

Soy Baby Formula Linked to Behavioral Problems

The American Academy of Pediatrics recommends that breastfeeding continue for at least 12 months and then as long after that period as it is mutually desirable. However, that is not always the reality. A study by Yale researchers last year found that most women do not continue breastfeeding after four months because they lack the confidence they will be able to do so and think their infants prefer formula. Of the women who participated in the study, 27% had stopped breastfeeding their infants after one week; 37% after two weeks; 70% after two months, and 89% by four months.

These figures have special importance due to the recently released study on manganese in infant formula and possible links to behavioral problems in children. In the study, the researchers found that newborn rats fed a mineral found in higher levels in infant formula -- especially soy formula -- than in breast milk may have attention-related changes in a brain chemical.

The reason manganese is such a concern is that it can be toxic in very high levels, even though it is essential for life, as it helps cells gather energy. The levels of manganese differ considerably in different infant foods:

Breast milk contains 4-6 micrograms per liter (mcg/L)
Milk-based infant formula contains about 30-50 mcg/L
Some soy formula contain 200-300 mcg/L

The study included 32 newborn rats that were fed 0 to 500 micrograms of manganese daily. The amounts given to rats were designed to mimic the amounts in breast-fed and formula-fed infants. Those rats who received no or very low doses of manganese didn't show any chemical irregularities, but those on the highest level of manganese dose were associated with lower levels of dopamine, a brain chemical that helps in problem-solving tasks.

The researchers chose manganese because past research on miners who were exposed to very high doses of the mineral developed serious health problems akin to Parkinson's disease. They are worried about soy formula because it contains approximately 80 times the manganese of human breast milk, but they caution that other minerals in the formula could offset the effects of the manganese.