BREASTFEEDING: Good for mom. Good for baby. Good for planet?
By Ginger Carney, RD, LDN, IBCLC, RLC, Kathleen Pellechia, RD, and Alyssa Rider

Abstract
A decade ago green was just a color; now green is a trend, a movement, a lifestyle choice. We can choose to go green with the cars we drive, the type of bag we use at the grocery store, the appliances we use in our homes, and even with the foods we purchase. As nutrition professionals, we know that breastfeeding is a healthy choice for mom and baby, but what role does it play in keeping the planet healthy? In this article, we will review information on breastfeeding and the environment as part of our continued efforts to monitor trends that can play a role in how we promote breastfeeding to new moms.

The Impact of Infant Formula Production
The impact of producing infant formula on the environment is tremendous. From the raw ingredients to the shiny, well-branded can you find on the supermarket’s shelves, infant formula like many industrially produced products undergoes a transformation whose impact on the environment is not yet fully understood, and at this point mostly ignored.

The full trajectory - from raising cows for milk, to the industrial processing plant, to the packaging center and transportation network, to the baby’s bottle and finally to the garbage heap is an intricate one that ultimately wastes valuable resources and negatively impacts our environment.

It has been estimated that approximately 10,000 square meters of land is required for every cow used in the production of milk to be used in infant formula (4). This sizeable requirement of land is required for every cow used in the production of milk to be used in infant formula (4). This sizeable requirement of land that might otherwise have been used in a wider variety of food production. Deforestation has long been recognized to contribute to poorer soil quality and nutrient depletion in addition to erosion. Cattle themselves also contribute to environmental problems polluting our water systems through the runoff of soil, pesticides and fertilizers (used to grow feed for the animals) and manure. According to John Robbins, author of Diet for a New America, agricultural pollutants contribute to the contamination of half of all wells and surface streams in the US (16). The effect of these pollutants in our runoff and groundwater go on to have serious and detrimental effects on numerous other ecosystems dependent on our rivers and groundwater supplies.

From processing to transportation, the formula industry releases substantial amounts of carbon emissions and other chemicals into the air and soil. Formula is distributed across the world by all modes of transportation- trains, planes, trucks, and ships. According to the Natural Resources Defense Council (NRDC), “food miles” are the distance food travels from where it is grown to where it is ultimately purchased or consumed. The food miles Americans typically log are between 1,500 and 3,000 miles (1). In 2006 alone, the U.S. transportation industry logged 432.9 billion miles to deliver products such as infant formula (2). Furthermore, every year the transportation industry consumes 53.9 billion gallons of fuel for business purposes. Importing food by airplane results in far greater emission of greenhouse gases; in 2005, the import of fruits, nuts, and vegetables into California alone released over 70,000 tons of carbon dioxide: equivalent to more than 12,000 cars on the road (1). Production materials used to manufacture formula, like paper, plastic, rubber, tin, among other materials, are almost always tossed in landfills, wasting their potential for reusability. For every 3 million bottle-fed babies, 70,000 tons of metal are discarded from cans that are not recycled (3). Furthermore, the 550 million cans of formula sold annually to bottle-fed U.S. babies stacked end to end would circle the earth 1.5 times, leaving 86,000 tons of metal and 1,230 tons of paper labels (4).

Landfills are becoming increasingly scarce, as we tend to live in a disposable society. According to the Environmental Protection Agency, the average American produces about 4.4 pounds of garbage a day, totaling 1,600 pounds a year per person (5). These numbers only take into consideration the average household member and do not include industrial waste or commercial trash. With statistics like that, do we really want to add the wastes that come with infant formula? Plastic feeding bottles, nipples, and pacifiers will not only take up valuable space, but will also take approximately 200 to 450 years to break down (3). In addition, it’s important to remember that many of the containers and bottles used to feed infants are not recycled, further increasing the amount of waste dumped into our landfills.

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As I move from Chair-elect to the acting Chair I find myself both excited and a bit overwhelmed. I have been a member to the Women’s Health DPG for many years and an avid reader of both this newsletter and the listserv. That has made me well aware of how smart and talented this group is, and I hope I can serve you well during my term! I want to assure you this DPG is in great hands with the current Executive Committee—a group of dedicated dietitians from around the country who are invested in serving you.

For my first newsletter contribution it seemed appropriate to review the goals of this DPG and fill you in on a few of the strategies your Executive Committee is working on to meet them.

1. **Build an aligned, engaged and diverse membership.**
   We are in the midst of conducting a member survey. Please take a few minutes to go to the Women’s Health website (http://www.womenshealthdpg.org/) and let us know how the DPG can best meet your needs and expectations. The results of the survey will be reviewed at our meeting prior to FNCE and we hope to have lots of feedback from you to discuss. Your input will guide and direct strategic planning for the next two years. We will be present at the Member Showcase and will also be holding a fantastic networking event at FNCE with two other DPGs: Nutrition Education for the Public and Medical Nutrition Practice Group. I hope to meet many of you there!

