UC DAVIS
WORKLIFE AND WELLNESS

Breastfeeding Support News

Winter Quarter 2016

Davis Classes and Groups

- **Weaning and Introducing Solids SCC Room E March 24**
- **Preparing for Breastfeeding SCC Room E April 28**
- **Continuing to Breastfeed When You Return to Work/School SCC Room E May 12**
- **Mother-to-Mother Support Group: SCC Rm. E April 15, May 20**

UCDHS Classes and Groups

- **Continuing to Breastfeed When you Return to Work March 10, 11:30-1:00 Ticon III 3B**
- **Breastfeeding Clinic and Community Support Group Thursdays 10:00 – 11:00, Glassrock Building Room 7106**
- **Mother-to-Mother Support Group facilitated by Shirley11:30-12:30, Main Hospital, Tower DCR1655 Boardroom: March 11, April 8**

News and Updates

Cheryl Burstiner, Clinical Resource Nurse Lactation Consultant Women's Pavilion/L&D/Newborn Nurseries UC Davis Medical Center Main Hospital has accepted the position of Lactation and Parent Education Manager, for Sutter Health Sacramento Sierra Region. Her last day with us will be March 11, 2016.

Cheryl has a 17 year history with UC Davis, much of it as a Labor & Delivery nurse. She is one of two main Lactation Consultants for the Medical Center, and is one of three support persons for the UC Davis Breastfeeding Support Program.

We thank Cheryl for all of the assistance, collaboration and education that she has provided, and wish her all the best in this new adventure.

Not all Plastics are Created Equal

Plastics have increasingly crept into and benefited our society in a number of ways. As it's so versatile, it can be used in a variety of purposes – it can be rigid and tough (baby bottles, breast pumps and parts), it can be flexible (bottle nipples, zip-lock bags), it can be a combination of both (pacifiers, baby toys). Over the past few years, the Breastfeeding Support Program has received questions regarding the safety of using plastics related to breastfeeding. Are we getting more than just convenient storage from them and being exposed to toxic chemicals?

Candace Bever is a Project Scientist in the Department of Entomology and Nematology on the UC Davis campus. She is also an ongoing member of the Breastfeeding Support Program. We have asked Candi to provide some useful information from her research on toxic chemicals, please read below:

All plastics seem to get a bad wrap (pun intended). In actuality, they all have very different characteristics. Most people are fearful of plastics due to the chemicals they leach. These chemicals can enter our bodies by leaching into the foods we eat or come in contact with. We cannot see these chemicals, so, how is one to know which plastics leach chemicals and should be avoided and which plastics are not known to leach chemicals?

One thing we can see is a recycling arrow. Did you know that the number (#1-7) in the recycling arrow refers to the type of plastic resin that the material is made of? These numbers are useful for recyclers, but we as consumers should take note of them also. Number 2, #4 and #5 are thought of as the safest; #1 is moderately safe; and #3, #6 and #7 should be avoided.

How and why are some chemicals considered safe and others not?

The most difficult concept/consideration is that the amount of chemical needed to cause a harmful effect in a human is largely unknown. Scientists can speculate from

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Support Group Topics

The Breastfeeding Support Group is looking for new topics of interest for our breastfeeding mothers in the workplace.

While our classes have grown in number and focus on both campuses, attendance at our monthly support groups over the past few years has been decreasing. Relevant solutions enabling new mothers comes from the knowledge and experience of mothers that have developed the expertise of managing work and breastfeeding. New knowledge, attitudes, and skills are reinforced through participation in mother-to-mother support groups. The wisdom and expertise from an experienced working mom is important and helps everyone.

To keep you engaged, we are asking if there are topics you would like to see discussed at the support groups. If you have a topic of interest that you would like to hear about or to share, please email sagerman@ucdavis.edu .

Night Milk?

Several compounds in milk appear to have a soporific effect. And perhaps the most intriguing thing about them is that their levels alter with the time of day that the milk is produced. This research comes from Danielle Lemay, PhD, one of our Research Faculty with the UC Davis Genome Center.

Danielle's research program studies the genes responsible for making milk--those that are expressed in the mammary gland during pregnancy and lactation--and how these gene products work together to produce this marvelous fluid. Danielle is also the Executive Editor of SPLASH!, the monthly newsletter for the '*International Milk Genomics Consortium*.' SPLASH! is a public publication providing news and insights into the past, present and future of milk science.

