on their backs as opposed to being upright can reduce "negative pressure" in the ear, which could theoretically lead to fluid entering the ear. But there's no proof it does and even less proof that this fluid causes ear infections, Dr. Rosenfeld says.

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