2. **Proactively focus on emerging areas of women’s health nutrition across the lifespan.**
   This newsletter is one means by which we meet this goal. In addition, you as members will likely be asked throughout the year to review papers and provide feedback to ADA on various issues. Let us know if you would like to contribute!

3. **Ensure women’s health issues are part of public policy and legislative agendas.**
   The current environment is rich with opportunities to influence policy and legislation. Expect to hear from Jeanne Blankenship (past chair of this DPG!) in her new role as Vice President of Policy Initiatives and Advocacy at ADA’s Headquarters in Washington, D.C. In addition your Public Policy Chair will be attending the ADA Public Policy Workshop in the spring.

   I would like to thank you for this opportunity to serve and I encourage you to be an active member of Women’s Health DPG. Each individual contribution makes the group even stronger. So, join the list serve if you haven’t already. Make it a habit to check out the Women’s Health website regularly. Contact me at whdpgchair@gmail.com!

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**from the chair  Stephanie Bess, MS, RD, LDN, CLC**

**from the editor  Olivia Eisner, MPH, RD, IBCLC**

Welcome to the Women’s Health Dietetic Practice Group! For those that have been long time supporters, we welcome you back. And to those who are discovering the Women’s Health DPG for the first time we hope that you will take full advantage of the many educational offerings, resources and opportunities that are available.

This edition of the Women’s Health Report is dedicated to all things Green! In addition to being a topic near and dear to my own heart, we hope it provides a reminder of how our work as dietitians is so vitally linked to the larger health of our planet. In the past couple of months, this vital (and vulnerable) connection has been all too well publicized through the gulf-oil spill and its effects on our fish and animal populations to the recent recall of salmonella-ridden eggs and even more recent recall of powdered baby formula due to beetle and larvae contamination.

In honor of World Breastfeeding Month, Ginger Carney RD, LDN, IBCLC, RLC, FILC with the help of Kathleen Pellechia, RD and a student volunteer, Alyssa Rider bring us a look at the impact of formula feeding on the environment. Amy Marlow, MPH, RD, CDN co-author of Happy Baby: The Organic Guide to Baby’s First 24 Months delves into the world of kitchen plastics and gets to the bottom of the BPA debate. Our new Research Coordinator, Jo Carol Chezem brings resources right to your fingertips with research on a variety of environmental pollutants and the subsequent health effects on individuals. And, as a reminder to do your part for the environment, Kathleen Pellechia, RD details how we can be greener in the workplace.

As always, please share your thoughts and comments about the content of this publication by emailing me at whdpgpublications@gmail.com.
Breastfeeding: Lowering Costs

On average, households with new babies use 25% more electricity and 13% more natural gas (6) than those without. While it is unclear if such households feed babies with infant formula or breast milk, we know it takes energy from a microwave or stove to warm and sanitize bottles. Breast milk, on the other hand, is always at the perfect temperature and ready to go. When purchasing formula, you are, in part, paying for the energy cost to run the formula manufacturing plant—lights, heat, and water. Lights, heat, water, and other additional sources of energy are used to keep the plant in operation. Breast milk is a natural, renewable resource that is ecologically sound.

Another selling point: Not only is breastfeeding good for baby, mom, and the planet, breastfeeding is also good for the bottom line. According to a 2001 report by the USDA, Economic Research Service, “a minimum of $3.6 billion would be saved if breastfeeding were increased from current levels (64 percent in hospital, 29 percent at 6 months) to those recommended by the U.S. Surgeon General (75 and 50 percent). Most likely, this figure underestimates the total savings, as it considers savings for treatment cost of only three childhood illnesses: otitis media, gastroenteritis, and necrotizing enterocolitis” (7). A 1996 study by Tuttle and Dewey looked at the effect of increased breastfeeding rates among Hmong women on select social services programs. The authors estimated that “compared with formula feeding, breastfeeding each infant enrolled in WIC (Special Supplemental Nutrition Program for Women, Infants and Children) saved $478 in WIC costs and Medicaid expenditures (1993 dollars) during the first 6 months of an infant’s life, or $161 after consideration of the formula manufacturers’ rebate.” (7) Although the data is not current and further research in these areas is needed, the bottom line still rings true: there are significant direct and indirect savings in breastfeeding from both organizational and individual perspectives.

Breastfeeding: Protecting against Environmental Contaminants

Bisphenol A (BPA) is an industrial chemical used to make polycarbonate plastic and epoxy resins, both used in a wide variety of products including infant formula, plastic bottles, and metallic cans (8). In recent years, human exposure to chemical released from plastic bottles has been a serious concern, yet little is said about the harmful effect it may have on the environment. Studies have been completed to determine what happens to BPA in the environment (also known as “environmental fate”) and the possible impacts (“environmental assessment”) (9). As a result of BPA usage in manufacturing plants, low levels may be released to the environment in the effluent water from biological wastewater treatment plants. It is further noted that roughly 50% of BPA in the environment has the potential to bind to sediments or soils with the rest remaining in water, such as streams and rivers. On the contrary, some recent comprehensive reviews of BPA studies conclude that current manufacturing and use patterns of BPA pose virtually no risk to the environment. More research is still needed, although there is enough evidence to show, at minimum, an association between BPA in infant formula (and materials used in infant formula) and environmental concerns.

