BARIATRIC SURGERY: Implications for Women’s Health

By Jeanne Blankenship, MS RD  Bariatric Surgery Nutrition Coordinator, University of California, Davis Medical Center

The field of surgery may be a male-dominated profession, but from a patient standpoint, bariatric surgery is a woman’s world. Unlike other areas of medicine in which research has been conducted primarily in men, bariatric surgery is dominated by research on the effectiveness in women. More than 170,000 bariatric surgical procedures were performed in the US in 2005 according to the American Society for Bariatric Surgery (ASBS). The fact that more than 85% of these procedures are performed on women is an important consideration when reviewing the literature. Sans procedures that can only be performed in women, this bias in the literature is truly unprecedented for women. The reasons for the disparity in gender representation in the operating room likely include societal issues with regard to weight, but also may be reflective of gender differences in surgical risk. In the surgical arena, those who are male, have higher BMI’s and are older are more likely to suffer from perioperative complications (1). No matter why more women choose surgical weight loss than men do, the fact is that women are defining the professional and practical considerations of bariatric surgery. The health changes and considerations that result from bariatric surgery are significant for women and will be reviewed in this article including bone health, endocrine and fertility issues, cardiovascular risk, hypertension and disordered eating.

Bone Health

The process by which bones are repaired and maintained in the human body is complex and variable. Bariatric surgery procedures may impact bone health as a result of decreased intake of vital nutrients or absorption of nutrients may be impaired. The relative risk of bone demineralization is related to the client’s overall bone status and risk level independent of bariatric surgery. Therefore, during nutrition assessment it is important to identify those individuals who have increased risk of osteoporosis and other related disorders. Women with histories of glucocorticoid use to treat co-morbid conditions such as asthma, long-term use of anti-seizure medication, smoking and those who have histories of fractures are at increased risk for bone loss. Surgical weight loss procedures can further increase this risk. While obesity has been traditionally considered to be protective against bone disease, recent studies have found that obese restrained eaters are likely to be at risk for low bone mass (2). Many women who present for bariatric surgery have histories of chronic dieting and weight regain and may already have signs of osteoporosis or osteopenia.

After surgery, weight loss and changes in absorption may collectively increase a woman’s risk of osteoporosis. Decreased intake of dietary sources of calcium may occur with restrictive procedures. In addition, since calcium is preferentially absorbed in the duodenum and proximal jejunum, areas that are bypassed or partially bypassed after bariatric surgery, absorption of calcium may also be impaired (3).

Levels of calcium and vitamin D supplementation that are required to prevent bone loss in post-menopausal women have not been established. In addition, nutrients such as magnesium, zinc and copper have important roles in bone health, but have not been addressed in the literature for surgical weight loss. Follow up at 8 years and 20 years post bilio-pancreatic diversion found that the incidence of fracture rate approximated that of the general population (4). Identification of patients with elevated risk and subsequent monitoring for changes in bone mass is recommended for women who undergo surgical weight loss procedures.

Endocrine and Fertility Issues

Surprisingly, little research has been conducted on the impact of bariatric surgery on Polycystic Ovarian Syndrome (PCOS). It is unclear whether surgeons fail to identify this co-morbid condition or are not trained to monitor and evaluate resolution. Conventional and medical weight loss data have shown that minor weight loss of 5-7% can positively influence infertility attributable to PCOS. Most women who undergo bariatric surgery lose approximately 10% of their body weight within the first month of surgery. Presumably many women who have experienced infertility prior to bariatric surgery are able to become pregnant although determining the extent to which PCOS is resolved is challenging. In addition to the fertility, the resolution of PCOS and relationship to subsequent cardiovascular risk after surgical weight loss is an important research consideration that has yet to receive attention in the surgical community. Most efforts to restore fertility in women who suffer from PCOS have focused on macronutrient manipulation of diet (low carbohydrate or low-glycemic index diets) and conventional weight loss methods.

Unlike PCOS, the resolution of type 2 diabetes after surgical weight loss is well documented and has been deemed the “poster child” for successful outcomes (5). Diabetes related-outcome data

Continued on page 3
from the chair  Cathy Fagen, MA, RD

Over the years I have seen many changes in my job and professional career. Sometimes it seems like things are cyclic and repeating. But if we look at these cycles as an upward spiral we will notice that we are not like a dog simply chasing our tails. We are making progress!

I write this column as Thanksgiving is approaching, realizing it will not get into your hands until January. This time of year we get into the spirit of giving thanks, giving gifts and also reflecting on New Year’s resolutions. I recently heard a term that relates to this perfectly. Have you heard of “Gift Culture?” I was fascinated with this concept and surfed the net for more information. Apparently there is a book soon to be released on this philosophy. This is what I found:

"You are the Ultimate Gift. You are your greatest contribution. You are all of this because you are change. The greatest thing you can do for yourself and the world is to become your true nature – your best. Becoming a gift is not an act of gaining something you do not already have. To become great you must let go of toxic ideas, outmoded beliefs, false judgments and all unprofitable ways of being. When we rid ourselves of wrong methods we naturally and without force take on better ones…. By changing yourself you can help in creating a beautiful shift in human consciousness – you become the ultimate gift." [http://giftculture.org] Accessed 11/20/2007.