The February 2016 issue of SPLASH! has two articles addressing the possible soporific effect of night milk , "Medicating the Elderly with Night Milk", and, "Breast Milk, the Synchronizer."

Human Milk Drive—Creating the Momentum!

Submitted by: Debbie Albert, PhD, BSN, IBCLC

For several years now, the Sacramento Breastfeeding Coalition has been conducting an annual Human Milk Drive. This project has become bigger and better every year and 2016 will be no exception because this year we are hoping to expand the event to Yolo and Placer County. Although we don't have a date yet, it will probably be in early December, and UC Davis will be housing the Yolo county event in their Covell PCN office at 2660 W Covell Blvd # A, Davis.

The San Jose Milk bank helps all of the NICUs provide much needed donor milk to our most vulnerable infants. UC Davis NICU benefits from their donations, and so do many other NICUs throughout California. Mother's own milk is considered primary, but there are cases where mothers cannot produce the amount needed. This is a very valuable service, and there are times where donations are low. UC Davis wants to be a part of the solution, so here is how you can help, particularly if you can spare some extra milk.

First, please contact the San Jose Milk Bank at 877.375.6645 or sign up online to be a donor at www.mothersmilk.org. They send all the materials necessary for you to qualify as a donor, and they will provide you with a donor number.

Second, if you don't want to wait until December, there are ways that you can donate immediately. The Milk Bank will pay for you to ship directly to them, or if you prefer to take care of sign up, lab work and donation all in one spot you can contact Midtown Lactation Consultants. They are located at 4250 H Street, Suite 2 , Sacramento, CA 95819. You can call them at 916.936.2229.

Finally, please keep an eye out for future newsletters. As soon as we know what day the Milk Drive will take place, we will be announcing the date. Please let us know if you would like to participate or volunteer by emailing Shirley German at sagerman@ucdavis.edu.

Breastmilk is an amazing gift, and we cannot do it without those moms who have a little freezer stash! Thank you for your help in advance.

animal data, but unfortunately we as humans are exposed to a large cocktail of chemicals daily and with varying amounts. Nonetheless, from animal studies, scientists do know that the harmful chemicals found leaching from plastics are often those known as "endocrine disruptors" or "carcinogens". Endocrine disruptors are chemicals that interfere with the endocrine system disrupting natural hormone levels, that in turn produce adverse reproductive, developmental, neurological, and immunological effects (NIEHS Endocrine Disruptors, 2008). Carcinogens are chemicals that are likely to cause cancer. What scientists have been able to do is to identify the chemicals that are leaching from the plastic and are able to measure them in humans. The best advice is to avoid these chemicals when you can, since you are probably exposed at times when you do not know it or when it is unavoidable.

Why should we avoid plastics #3, 6, 7 and sometimes 1?

- **Plastic #3** is PVC or polyvinyl chloride, which sometimes contains phthalates, an endocrine disruptor, and give off vinyl chloride gasses, which cause cancer.
- **Plastic #6** is polystyrene (often referred to as Stryofoam). Styrene is able to leach and is a probable carcinogen (NIEHS Report on Carcinogens, 2014)
- **Plastic #7** is considered the "other" category as it often refers to composite materials or mixtures of different types of plastic resins. These resins include the polycarbonates and often contain bisphenol-A (BPA), which leaches from the product and is an endocrine disruptor. Another common "#7 Other " plastic is polyactic acid (PLA). While it avoids using BPA, in tests examining endrocrine activity, it raises concerns. Either the substitution of BPA for its analog BPS or another plasticizer still possesses endocrine disrupting properties.
- **Plastic #1** is polyethylene terephthalate The reason it is advised to use moderately is that it leaches a toxic metalloid antimony, the rate of which increases with temperature. These plastics are often the single-use bottles and when use as intended (i.e., not subjected to higher temperatures with hot beverages and not used repeatedly) the amount of antimony that enters the liquid is well below EPA's regulatory limit.

Why are plastics #2, 4 and 5 considered safe?

Plastic #2 is high density polyethylene, **Plastic #4** is low density polyethylene, and **Plastic #5** is polypropylene.