BPA as well as other chemicals have at times been labeled “endocrine disruptors.” (10). An endocrine disruptor is a man-made
SPOTLIGHT ON RESEARCH By Jo Carol Chezem

Sustainability! It’s become a buzzword in recent years, used by groups as diverse as global transportation companies and local environmental activist groups to describe the use of natural resources without depletion and/or damage. With the oil spill in the Gulf of Mexico still fresh in the memories of many, this installment of Spotlight on Research focuses on the risks of environmental contaminants in fish and seafood to women and their children.

The health benefits of omega-3-fatty acids, especially docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) that are found naturally in fish and seafood, are well-described. A number of recent review articles highlight the potential role of these essential fatty acids in preventing and/or treating a number of chronic conditions.


Omega-3 fatty acids are also critical for the neurological development of the human fetus and infant. The review articles below highlight the role of these polyunsaturated long chain fatty acids in the areas of visual and cognitive development.


While the benefits of omega-3 fatty acids are clearly documented, there is some concern regarding the ingestion of fish and seafood as dietary sources of these key nutrients. The United States Environmental Protection Agency (EPA) serves as a resource for both the public and health professionals regarding the potential contamination of fish and seafood (1). It provides federal and state-specific fish advisories that address major contaminants, including methylmercury and polychlorinated biphenyls (PCBs).

Methylmercury is a neurotoxin that originates as mercury from industrial waste disposal, moving through the environment to water (2). There, mercury is transformed to methylmercury, which accumulates in fish, especially those highest in the food chain, i.e. swordfish and king mackerel. Because methylmercury is most damaging to developing neural tissues, the EPA, in coordination with the United States Food and Drug Administration, released a consumer advisory in 2004 to reduce methylmercury exposure in young children and in women who were pregnant, might become pregnant or breastfeeding. The articles below offer up-to-date information on the relationships among methylmercury, fish consumption and neurotoxicity.


The term polychlorinated biphenyls (PCBs) encompasses a group of organic chemicals originally used in several industrial applications and found in products such as electrical equipment, paint, and insulation (3). Although the production and use of PCBs have been banned in the United States since 1979, these slowly-degraded compounds may be present in the water supply, potentially accumulating in fish, due to contamination from past production and use and from current mismanagement of hazardous waste sites. In humans, PCBs are associated with negative health consequences, ranging from cancer to impaired reproductive function and neurological damage (3). Below are articles that focus on the effects of maternal PCB exposure on infant and child outcomes.


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KITCHEN PLASTICS
By Amy Marlow, MPH, RD, CDN

Plastics are ubiquitous, found in every room of the home, and in almost every facet of modern life. In the kitchen we and our food may come in contact with many different types of plastics each day. Some toxicology and environmental health experts find this concerning, as certain chemical ingredients found in plastic do migrate into food. The question, however, is whether or not this exposure is dangerous. In the case of a particular ingredient in plastic, bisphenol-A (BPA) the debate is particularly heated these days. This article will discuss the current state of the science and government action regarding BPA exposure and risk to human health.

BPA: Plastic chemical of concern
Few plastic components have made headlines more than BPA. BPA is widely used in the production of plastics. In 2003, worldwide production of BPA exceeded 6 billion pounds (1). It is found in polycarbonate plastics labeled with a #7 (see Table 1).

<table>
<thead>
<tr>
<th>Resin Code</th>
<th>Plastic type</th>
<th>Examples</th>
</tr>
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<tbody>
<tr>
<td>1 – PET</td>
<td>Polyethylene Terephthalate</td>
<td>Water bottles, soda bottles</td>
</tr>
<tr>
<td>2 – HDPE</td>
<td>High Density Polyethylene</td>
<td>Yogurt cups, plastic milk jugs</td>
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<tr>
<td>3 – PVC</td>
<td>Polyvinyl Chloride</td>
<td>Commercial cling wrap</td>
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<tr>
<td>4 – LDPE</td>
<td>Low Density Polyethylene</td>
<td>Plastic wrap, food storage containers</td>
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<tr>
<td>5 – PP</td>
<td>Polypropylene</td>
<td>Food storage containers, dishware</td>
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<tr>
<td>6 – PS</td>
<td>Polystyrene (aka Styrofoam)</td>
<td>Food storage containers, disposable cups</td>
</tr>
<tr>
<td>7 – Other</td>
<td>Includes polycarbonate plastics</td>
<td>Baby bottles, food processor bowls</td>
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The addition of BPA to these products makes the clear plastic durable. BPA is also used to make epoxy resins for lining cans, protecting the can from corrosion and the food or beverage within from contamination.