When we focus on improving ourselves, we stop obsessing over things that give us turmoil. All other attempts at changing undesired situations or conditions are simply band-aids to a deeper problem. We must go to the center for lasting change. I will vow as your Chair to start making changes by centering on myself. And I would like to relay this “Gift Culture” to each of our DPG members. It is the individuals together that make up the whole. "Cultivating a "Gift Culture" where each of us becomes our gift, is the only way to change for good." We can lead by example.

Thank you to Susan DuPraw, our ADA Practice Manager and each of our past DPG leaders and member volunteers who have led our group by example. And thank you to all of you reading this column, for without you there would be no change and no growth. Together we have made great strides! I am so proud to be a part of the group. For a copy of the WH DPG strategic plan please go to our new website: [www.womenshealthdpg.org](http://www.womenshealthdpg.org)

Happy New Year to All!

from the editor  Krista Neal, MS, RD, LD

I’d like to apologize for the delay in getting this issue published. Sometimes life and work get in the way of other responsibilities. This fall and winter I have had the fortune of not only being in the middle of my third pregnancy, but also in the middle of major professional changes. Fortunately, we have a great Publications team who pulled together this issue when things got too busy for me. I am the one who gets to write this column, but the rest of the Publications team are the real heroes. Our Communications Chair is Miri Rotkovitz who helps coordinate the newsletter, listserv and our monthly Publications Committee conference calls. The Assistant Editor is Olivia Bletsos who is the epitome of a great assistant. I hope one day you all get to work with someone as talented as Olivia. The Perinatal Section Editor is Joanne Volpe who never turns down a requested task. Joanne helps us to find great authors for articles related to maternal nutrition. Karen Peters is the Lactation Section Editor. I have decided Karen not only knows everyone, but also knows everything about breastfeeding. Karen coordinates the finding of our lactation case studies. Heather Baden does a great job reviewing books and websites for us. Allison Starr interviews members for the Member Spotlight, even with a new baby. In addition, the rest of the Publications team, Cathy Fagen, Jamillah Hoy-Rosas, Jeanne Blankenship and Susan DuPraw review everything submitted for the newsletter. How they do it with the rest of their responsibilities I’ll never know. Last, but by no means least is Steve Bonnel, our layout contractor. Steve is responsible for the fabulous new look of the newsletter. He also is wonderfully helpful when the rest of us need help with the process of publishing. You’ll notice we don’t have a Women’s Health Section Editor. If you’re interested, let Cathy or Miri know. We would love for you to join the team! I am so lucky to be involved with this practice group. I get so much more out of my ADA membership by being involved and I get to work with some amazing people.

We’re on the web!  [www.womenshealthdpg.org](http://www.womenshealthdpg.org)
for patients included in a meta-analysis report demonstrated that 76.8% (n=1846) had complete resolution and over 86 percent (n=485) had either resolved or improved disease status (6). Schauer et al have found similar resolution rates in diabetes, but have also depicted those less likely to experience improvement of resolution. Factors that decrease the likelihood of improvement or resolution include the use of insulin, longer history of diabetes diagnosis and poor overall weight loss (7). A history of gestational diabetes has been linked to subsequent development of type 2 diabetes in women, but this progression has yet to be evaluated independently in the surgical literature.

**Cardiovascular Risk**

Heart disease remains the number one cause of death for US adult women (8). Obesity and hyperlipidemia are independent risk factors for developing cardiovascular disease. A recent study (n = 95, 72% women) found that total cholesterol levels, triglycerides, low-density lipoproteins (LDL) and very low-density lipoprotein (VLDL) levels improved in significantly at one year post-surgery in subjects with hyperlipidemia. Notably, 82% of patients who required a lipid-lowering medication were able to discontinue use (9). The influence of bariatric surgery on hyperlipidemia was included in the recent meta-analysis of bariatric surgery. Over 70% of those with hyperlipidemia showed improved lipid parameters. Not surprisingly, bili-pancreatic diversion (BPD) and duodenal switch (DS) subjects led to higher degrees of improvement than did other types of procedures. Although high-density lipoprotein levels in all populations did not increase significantly, there were significant increases for those with gastric band procedures and those with gastoplasty (6).