In actuality, they are considered 'relatively safer' or 'fairly safe'. In the eyes of science, nothing is ever truly safe. Very few studies examine all of the types of plastics -- and with different proprietary formulations from so many companies, it would be impossible to test them all. The prevailing notion is that these plastics are thought to have a lower risk of leaching harmful chemicals.

'BPA-free' does not imply the product is safe

BPA is a chemical with big name recognition. BPA is not used in all types of plastics which is somewhat of a mis-labeling by advertisers. Advertisers who advertise as 'BPA-free', either have replaced it with another chemical potentially worse or had never used BPA to begin with. BPA is used to make polycarbonate (recall those #7s?), but not used with polyethylenes (#4s). For instance, breastmilk pump bags are labeled as BPA-free (and some even mention BPS-free), but they are often plastic #4 and have not used BPA in the original formulation. So, even if #4 plastics are not labeled BPA-free, it does not contain BPA. Conversely, be weary of a plastic #7 that reads BPA-free, because it may contain a replacement chemical that is just as toxic.

Where is BPA a concern?

BPA is used in some baby bottles labeled #7, so these should be avoided. There are plenty of baby bottles that are made of polypropylene (#4), so just check for the recycling triangle. Alternatively, use glass baby bottles with silicone sleeves so they have less of a chance to break, or use a stainless steel bottle, which might dent, but otherwise are child-safe - both from their clumsiness and their chemical exposure. BPA can be used in the epoxy resins that line some metal-based cans so another recommendation is to use glass jars instead of canned foods. BPA is also found in thermally-printed receipts, such as those from gas station and grocery stores. Minimize your handling of these and wash your hands after handling them.

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KNOW YOUR PLASTICS. SAFE OR HARMFUL?

CODE 1: PET OR PETE (POLYETHYLENE TEREPHTHALATE)

You'll most commonly see this in the thin, clear plastic of bottled water (or bottled cooking oil, peanut butter, soda, etc.). It appears safe for single use, but these bottles should not be reused, refilled, or heated.

[√] RECYCLABLE / AVOID

CODE 2: HDPE (HIGH-DENSITY POLYETHYLENE)

This is the thicker, milkier or opaque plastic found in milk and water jugs, juice bottles, detergent, shampoo, and motor oil containers, and toys. Unlike #1, these are safe to refill and reuse, even though they may not look as snazzy as #1 or #7.

[√] RECYCLABLE

CODE 3: PVC (POLYVINYL CHLORIDE)

Found in bibs, mattress covers, shower curtains, cling wrap, and other food and detergent containers. The manufacture of PVC releases dioxin, a potent carcinogen, into the environment. It may also contain hormone-disrupting phthalates.

[X] NOT RECYCLABLE / AVOID

CODE 4: LDPE (LOW-DENSITY POLYETHYLENE)

Found in soft, flexible plastics such as those used in grocery story bags, plastic wrap, dry cleaning bags, squeezable bottles, and garbage bags.

[√] RECYCLABLE

CODE 5: PP (POLYPROPYLENE)

Found in hard but flexible plastics, such as those used for ice cream and yogurt containers, drinking straws, syrup bottles, salad bar containers, and diapers.

[√] RECYCLABLE

CODE 6: PS (POLYSTYRENE)

Found in rigid plastics such as opaque plastic spoons and forks, and in Styrofoam, found in coffee cups and meat trays. These plastics can leach styrene, a known neurotoxin with negative health effects.

[X] NOT RECYCLABLE / AVOID

CODE 7: OTHER (INCLUDING POLYCARBONATE, NYLON, & ACRYLIC)*

This category includes polycarbonate (a source of the endocrine disruptor BPA) and found in most baby bottles, 5-gallon water bottles, sports bottles, clear plastic cutlery, and in food and formula can linings.

** Code 7 Plastics can also include some of the newer, compostable green plastics Avoid unless labeled as bio-based.*

[X] SOMETIMES RECYCLABLE / AVOID

Healthy Child HEALTHY WORLD*

HEALTHYCHILD.ORG

Final words of advice

If you must use plastics (and cannot find a glass, stainless steel, wood, or cloth alternative) use this handy guide to inform you about the types of plastic you can use.

If those plastics don't have a number? Avoid using them for food storage and avoid giving them to kids who might mouth them.

Lastly, refer to my website, Toxin Free for Me, for further information and links to safer alternatives to common products.

Candace Bever
Department of Entomology and Nematology & BFSP member