Evidence of exposure to BPA
It is believed that our primary exposure to BPA is from our diets – it can migrate into food or beverages from food containers when at high temperatures and at certain pH levels. In 2008, Centers for Disease Control (CDC) researchers found that 92.6% of the 2,517 subjects (NHANES 2003-2004) tested had detectable levels of BPA in their urine. The women in the study had higher levels than men, and children aged 6 to 11 (the youngest in the sample) had the highest levels of all the age groups, followed by adolescents. Scientists concluded that given the relatively short half-life of BPA, almost all Americans are continuously and consistently exposed to the chemical (2).

Other studies have sought to determine whether BPA migrates from plastic packaging into food and beverages in dangerous amounts. This June, Health Canada completed a survey of canned goods and found the levels were very low and concluded the levels were not high enough to cause concern for human health (3). However this year the National Workgroup for Safe Markets, an organization made up of public health and environmental health groups, studied 50 different canned goods, including vegetables, soups, and beverages and came to a different conclusion. They found an average of 77ppb of BPA in the food and beverage samples from those cans. Among those with the highest levels were canned vegetables and soups, including one Del Monte green bean sample which contained 1,140 ppb of BPA. Canned tomatoes and soda samples contained the lowest levels of BPA. According to the researchers, if a pregnant woman were to consume several of the tested canned goods in one day, the amount of BPA that would be consumed would theoretically be enough to endanger an unborn child (based on findings of animal exposure studies)(4). The Environmental Protection Agency has set the Lowest Observed Adverse Effect Level (LOAEL) at 1000ppm in diet, or 50mcg/kg/day (5).

Given the CDC’s findings indicating widespread exposure to BPA, many in the scientific community are concerned about potential risks associated with exposure to the chemical, though there is no consensus yet. Studying the effect of BPA exposure on humans is difficult, limited by ethical constraints and sometimes even limited by the sensitivity of available testing methods.

Not surprisingly perhaps, the plastics industry maintains that BPA is safe in the quantities that are found in our food supply. The American Chemistry Council, the primary group of the plastics industry, cites studies showing that humans convert BPA into metabolites and eliminate them, with little bioaccumulation (6). However, a 2006 scientific review by Welshons et al. indicates that this claim may tell only part of the story. They showed that although it may seem that adults have the capacity to deactivate BPA with certain liver enzymes; it also indicates that infants, toddlers, and pregnant women have a limited ability to do so, leading to more bioaccumulation in these vulnerable groups. This review also found evidence of endocrine disruption in animals after low-dose exposure to BPA (7).

In 2008, the US government weighed in on the debate, with a much-anticipated National Toxicology Program (NTP) report on the health dangers of BPA. The conclusion: the current human exposure to BPA raises “some concern for effects on the brain, behavior, and prostate gland in fetuses, infants, and children.” The researchers indicated they had “minimal concern” for other endocrine effects including early puberty and breast effects, and “negligible concern” that exposure to BPA during pregnancy would result in birth defects or other reproductive concerns (8).

The NTP’s conclusions were met with skepticism from some in the environmental science community. There were allegations that too much of the research was sponsored by the plastics industry. To this point, an extensive 2005 literature review showed that 128 out of 159 BPA studies not funded by the plastics industry found adverse health effects after exposure to the chemical, whereas the 12 industry-funded studies found no effect (9).

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The same 2005 review found that of the 115 studies that had been done on in vivo low-dose exposure, 94 showed significant health effects, and of those, 31 studies found ill effects at lower exposure than the accepted safe daily dose of 50 mcg/kg/day. Observed health effects included prostate enlargement in mice exposed as fetuses, early onset of puberty in female lab animals, a decrease in sperm production and fertility in male mice, and behavioral effects including hyperactivity in lab animals. Many of these effects followed exposure to BPA in early development (gestation and/or lactation). Interestingly, 11 studies showed adverse health effects at low doses but not at high doses (an “inverted-U dose-response” curve) so the authors of the review suggested that older toxicological studies that had been done using very high doses may not be relevant. They urged a new risk assessment for setting “safe” levels of exposure to BPA.

While most BPA research focuses on endocrine disruption as a result of exposure, this year Melzer et al studied more than 1,400 people aged 18 to 74 and found a correlation between BPA exposure and a higher rate of heart disease, diabetes and liver disease (10). In the two years since the NTP published their 2008 report, research has continued to show endocrine disruption and brain effects due to BPA exposure. For example, Hugh Taylor, a researcher at Yale, has been studying the way BPA exposure in utero changes the way DNA functions with respect to estrogen receptors, increasing susceptibility to estrogen for the rest of the baby’s life and theoretically increasing the risk of estrogen-sensitive cancers (11). A 2008 study by Pallanza and colleagues looked at “low environmentally relevant” levels of BPA exposure in mice and found that in utero exposure led to behavior and brain changes in the offspring (12).

**Government Action Regarding BPA**

As the science surrounding BPA is forever evolving so is the regulatory landscape. The Food & Drug Administration has said it will take another look at BPA and make new recommendations. In the meantime, BPA is considered to be GRAS, generally recognized as safe, and therefore permitted to be used in the production of food containers and packaging.