**Hypertension**

Weight loss has been shown to improve hypertension throughout the literature. Compared to other co-morbid conditions, hypertension improvement and resolution following surgical weight loss has been less impressive. Long term follow-up studies including the Swedish Obesity Study have suggested that perhaps the early changes in blood pressure are transient and likely to regress over time, particularly between the second and third year out from surgery (10). In Buchwald's systematic review and meta-analysis, comparison of all procedure types found that nearly 62% of hypertension was resolved following surgical weight loss with almost 79% of subjects having improvement or resolution (6). Some experts have suggested that this review, however, is limited by the fact that follow-up inclusion studies were a mere two years from surgery. Fernstorm et al examined the long-term changes in blood pressure after bariatric surgery and the specific effect in women. They found that age (>50 years) and time (> 6mo out from surgery) were associated with higher systolic blood pressures. Similar to other published studies, the status of subjects with regard to blood pressure prior to surgery and the requirement of hypertensive medications influenced post-surgical resolution or improvement (11).

**Disordered Eating**

Experts have estimated that between 16% and 30% of overweight individuals who enroll in weight reduction programs meet the diagnosing criteria for binge eating disorder (BED). In one study of gastric bypass surgery candidates, up to 49% of candidates were classified as having BED (12). Those who suffer from BED eat more calories than non-BED subjects and consume a greater percentage of their overall energy from fat and less from protein food sources in controlled settings. In addition, they are more likely to eat between the hours of 12 am and 8 am than non-BED subjects are. Notably, food consumption is not correlated with hunger or satiety ratings in those who suffer from BED.

Whether BED is an indication or contraindication for surgical weight loss procedures remains controversial. At four months post-op, Kalarchian reported no significant differences in weight loss between those who met the criteria for BED and those who did not (13). In a separate study, at 12 months BED subjects actually lost more weight than non-BED subjects leading many to believe that the procedure could be effective in this population (14). BED is characterized in non-surgical patients by consumption of large volumes of food --- a trait that is not possible in the early post-operative phase of gastric bypass. Some experts have, therefore, suggested that rather than focusing on the quantity of food consumed, clinical assessment should include an evaluation of subjective loss of control. Six months after surgery, grazing can become a common pattern in high-risk subjects (15) and could signal subjective loss of control. While this may not effect weight loss outcomes at 12 to 18 months significantly, it could be that more observation is required. Hsu found that pre-surgical eating disturbances predicted post-surgical eating patterns two or more years after surgery making assessment worthy of consideration in long-term follow up (16). While the initial tendency is to jump to the conclusion that BED is a contraindication for surgery, the significance of weight regain with regard to comorbid conditions remains unknown. In addition, limited information exists about how disordered eating progresses in post-surgical patients or about the natural course of the BED if left untreated by surgery methods. Screening for BED and other eating disturbances should be routine in the pre-surgical evaluation and adjunct psychotherapy and behavioral modification may be required pre-operatively, post-operatively or both.

**Other Considerations for Women**

Twenty years ago, the thought of introducing racial bias into research was taboo. Now, advances in the human genome and the introduction of nutritional genomics have opened the door for possibilities than all women are, in fact, not created equal. Early studies suggested that cardiovascular and hypertensive risk were genetically different for various racial groups. Indeed, there are also ethnic differences in obesity and surgical weight loss that have yet to be fully explored. Buffington and Marema have broken new ground with research pointing toward increased adiposity in African-American females versus those who are Caucasian. They found that obesity is more severe in African American females and that this could not be attributed to energy intake, dietary macronutrient composition, parity or psychological status. In their study, the increased adiposity of African-American women was associated ultimately with less weight loss possibly due to inherent differences in fat metabolism (17). Designing programs with a "One size fits all" approach may not best meet the needs of individuals who come...
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from different ethnical backgrounds. As dietitians strive to improve overall weight loss goals, attention to these differences will become increasingly important.

Conclusion

Bariatric surgery remains the most effective medical treatment for morbidly obese women. Co-morbid conditions which can be life-threatening and debilitating are often resolved or reversed following surgical weight loss. While there is extensive data on outcomes in many areas, those specific to women such as PCOS, fertility, menopause and bone health remain understudied. Surgeons are in the driver’s seat in the operating room. Eventually they will listen to the women they serve as these women ask more questions, demand more answers, and who continually as a group, steer the direction of both patient care and research in bariatric surgery.

References

5. Pories, WJ, Swanson MS, MacDonald KG, et al. Who would have thought it? An operation proves to be the most effective therapy for adult onset diabetes mellitus. Ann Surg 1995;222:335-152.  

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send an email to:

WHRN_list-subscribe@yahoogroups.com
-ualized to a patient's specific needs; women receive little or no advice about physical activity, and when they do, that advice is generally vague and largely limited to being told to "walk"; and many of these women felt that professional advice lacks credibility. Her recommendations for the future: we need more studies that combine diet and physical activity – especially targeted to obese women; we need to take into consideration stages of change, tailored messaging, social cues and the environment in our counseling efforts; and we need more interdisciplinary intervention studies that focus on the preconception and interconception periods.

