

**The Effects of Environmental Estrogens on Milk Production and Milk Supply**

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(author of *Natural Families – Healthy Homes*)

Donna talked about the detrimental effects of environmental estrogens – “xenoestrogens.” These are man-made compounds that are structurally like estrogen, but cause adverse reactions at the tissue receptor sites. (These are different than “phytoestrogens” that are good for us.)

Examples of environmental estrogens –

- Pharmaceutical hormones – birth control pills, hormone replacement therapy.
- Food hormones – DES-like growth hormones and dyes (associated with reproductive cancers), BHA (preservative).
- Personal care sources – parabens (an emulsifier, implicated in breast cancer), phthalates.
- Household chemicals – phenols, laundry chemicals, benzenes.
- Dioxins – unintentional by-product of many processes involving chlorine (incineration of waste, chemical and pesticide manufacturing, pulp and paper bleaching), highly persistent in the environment.
- Styrofoam cups, plates, carry-out dishes.
- Pesticides and herbicides – atrazine, methoxychlor, heptachlor. Associated with reproductive issues – earlier menarche for girls, smaller genitals in males.
- BPA – Minnesota has banned it.

So, is there a connection between environmental estrogens and milk production?

- Effect on milk supply was first noted in farm animals, then replicated by feeding mice BPA with resulting poor growth.
- Mother rats had lower prolaction levels and lower milk production when exposed to BPA.
- Exposure to dioxins during pregnancy harms the cells and impairs the ability to make milk – in mice for sure; humans???

Donna noted increasing numbers of mothers who were “doing everything right” and still struggling with milk supply. Besides fixing any lactation issues and herbal galactagogues, she suggested reducing environmental estrogens as much as possible.

- Switching to organic or at least “hormone-free” meat and dairy
- Avoid or minimize food contact with plastic including plastic wraps, storage containers and water bottles
- Avoid or minimize contact with personal care products containing parabens and phthalates (lotions, shampoos, cosmetics, etc.)
- Avoid non-stick cookware
- Avoid the use of herbicides and pesticides in home and yard
- Switch to vinegar, baking soda, lemon juice-based household cleaners
- Avoid the use of chlorine bleach
- Add immune boosting foods and herbs

Galactagogues used were fenugreek tea, Mother’s Milk tincture, and Goat’s Rue tincture if no significant breast changes late in pregnancy or with lactogenesis II.

Results: Has tracked 78 mothers ranging from 3 weeks PP to 7-8 months PP. Results were seen in 1-5 weeks. 53 noted increased breast fullness and changes in babies' behavior. Of those, 44 were able to stop supplementing. 18 found that their milk supply had doubled or close to doubling. 7 had no noticeable increase in milk supply. All this is anecdotal.

Donna is currently starting a research study in collaboration with Wright State University, School of Medicine. Hypothesis: milk supply will significantly increase when environmental estrogen exposure is controlled. Variables: control for avoidance of estrogens separately, exact measurement of supply, effects of interventions separately.

### Other Interesting Bits –

Ilana Azulay-Chertok, PhD, MSN, IBCLC ~ Glucose levels of term infants born to gest. diabetics. “Infants who were breastfed early while in the delivery room had a significantly lower rate of borderline-hypoglycemia than those who were not breastfed in the early postpartum period (10% vs. 28%). Likewise, infants who were breastfed early had significantly higher mean blood glucose levels compared to that of infants who were not breastfed in the early postpartum period (57.7 vs. 52 mg/dL).” \*She clarified that infants who were not breastfed were given formula, not **no** feed.

Kay Hoover, MEd, IBCLC, FILCA ~ Useful advice from her talks.

- If babies are skin-to-skin after birth with 4 thicknesses of baby blankets over them, there are no cold babies.
- If you're working on policies that need approval from others, put in something obvious that needs tweaking so that others have can have input without messing with all the rest of it.
- Signs of effective breastfeeding that nurses can look for –
  - Mouth wide open
  - 10+ sucks in a row
  - Pauses < 10 seconds
  - No dimples in cheeks
  - No clicking sounds
- Hand expression in the first 24 hours – tell mom “you have to do it 20x before you see any moisture.”

Donna Geddes, PhD ~ Coordination of suck-swallow-breathe reflex during breastfeeding.

- Vacuum plays a major role in milk removal. Some babies suck with much less vacuum than others. Babies can look like they're nursing well but remove less milk.
- Ultrasound indicates that the nipple does **not** reach the junction of the hard/soft palate.
- Suck-swallow-breath patterns are not consistent and SSB is rarely 1:1:1.
- Can't breathe and swallow at the same time, but can suck and swallow.