Perhaps due to the continued controversy over BPA and the lack of a widely accepted conclusion on this matter, the National Institute of Environmental Health Sciences, the institute that houses the NTP, recently committed $30 million for BPA research starting this year. Meanwhile, the European Food Safety Authority of the European Union is completing their review of the literature and hopes to have something to share with the public this year.

Though the US Federal Government has not taken a stance against BPA, local and state governments began responding to public concern over the safety of BPA in spring of 2009 when Suffolk County in New York was the first government to ban the sale of sippy cups and baby bottles made with BPA. To date, five states (Minnesota, Washington, Maryland, Wisconsin, and Connecticut) have banned BPA in baby bottles and more legislation is pending. Health Canada has also instituted a ban on BPA in baby bottles.

Luckily for consumers, industry took action even without federal policies, perhaps anticipating more widespread regulation soon. Very quickly after the local and state bans began, baby bottle manufacturers began removing BPA from their products and retailers like Babies “R” Us and Target took baby products containing BPA off their shelves. Water bottle manufacturers Nalgene and Sigg have created BPA-free lines. Eden Foods removed BPA from their line of canned beans cans. Other companies like Nestle, and its well-known subdivision, Gerber, have committed to removing BPA from the lining of formula cans over the next few years.

**What to do about BPA**

Given the growing body of evidence suggesting risks associated with BPA exposure it is prudent for pregnant and breastfeeding women, infants, toddlers, and young children to avoid BPA. Practical ways to avoid BPA include:

- Breastfeed until at least 12 months; if formula-feeding, choose powdered infant formula instead of ready-to-feed canned formula.
- Choose BPA-free baby bottles and sippy cups.
- Do not heat food or beverages in plastic, particularly clear hard #7 polycarbonate plastic.
- Reduce your intake of canned food; choose BPA-free cans when ever available.
- Consider switching to glass for food storage purposes.

**References**

chemical that once absorbed into the body either mimics or inhibits hormones and disrupts the body’s normal functions. Endocrine disruptors are often the result of industrial pollutants or pharmaceutical runoff in the water supply. Research in this area is needed however an article written by Theo Colborn for Environmental Health Perspective in 2004 provides insight and discussion for the etiology of neurodevelopmental disorders (11) as it relates to the role of chemical contaminants. The author discusses the possibility that contaminants contribute to the increasing prevalence of attention deficit hyperactivity disorder, autism, and associated neurodevelopmental and behavioral problems seen in developed countries. Research has even shown human utero exposure to contaminants can interfere with the thyroid. The good news is that breastfeeding may reverse some of the damage caused by chemical exposures in the womb (12). Compared to bottle fed babies, breastfed babies have lower rates of asthma, diabetes, and some childhood cancers (12). Breastfeeding also reduces the risk and severity of communicable diseases such as pneumonia, diarrhea, and ear infections. Moreover, women who breastfeed have lower levels of ovarian and breast cancer and breastfed daughters also tend to have lower rates of breast cancer. A review published by Annual Review of Nutrition in 2004 focused on experimental studies of the effect of soy-based infant formula on estrogen activity and immune function. Researchers concluded more clinical and epidemiological study is still needed to determine long-term safety to the endocrine or immune systems (13).

In light of concerns about potential environmental pollutants absorbed by mother, breastfeeding still offers advantages that outweigh the risk of ingesting possible contaminants. According to La Leche League International, “the benefits of breastfeeding may prove to be essential to compensate for and outweigh the risks of toxic effects from the environment. The focus of scientific concern should be directed toward removing such chemicals from our environment, not casting doubts about the only unprocessed source of perfect nutrition for infants – human milk (14).” Those who are concerned with contaminants must consider the environment in which infant formula is made. Many other contaminants have been found in formulas, including high levels of hormones, aluminum and lead, bacterial contamination, and even glass particles (15).

Conclusion
Breastfeeding, along with other forms of sustainability, is a good practice for health, economic, and environmental concerns. We have explored the broad reasoning behind why breastfeeding is green, yet more evidence-based research is needed to further highlight breastfeeding and its green effect.

In this article, we have explored the link between breastfeeding and a reduced carbon footprint and economic burden. As health professionals, it is now within our scope to further explore this relationship within our own communities and client bases. Opportunities exist to form partnerships with green-friendly businesses and organizations so that the decision-making and programs provide new moms with the information they need to have a healthy family and promote a healthy planet.

References:

It is time to take a leadership role and enjoy the professional growth and networking in Women’s Health!!

The WH Dietetic Practice Group Nominating Committee is pleased to announce three positions open for the 2011-2012 ballot. They are:

Chair-elect
(1-year term, then becomes Chair of the WH Dietetic Practice Group)

Treasurer
(2-year term)

Nominating Committee
(Candidate receiving the most votes becomes Chair-Elect of the Nominating Committee, 1-year term, then becomes Chair of the Nominating Committee for 1 year. Candidate receiving the 2nd most votes becomes the Awards Chair with a 2-year term)

You must be a current WH member. Please submit your name if interested in speaking with a member of the Nominating Committee and learning more about these positions and responsibilities. You can nominate another stellar Women’s Health DPG member as well!