Kathleen Rasmussen, ScD, RD, a Professor at Cornell University, gave the second lecture entitled, "Maternal Obesity and Weight Gain during Pregnancy: Associations with Success of Breastfeeding and Postpartum Weight Retention."

From a public health perspective, maternal obesity causes problems for the women, their care providers, and their children. Compared to normal-weight women, obese women have more difficulty becoming pregnant, planning and carrying out their pregnancies. Recently, Nelson and Fleming (2007) recommended that "women with a BMI in excess of 35 should lose weight prior to conception – not prior to receiving infertility treatment."

Maternal obesity also impairs breastfeeding success. In her studies, women who were overweight had 2.5-fold higher odds of ceasing breastfeeding by the time of hospital discharge when compared to women of normal body weight; this was 3.65-fold higher for obese women. Interestingly, this association is reproducible among white and Hispanic women, but not in Black women in the US and white women in Denmark. Possible reasons for poor breastfeeding outcome are hormonal changes due to higher body mass index. Her research group demonstrated that heavier women have a reduced prolactin response to sucking at 2 and 7 days postpartum (Rasmussen et al., 2004). They calculated, "that there was a 0.5-h delay in the onset of lactogenesis for each 1-unit increase in prepregnancy BMI." Within the range of prepregnancy BMI values in our sample, this translates to a 10-h difference, something we consider clinically significant in the face of a hungry baby and a frustrated mom!

Also, breastfeeding success exhibits a dose response relationship. That is, with each successive category of obesity, the odds of breastfeeding cessation at 24-weeks postpartum increase concomitantly.

Next, Dr. Rasmussen discussed the role of breastfeeding in postpartum weight retention. In American women, breastfeeding has low to no benefit on postpartum weight loss because of low intensity and short duration of breastfeeding. She and her colleagues analyzed data from the Danish National Birth Cohort. Longer duration of breastfeeding (>16 weeks) is associated with a reduction of ~ 2 kg in postpartum weight retention among Danish women (Baker et al., 2007).

Because gestational weight gain puts the woman at increased risk for postpartum weight retention and early termination of breastfeeding, this is an important target for intervention. To date, the success rate of interventions to lower gestational weight gain is poor. It is clear that additional approaches are needed to help women gain a healthy amount of weight during gestation. More trials are going on in the field now.

There are several possible areas for intervention (Table 2). Precisely what should be done for obese women is the focus of Dr. Rasmussen's current research (Rasmussen, 2006). Other areas that need to be addressed include establishing breastfeeding as the norm, providing community-level support for prenatal and breastfeeding mothers, and ensuring workplaces are friendlier environments for nursing mothers in particular and families in general. The data for postpartum weight reduction are also scanty. However, studies investigating how to achieve optimal postpartum weight loss are in the field. Stay tuned!

<table>
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<th>Table 2 Possible Points of Intervention</th>
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<td><strong>Intervention Points</strong></td>
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<tr>
<td>- Obtain a normal weight before conception</td>
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<td>- Moderate weight gain during pregnancy</td>
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<tr>
<td>- Support optimal breastfeeding</td>
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<tr>
<td>- Reduce postpartum weight retention</td>
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<tr>
<td>- Educate families about appropriate feeding for infants and young children</td>
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References:

1. Please email Dr. Siega-Riz (am_siegariz@unc.edu) for questions or references.
2. Please email Dr. Rasmussen (kmr5@cornell.edu) for questions or references.


Kathleen Rasmussen, ScD, RD has identified that women who are obese do not breastfeed as long as women who are not obese. One reason could be the delay in their milk increasing in volume. Hilson (2004) showed a delay of 0.5 hours for each 1-unit of pre-pregnancy body mass index over normal. In the systematic review conducted by Szajewska (2006) there was a reduction in duration of breastfeeding if a baby was supplemented in the early days. If there is a delay in the milk increasing in volume, the baby might need to be supplemented early during the first week (Neifert 1999). Dewey (2003) and Chapman (1999) found 22% to 31% of women had a delay beyond three days in an increase in their milk.

The delay coupled with supplementation could be one reason for breastfeeding to be abandoned by obese women. In addition, the challenges encountered by obese women surely play a role. I interviewed three breastfeeding, obese women to find out about their experiences. Their challenges fell into four major categories: feeding position, large brassieres, public breastfeeding, and pumping.

**Positions for feedings**

"Finding a comfortable position for my baby and myself was hard because of the physical limitations of my body. I have no lap. The Boppy TM does not fit. My Breast Friend TM nursing pillow worked better than the Boppy TM. Actually my bed pillows worked the best."

"Breastfeeding was scary. I worried about suffocating the baby. In the early weeks, I needed someone to help me (mother, husband) because I could not see if the baby could breathe. Maybe a mirror would help. I needed to have a finger by his nose to be sure he could breathe. I always had to hold the breast, so the baby would not get smothered."

One woman described her alarm when her daughter’s arm was caught between the breast and the roll of fat. It was an eye-opener to me to hear the obese women describe these real fears. They stressed the need for women to be creative to find a hold that works for them. When working with breastfeeding women, I have found in four cases that the weight of the breast on the baby’s chest was deterring the baby from latching. Once the woman lifted the heavy breast off her baby’s chest, the baby latched.

One woman said she found it easier to nurse in an armless chair. As a hospital lactation consultant, I positioned the chair next to the bed and lowered the bed to the level of the arm of the chair, then placed the baby on the bed and supported the baby on his side with a rolled up receiving blanket behind his back. The woman could rest her breast on the bed and use her two hands to hold the end of her breast into her baby’s mouth. On home visits I have helped the woman in a side-lying position so the bed is supporting the baby’s body as well as her breast. One woman told me she would sit at her dinning room table to breastfeed. She positioned the baby on his side, then placed her breast on the table and had her two hands free to hold the end of her breast.

One of the women I interviewed described her early latching experience. "In the early postpartum after my Cesarean-birth, I sat on my bed with my legs crossed, put the baby in front of me on a pillow on his back, and I held my breast out for him."

"People suggested rolling a towel and placing it under my breast, but the towel did not stay in place. The wedge made by Udderly Yours TM Breast Pillow (www.udderlyyours.com) worked for me." Another woman stated, "I used a triangle toy under my breast. It fit well between my breast and my roll of fat and would hold my breast up."

One woman said she could not use the football hold position. Another woman said the football hold was the only position she could use. "The football- hold position worked well. When my baby’s legs no longer fit comfortably behind me due to the chair’s back, I put a pillow behind me to bring myself forward so there was more room for his feet. Then as he grew even bigger, I used a body pillow folded in half to rest the baby on beside me with his feet going over the arm rest of the sofa or the glider." When she was shopping she took a body pillow with her and nursed in the back seat of her car.

**Finding a brassiere that is the correct size**

"Affordable brassieres for large women do not exist," one woman pronounced. "I used 2 extenders." She found a solution, but not a correctly fitted bra. Large bras are hard to find and even harder is finding ones you can try on. Mail order seems to be the only way to get them. Large sizes are expensive. Even the large-sized bras do not fit well. The padded shoulder strap does not reach to the shoulder for some women. A corsetiere who makes brassieres might be another option, which is an expensive proposition. Having three well-fitting, nursing brassieres even though they are expensive would be ideal.

**Public breastfeeding**

"There is a prejudice against overweight women. I felt guilt and shame for anything that happened, feeling it was my fault for being overweight" (surgical birth, hypertension, delay in milk).

"It took a long time to feel comfortable enough with myself to be able to breastfeed in public. I finally decided that breastfeeding was best for my baby, so ‘tough,’ if they have a problem seeing my fat rolls."

"I had to expose more of my body than a thin woman to be able to breastfeed." One woman cut the bra part out of her body girdle, and that way the spandex covered her roll of fat. Another woman wore an extra large tank top under her shirt so her body was covered. A friend who breastfed twins bought tightly fitting T-shirts in colors to match her outfits and cut holes in the T-shirts where her nipples were, thus covering her midriff while breastfeeding both children. Today there are several products on the market to provide a midriff cover for women’s bodies while they breastfeed.

**Pumping**

"The standard pump flanges were not big enough. I needed a large flange tunnel that was not available in the store where I bought..."
I had the pleasure of presenting at this year’s Maternal Nutrition Intensive Course at the University of Minnesota, School of Public Health from July 25-27, 2007. This continuing education program focuses on delivering nutrition education to support the goal of improving maternal and infant health outcomes. It is targeted to health professionals of various disciplines who work with pregnant and breastfeeding women and their children. This year, the program was offered for the first time in conjunction with the Maternal Child Health Summer Institute on Addressing Health Disparities, Connecting Communications and Health. Presenters included Women’s Health DPG members Alyce Thomas, RD, CDN who is a Past Chair, Brenda Dobson, MS, RD who is a past coordinator, and Jamie Stang, PhD, MPH, RD who was the Course Co-Director. Information on next year’s program which will take place from July 30-August 1, 2008 can be found at http://cpheo.sph.umn.edu/cphee/events/mnic/home.html. Below is a general summary of selected presentations.