Please send inquiries or nominations by October 18th to Gail Frank, Chair, Nominating Committee at gcfrank@csulb.edu . We will contact you and discuss the positions.

Nominating Committee
Dr. Gail C. Frank, RD, CHES, Chair
Dawn Ballosingh, MPA, RD, LDN, Member
Angela Grassi, MS, RD, LDN, Member
Did you know that using power management features on your computer can reduce carbon dioxide emissions and save money? The U.S. Environmental Protection Agency estimates that computers with sleep or standby mode can reduce energy usage by 60 to 70 percent. This could save enough electricity each year to power Vermont, New Hampshire, and Maine! The average computer uses 60-250 watts of energy when it is in use or has a screen saver turned on; energy use drops to only 1-6 watts when it is in sleep or standby mode. Eliminate screen savers altogether by activating your computer’s “sleep” feature after 30 minutes of inactivity. This small step can reduce energy use and make your home or office a little greener!

In 2008, the Climate Group and the Global e-Sustainability Initiative issued SMART 2020: enabling the low carbon economy in the information age. The study found that:

- PC ownership will quadruple between 2007 and 2020 to 4 billion devices. Emissions will double over the same period, with laptops overtaking desktops as the main source of global information technology and communications industry emissions (22%).

- Mobile phone ownership will double to nearly 5 billion accounts by 2020, but emissions will only grow by 4%. Broadband uptake will increase to almost 900 million accounts over the same period.

That rapid explosion of technology usage will result in increased energy expenditure unless steps are taken to incorporate environmentally-friendly practices. From an operational standpoint, energy-saving measures including examining building structures, such as data centers, and purchasing energy efficient equipment can help ensure that our computer and network infrastructure run as efficiently as possible. However, each of us can do our part by practicing these green computing tips:

1. Unplug all electronic devices when you are not using them, including printers, cell phone chargers, and laptops. Adapters plugged into outlets use energy even if they are not charging. By doing this you can save energy and keep your devices working longer.

2. Print only when necessary. Add a message to your email signature asking readers to print only if needed. Use recycled paper and ink and print double sided.

3. Save time and money by holding a Web conference. Free tools for online meetings include DimDim, Adobe Connect Now, Yugma and Vyew.

4. Buy Energy Star products. If your computer is supported by Energy Star, a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy, it will use 70 percent less electricity than a computer without power management features. Consider leasing equipment as leased computers are often made from recycled parts and have less packaging. Donate or recycle old equipment.

5. Consider buying an all-in-one fax machine/photocopier/printer/scanner.

6. Use a laptop instead of a desktop. A laptop uses on average 15-45 watts compared to 60-250 watts for a desktop.

The Internet and Cloud Computing: The Big Picture
Increasingly, rather than storing data files on personal devices, we rely more and more on the internet, or “the cloud”, for information storage and retrieval. We access data, entertainment, news and other products and services in real time through Google, Facebook, YouTube, or any of the other hundreds of Web-based tools available from computers and mobile devices. These technologies, for both small and large businesses alike, can be time saving and resource-friendly; however, there are energy costs associated. Whether self-employed or part of a bigger organization, it is important that we calculate our energy burden or carbon footprint. Go to http://www1.eere.energy.gov/calculators/ to calculate yours and research ways to reduce energy, and do more with less.

Sources:
Green Computing Guide – University of Colorado Environmental Center http://ecenter.colorado.edu/energy/projects/green_computing.html
Climate Savers Computing - http://www.climatesaverscomputing.org/3-steps-to-go-green/

Speaking of Green….
Serious about doing your part for the environment? Did you know you can opt out of receiving the print version of JADA by contacting Karen Noldan at knoldan@eatright.org.

For those who enjoy their print copies… the ADA Journal utilizes earth-friendly paper policies, including recycling not only paper, but where possible inks, emulsifiers, and office equipment (i.e. monitors, fluorescent bulbs) at Elsevier’s US and overseas offices. For more information on how Elsevier strives to be an environmental steward, check out their “green” policies and philosophies in detail at www.elsevier.com!
MEMBER SPOTLIGHT  By Stefanie Casillas

Jamillah Hoy-Rosas, MPH, RD, CDE, CDN

In this newsletter we’d like to spotlight and honor active member and former Women’s Health DPG Chair, Jamillah Hoy-Rosas.

How did you get into dietetics? I was always interested in nutrition and the ways in which certain foods and eating habits could harm or heal the body. While an undergrad at the University of Pennsylvania, I noticed a couple of nutrition courses being offered and I took them. My interest in nutrition grew from there as I was intrigued by the opportunities for research and the focus on disease prevention and health promotion. I went to NYU to complete the pre-requisites to obtain my RD and pursue my Master of Public Health in Nutrition at the same time. I am currently a doctoral candidate in Clinical Nutrition at NYU.

What was your first job and where have you worked? After I graduated with my MPH and completed my internship, I began working full-time as a Nutrition Associate with the “Wellness at Work” program in the Bureau of Chronic Disease with the New York City Department of Health and Mental Hygiene. After that, I took some time off to care for my first child, Olivia, born in 2004.

What made you become more involved in women’s health? I started working at Betances Health Center, first as its outpatient nutritionist doing individual and group nutrition counseling, then as the Coordinator of the Women, Infants & Children (WIC) Program. It was wonderful to teach pregnant women and new mothers about the importance of breastfeeding and how to manage breastfeeding concerns. At the time, I was a new mother myself and I was grateful to WIC for the extensive education they provided to me as a professional about breastfeeding because it helped me find a balance as a working mother and encouraged me to breastfeed longer. During that time, I also became involved with the Women’s Health DPG so it was professionally satisfying to be involved with women’s health on so many levels.

What do you enjoy most about being an RD? As nutrition experts, RDs have such an important role to contribute to the health of the general public. As an African-American RD, I feel especially moved to work with and within African-American communities to help address the diet-related health concerns of diabetes, obesity and hypertension that disproportionately affect them. This is the focus of my doctoral research.

What has been a highlight of your career? So far, being elected Chair of the Women’s Health DPG has been a major highlight. I started in this DPG as a student recruited by Alyce Thomas, who encouraged me to get involved and stay involved. She and so many of the leaders from this DPG continue to be mentors and an inspiration to me. I started out on the Membership Committee, acted as Treasurer and then Chair of the WHDPG and now I am back to working on the Membership Committee. The DPG has given me so much (the opportunity to enhance my knowledge of women’s health, leadership skills, networking, mentoring opportunities), and I want to give back and help support it as it grows. I truly feel that in a profession of mostly women, every one of us should be a member of the Women’s Health DPG, for our own health.

What resources do you find most helpful/useful in your daily work? The internet is the most useful because I can find online resources to help calculate and analyze BMI, calorie and nutrient needs, menu plans, and really anything we need to do as RDs. I love the online ADA nutrition manual and the evidence analysis library. I read a lot of research articles as well, so I spend a lot of time in PubMed and Google scholar.

Anything else you’d like to add? I just want to encourage people to do research in women’s health. One of the things that made me fall in love with nutrition was how much there is to learn in this young field. More of us need to get advanced degrees. The ADA has many resources for those pursuing PhDs, including scholarships. I have been fortunate enough to be awarded a doctoral scholarship from the ADA recently that will help me to finish my studies in a timely manner.
SPOTLIGHT ON RESEARCH  Continued from page 4


Although not considered by the EPA as a primary contaminant, polycyclic aromatic hydrocarbons (PAHs), which originate not only from degrading crude oil also as a by-product of incomplete burning of gas, coal and other carbon-containing materials, may also be present fish and seafood (6). Although there is little research to date describing the risk of PAHs from contaminated fish and seafood specifically, there is evidence that some PAHs are likely carcinogens and may be associated with impaired reproduction (6).


The full text of the article is available for free at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2367680/pdf/ehp0116-000658.pdf.


Fish and seafood offer natural sources of omega-3 fatty acids. However, through acute and chronic pollution of oceans and fresh water, environmental contaminants may accumulate in these food products. The research cited above suggests some of these contaminants, notably methylmercury, polychlorinated biphenyls, and polycyclic aromatic hydrocarbon, have the potential to negatively influence human growth and development during both the prenatal and postnatal periods. As a result, women in their reproductive years should consider both the benefits of omega-3 fatty acids and the risks of contaminants from fish and seafood consumption.

References:
Dear Readers:

It is with great pleasure that I present a letter to the editor written by one of our WH members and the subsequent response from Kathy Kendall, MS, RD, LD, whose piece entitled Food Sensitivities and The LEAP Diet ran in our Winter 2010 edition. One of the goals of our publications team has been to more actively engage our readers. We are delighted to be able to showcase this dialog, and the various viewpoints of our diverse group of members and practitioners.

Hello,

I read with interest the article by Katherine Kendall and Rebecca Bitzer entitled “Food Sensitivities and the LEAP Diet: in the Winter 2010 edition of Women’s Health Report. The two clinical reports in the article supporting the use of Mediator Release Testing (MRT) and elimination diet therapy are poster papers presented at ADA (2009) and ACG (2004) annual meetings. I could find no other reference through PubMed regarding MRT and no supporting research at the Signet website. I did find, however, that MRT is listed in Quackwatch (www.quackwatch.org) under “Allergies: Dubious Diagnosis and Treatment.” While there may be some scientific basis for the use of MRT, I am concerned that there doesn’t seem to be good evidence available to support its use for diagnosis of food intolerance or allergy.

If there are any well controlled trials in progress regarding MRT and associated diet therapies, I would like to find out more about them.