RESEARCH UPDATES

Health Disparities
Day one of the conference was a shared program day with content addressing health disparities. The keynote speaker was Gail Christopher, DN who is the newly appointed Vice President for Health Programs at the W. K. Kellogg Foundation. Dr. Christopher discussed the work that she and colleagues have done on eliminating health disparities and addressing the social determinants of health such as education, economics, environmental and behavior factors. This theme was further addressed in a video showing of an upcoming PBS documentary entitled, Unnatural Causes: Health Disparities in America. This documentary highlights the impact that social conditions such as employment, housing, environment and education have on health outcomes. It promotes the belief that activities that promote social justice and equality in these areas will produce a greater long-term impact on health than interventions that solely address lifestyle change. Further information on this documentary can be found at http://unnaturalcauses.org/

Effects of Prenatal Methamphetamine on the Developing Child by Lynne Smith, MD
Methamphetamine, aka “Meth” or “ice” is a highly addictive psycho-stimulant. Estimates on worldwide use are over thirty million people, more than the combined use of opiates and cocaine. Meth comes in multiple forms and can be smoked or injected for a brief, intense rush or ingested or snorted for long lasting highs. It is used illegally as a recreational drug, primarily in the South and Midwest in the United States, and it is easy to obtain and produce. Users experience increased attention, a sense of euphoria, bolstered confidence and self-esteem, increased libido and appetite suppressant effects during initial use. For chronic users, effects range from impulsivity, distractibility, poor attention and depression to violent behavior. Because of its appetite suppressant effects, it is one of the only illicit drugs that is used as often by women as men, and whose rate of use does not decrease in pregnant women. Research using PET scans on Meth-using adults show a loss of brain cells related to the cumulative effect of the drug. This leads to impaired judgment as mothers undergo frequent drug binges and crashes, leaving children unsupervised and subject to chaotic and often violent home environments. Previous research on amphetamine use during pregnancy suggests that it is associated with ADHD, learning disabilities, aggression and school failure in children. There is an ongoing NIH-funded trial called the IDEAL (Infant Development, Environment and Lifestyle Study) trial which is researching the developmental outcomes for infants exposed to amphetamines and other substances in utero. Findings from this study will add much needed information to the scientific literature about the short-term and long-term effects of these drugs on infants. If you would like more information on the study, please visit http://www.nida.nih.gov/DirReports/DirRep p506/DirectorReport3.html.

PRACTICAL APPLICATIONS

Nutrition Issues of Pregnant Teens by Jamie Stang, PhD, MPH, RD
The presenter offered tips for counseling pregnant adolescents about dietary change. The need for these recommendations was illustrated by a video showing a focus group of pregnant teenagers discussing their nutrition habits and the influence of health professionals on their dietary choices. One of the tips mentioned was to recognize that adolescents remain immature in their cognitive development until their 20s, even when dealing with mature concepts and consequences such as sexuality and pregnancy. In addition, the stressful nature of these events can cause an emotional regression in some younger adolescents. Working with these vulnerable youth successfully requires that they are engaged by offering role models that they can identify with and trust. Desired behaviors should be directly related to expected pregnancy outcome to facilitate understanding and promote compliance. Lastly, health professionals interacting with pregnant adolescents should work together to give clear, consistent advice that the teens can understand and follow.

Improving How We Teach Nutrition Using Stages of Change and Critical Thinking Skills by Brenda Dobson, MS, RD, LD
As part of a grant from USDA/FNS to improve nutrition education delivered in the WIC Program, educators from the Iowa WIC Program & Iowa State University developed 42 nutrition education modules focused on increasing the quantity and variety of vegetable intake in children 2-5. The “Veggie Grant” modules use the stages of change construct from the transtheoretical model (see below) to screen client’s readiness to change.

Identifying Stages of Change

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<th>Stage of Change</th>
<th>Verbal Cues</th>
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<tr>
<td>Precontemplation</td>
<td>“I didn’t know about the problem”</td>
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<td>Ready to Change</td>
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<tr>
<td>Contemplation</td>
<td>“I know about it but I am not sure what to do”</td>
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<td>Sure about change</td>
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<tr>
<td>Preparation</td>
<td>“I know and I would like to do something about it”</td>
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<td>Ready for change</td>
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<td>Maintenance</td>
<td>“I am continuing to work on this”</td>
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The goal is to use tailored interventions to help clients adopt new behaviors. Tools from the project help practitioners identify and offer solutions to barriers for behavior change. For example, strategies for those not ready to change (precontemplation) suggest: identify benefits and make them relevant to clients in a way that is accessible to them, be available to make recommendations, answer questions and address feelings of doubt or
In light of our focus on obesity for this issue, we bring you an interview with a new addition to the Women’s Health DPG – author Eileen Behan. Her newest book *Eat Well, Lose Weight While Breastfeeding: The Complete Nutrition Book for Nursing Mothers,* now revised and updated to include the latest in nutrition and dietary concerns, provides mothers with expert advice on losing weight and eating well while nursing a happy and healthy baby.

**Eileen Behan**

*Where have you worked? What was your first job?*

My first job after becoming a registered dietitian was with the Veterans Administration Out patient Clinic in Boston, MA from 1978 to 1986. But my interest in Breastfeeding and maternal nutrition came from my training. I completed a thirteen month traineeship at the Boston Lying in Hospital now merged to become the Brigham and Women's Hospital. It was here that I became very interested in nutrition and breastfeeding. When I had my own children I was surprised to hear misinformation about nutrition while breastfeeding which is why I wrote my breastfeeding book. Now I am working 20 hours a week as a consultant to Core Physician Services in Exeter, NH. I work with both children and adults on general nutrition issues. The rest of the time I write or work on projects related to my work.

*What articles/books have you written?*

I have written seven books on nutrition and I am working on number eight which is a baby food book due out next year and to be published by Random House. I am particularly proud of *Eat Well Lose Weight While breastfeeding* and *Therapeutic Nutrition*, a guide to patient education is a manual with over 140 patient education handouts designed for non nutrition health professionals but dietitians seem to really like it too.

*What are your favorite tools and resources on women's health?*

Each month I read/scan the ADA journal including the abstracts in the back. When I find a topic I want to know more about I go to Pub Med and search the subject to find the original source.

*How have things changed since you started practicing? For example, how has your life as a dietitian and professional woman evolved through the years?*

I have to say that I believe my work is more valued today than ever before. We now have years of accumulated research on which to make evidence-based recommendations. That was not the case when I first started in 1978. Combine this science with the fact that we now have over 45,000 food items to choose from in the supermarket and an obesity epidemic and it’s accompanying co-morbidities that don’t seem to be slowing. Put all this together and it makes me feel like I (and all dietitians) really have something to contribute.

*What do you consider a highlight of your career?*

When I started as a freelance writer and had a cover story on the front page of the health section of the Washington Post I was pretty thrilled. Having two special features in Newsweek and appearing on the Today Show were both highlights too.
Another year of FNCE ends on an upbeat note. For those of you who do not get involved in a DPG; you are missing a world of wonderful people. As the years go by I find I meet lots of new acquaintances and treasure the friendships that are developing and deepen each year. It is work and commitment to volunteer your time to a group but when passion is involved emotions can move mountains. When you add in a large source of intellect and creativity the results are phenomenal.

It is amazing what a group can accomplish in a few short days. The weekend started early Saturday morning with the Executive committee meeting. The Board was joined in the afternoon by the Coordinators. Many subjects were discussed and plans for the new name roll out are in the works.

Sunday was a busy day for Women’s Health members. It began with a very well attended education session, Reproductive Obesity: Effects on Maternal and Child Outcomes. The speakers, Kathleen M. Rasmussen, ScD, RD, Professor at Cornell University and Ana Maria Siega-Riz, PhD, MS, RD, Associate Professor of Epidemiology at the University of North Carolina School of Public Health did a sensational job at outlining the numerous implications of the current obesity epidemic on women’s health outcomes from the preconception to postpartum periods.

The Breastfeeding Task Force facilitated by Jeanne Blankenship Sunday late afternoon had nearly 20 R.D.’s in attendance from all over the country. The group had quick introductions then got right to work discussing the upcoming year’s projects.

Sunday night a group of WH members met for dinner in an Italian restaurant in Philly. The food was served family style and with all the laughter and teasing one would think we were family!

Bright and early Monday morning was our membership breakfast and it was a huge success. Cathy Fagen, WH Chair warmly welcomed all

### WOMEN’S HEALTH LEADERSHIP CONTACT INFORMATION

**EXECUTIVE COMMITTEE**

<table>
<thead>
<tr>
<th>Chair</th>
<th>Cathy Fagen, MA, RD</th>
<th><a href="mailto:cfagen@memorialcare.org">cfagen@memorialcare.org</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair-Elect</td>
<td>Jamillah Hoy-Rosas, MPH, RD, CDN, CDE</td>
<td><a href="mailto:jhoyrosas@gmail.com">jhoyrosas@gmail.com</a></td>
</tr>
<tr>
<td>Post Chair</td>
<td>Jeanne Blankenship, MS, RD, CLE</td>
<td><a href="mailto:jbship@att.net">jbship@att.net</a></td>
</tr>
<tr>
<td>Secretary</td>
<td>Egondu Onuoha, MS, RD, CDN, IBCLC, RLC, CDE</td>
<td><a href="mailto:Emo9004@nyp.org">Emo9004@nyp.org</a></td>
</tr>
<tr>
<td>Treasurer</td>
<td>Nancy Turnier-Lamourexu, MS, RD</td>
<td><a href="mailto:turniern@sjhmc.org">turniern@sjhmc.org</a></td>
</tr>
</tbody>
</table>

**COORDINATORS**

| FNCE Coordinator | Laura Couillard, MS, RD | Lcouillard@ace-rd.com |
| Web Site and List Serve Coordinator | Kathleen Pellechía, RD | kpellechía@nal.usda.gov |

| Breastfeeding Task Force Coordinator | Jeanne Blankenship, MS, RD, CLE | jbship@att.net |