Sincerely,
Susan Hooy, RD, CSP

Dear Susan,

Thank you for your excellent questions. You raise a number of issues which are commonly raised about the MRT testing and the LEAP Diet.

As a Registered Dietitian with a research background I am much more comfortable recommending to my clients practices which are research-based and drawn upon many controlled studies. So I, too, look forward to the time when a large-scale study will be published using MRT and LEAP.

My own personal struggle with IBS led me to try out the MRT testing as a last resort. I had tried various treatments and assumed the cause was “stress” and so just lived with the symptoms of IBS for years. As I was researching help for a particular client on a dietitian listserv, I came across the mention of the MRT test and LEAP diet. On the advice of other dietitians who were using it with good results, I decided to give it a try and was surprised to find, that after following the LEAP diet based on my MRT test, I found the much desired relief from my symptoms. I am not overstating it to say that I largely regained control over my health and as a result my life became much more manageable.

This, however, is not all that convinces me of the use of the MRT testing. After working in a private practice with 6 RDs over the past three years I have had the opportunity to see actual results of the MRT/LEAP approach for 42 clients. Of those 42, the majority received considerable relief from symptoms. Several of my clients had dramatic results and were able to come off of medications they had been taking for years. Only 4 clients, for whom problems were of a complex nature and did not fall into the category of IBS-D, migraine, or fibromyalgia had little relief from symptoms.

I encourage all RDs with an interest in the treatment of IBS-D, migraine and fibromyalgia to try the MRT/LEAP diet for their patients and to seek publication of the results they get. For those of you working in research settings, I challenge you to use your influence to steer research dollars towards MRT/LEAP diet for their patients and to seek publication of the results they get. For those of you who did not fall into the category of IBS-D, migraine, or fibromyalgia had little relief from symptoms.

If symptoms may well abate using this approach while at the same time posing no risks, I see no reason not to recommend it to a client and, in fact, feel that it is ethically my responsibility to inform clients of the possible benefits of such an approach, particularly when traditional medical approaches have failed.

References:

In another study, MRT was able to differentiate between two populations—one symptomatic and the other asymptomatic for “allergic disorders”. Each group consisted of 40 University of Miami football players. In the symptomatic group, the percent of positive results (out of 1000 total allergens tested) was 7.2. For the asymptomatic group, the same measure was 1.6 (2).

Quackwatch’s listing of MRT testing under “Allergies: Dubious Diagnosis and Treatment” has attracted the attention of many LEAP RDs as well. MRT testing claims to detect foods which may trigger a delayed food hypersensitivity (type 3 or 4) not a type 1 food allergy. As you read through the detail of what is said in the Quackwatch listing about food allergy, the text is clearly addressing type 1 food allergies. So the Quack Watch listing of MRT as a dubious type 1 food allergy test is correct. However, MRT never claims to be a test for type 1 food allergy.

Also, it may be of interest to note that Quackwatch also lists Dietitians in Complementary Care (Currently renamed as Dietitians in Functional Medicine), a practice group of the American Dietetic Association as a questionable group of health practitioners.

The Hippocratic Oath exhorts us to “Above all, do no harm”. With the LEAP diet we are offering a client a pathway to improved health through a patient-specific elimination diet consisting of about 25 foods from most, if not all, food groups—a diet which is nutritionally balanced and healthy. If symptoms may well abate using this approach while at the same time posing no risks, I see no reason not to recommend it to a client and, in fact, feel that it is ethically my responsibility to inform clients of the possible benefits of such an approach, particularly when traditional medical approaches have failed.

Thank you for your excellent questions. You raise a number of issues which are commonly raised about the MRT testing and the LEAP Diet: in the Winter 2010 edition of Women’s Health Report. The two clinical reports in the article supporting the use of Mediator Release Testing (MRT) and elimination diet therapy are poster papers presented at ADA (2009) and ACG (2004) annual meetings. I could find no other reference through PubMed regarding MRT and no supporting research at the Signet website. I did find, however, that MRT is listed in Quackwatch (www.quackwatch.org) under “Allergies: Dubious Diagnosis and Treatment.” While there may be some scientific basis for the use of MRT, I am concerned that there doesn’t seem to be good evidence available to support its use for diagnosis of food intolerance or allergy.

If there are any well controlled trials in progress regarding MRT and associated diet therapies, I would like to find out more about them.
GOALS OF THE WH PRACTICE GROUP

WH DPG promotes the development of dietetics professionals in the specialty area of nutritional care in women's health which includes preconception through pregnancy and lactation and expanded to late menopause.

The objectives of the Women’s Health DPG are:

1. Build an aligned, engaged and diverse membership.
2. Proactively focus on emerging areas of women's health.
3. Impact the research agenda in women's health and nutrition.
4. Identify and influence key food, nutrition and health initiatives specific to women.
5. Increase demand, utilization and reimbursement of services provided by WH members.

"WH members are the most valued source of nutrition expertise in women's health"