**COMMITTEE CHAIRS & MEMBERS**

| Nominating Committee Chair         | Judy Brown, PhD, RD | brown002@earthlink.net |
| Nominating Committee Chair-elect  | Gina Jarman-Hill, PhD, RD | gjarman@tcu.edu |
| Awards Chair                       | D. Enette Larson-Meyer, PhD, RD | enette@uwyo.edu |

| Membership Committee               | Maria Pari-Keener, MS, RD, CDN, CPT-NASM | mpkeener@yahoo.com |
|                                   | Lara Englebardt Metz, MS, RD | lara@kkgbodfuel.com |
|                                   | Darlene Husch, MA, RD, CDE | darhusch@verizon.net |

**COMMUNICATIONS COMMITTEE**

| Communications Chair | Miri Rotkovitz, MA, RD | mrotkovitz@hotmail.com |
| Publications Editor  | Krista Neal, MS, RD, LD | kristakaye@hotmail.com |
| Assistant Publications Editor | Olivia Bletsos, MPH, RD, CLC | bletsoso@nychhc.org |
| Calendar of Events and Member Spotlight | Allison Starr, RD | abd237@nyu.edu |
| Resource Review      | Heather Baden, MS, RD, CDN | heather@hbnutrition.com |
| Perinatal Section Editor | Joanne Volpe, MS, RD | jovolpe@vt.edu |
| Lactation Section Editor | Karen Peters, MBA, RD, IBCLC, LCCE | kpeters@breastfeedla.org |
| ADA Practice Manager | Susan DuPraw, MPH, RD | Sdupraw@eatright.org |
MATERIAL OBESITY

Continued from page 6

my pump,” one woman lamented. Another explained that she had to be naked to pump and needed help to get started. She also found she could not double pump, or if she tried to double pump it was very difficult.

“My large soft breast does not stay still; it wiggles. The flanges often end up in the wrong place, and I get a hickie,” one woman explained. There is a decreased sensitivity of the nipples for some large-breasted women, so they cannot feel when the baby is latched correctly or when the pump flanges are on correctly.

Conclusion

Dietitians working with pregnant and breastfeeding women can help large-breasted women by sharing experiences of other women in similar situations; encouraging experimentation with positions; and by knowing the resources in their own communities for clothing, pump equipment, and lactation support.

References


Rasmussen KM, KjellOLVE CL. Prepregnant overweight and obesity diminish the prolactin response to suckling in the first week postpartum. Pediatrics 2004;113(5):446.


Do you have a great presentation on breastfeeding or lactation management? The WH Breastfeeding Task Force is looking for YOU!

With the unveiling of our new WH website in late September, the WH Breastfeeding Task Force has taken on the task of putting together a library of presentations on the topic of...you guessed it...BREASTFEEDING. The idea behind this is to have each presentation go through a series of peer reviews and eventually load these presentations onto the new website so that viewers can not only view them, but also be able to download and use them.

Here is what we need from everyone interested: Please send your presentations directly to Lisa Hamlett (liser13@hotmail.com). Please include the estimated length of the presentation, the target audience, any links or resources, and your contact information should anyone viewing the presentation want to contact you. All presentations must be wholly owned or copyrighted by a WH member. Presentations produced by WH members for a non-profit organization (e.g., health care facility) that holds the copyright, must have written permission from that organization for a presentation to be included on the Web site. Permission must be submitted with the presentation.

We need presentations for a variety of audiences, so if you have anything that you would like to showcase, please submit it!!

Thank you in advance for your help!! If you have any questions please feel free to e-mail Lisa Hamlett at liser13@hotmail.com.

REFERENCES


Rasmussen KM, KjellOLVE CL. Prepregnant overweight and obesity diminish the prolactin response to suckling in the first week postpartum. Pediatrics 2004;113(5):446.


in attendance and gave an overview of our strategic plan and a little history of the DPG. Women’s Health graciously recognized Shirley Ekvall, PhD, RD, LD, Professor, University of Cincinnati as a 50 year ADA member and a member of Women’s Health. Once again we were sponsored by the United Soybean Board. Mark Messina, PhD, and Soybean Expert gave us an update on the research available.

Monday afternoon WH members were at full throttle at the DPG networking showcase. Leadership members were recruiting new members, networking, answering questions and socializing with ADA members visiting the booth.

Our commitment to help in the Mother’s Room continues thanks to the efforts of Krista Neal, who disclosed that she is once again with child and maybe using the room again next year! Along with the Public Health DPG we were successful in providing a quiet and private area for our nursing mothers to feed their babies, pump and store their milk and recharge in the excitement of the conference.

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"

Egondu Onuoha, MS, RD, CDN, IBCLC, RLC, CDE
525 Marlborough Road
Brooklyn, NY 11226