The relationship among these processes is depicted in Figure 1 (see page 3). Dietary components can improve the integrity of the gut mucosa. Oral intake provides nutrients for the endothelial cells, thereby maximizing their ability to maintain control of the flow of material—including nutrients, as well as antigens, noxious chemicals and pathogens—through and across the GI tract. Increased permeability leads to local immune responses and local tissue damage due to resulting increased oxidative stress and a drain on energy reserves. A vicious cycle ensues as these processes further increase the local immune response, which includes inflammation, and the cycle continues (1,2,3). After passage across the GI barrier, material from the GI tract is carried by the blood directly to the liver, which extends the immune and oxidative response beyond the GI tract. One of the primary functions of the liver is to metabolize and detoxify toxins. Appropriate liver function leads to the production of inactivated or neutralized toxins that are eliminated in feces or urine. Limited liver function leads to increased oxidative stress and the return of antigens, noxious chemicals, pathogens and or antigen-immune cell complexes to the general circulation. Blood then carries these substances as well as nutrients from the diet to peripheral tissues and the brain. The balance of nutrients and noxious components delivered affects organ function, while nutrients, such as vitamins, minerals and antioxidants, support organ function (3, 4).

The GI Tract and Liver—Where it All Starts!
The GI tract is in constant contact with the external environment, including a variety of foreign antigens such as ingested foods, environmental toxins and microorganisms. There are three lines of defense: 1) acidic gastric juices, pancreatic digestive enzymes, secretion of mucus from epithelial crypt cells, and release of IgA antibodies to bind gut antigens; 2) rapid turnover of epithelial cells and tight junctions created by lateral extensions of epithelial cells’ cytoskeletons; and 3) immunological responses to include antigen processing and presentation to immune cells within the lamina propria (the layer of connective tissue under the epithelium) that leads to specific T-cell or B-cell immune responses (1). When functioning properly, the gut associated lymphoid tissue (GALT) balances the initiation of immune responses to pathogenic antigens and oral tolerance, or down-regulation of the immune response to non-pathogenic antigens. This delicate balance can be interrupted by inadequate stimulation of the GALT or increased permeability of the GI tract (2, 3, 5, 6). A poor quality diet can contribute to increased permeability—specifically inadequate dietary fiber, probiotics and antioxidants, and excessive alcohol. Exposure to dietary antigens such as gluten, in susceptible individuals, also increases permeability, as do non-steroidal anti-inflammatory drugs (4).

Increased permeability and immune stimulation leads to release of pro- (continued on page 3)
From the Chair

By the time you receive this installment of the Women’s Health and Reproductive Nutrition Newsletter, ADA’s Annual FNCE Meeting in St. Louis will have passed. ADA members will be back in their homes and at their places of work gearing up for the holidays. In the six years that I have attended ADA’s Food and Nutrition Conference and Exhibition, I always return with a sense of accomplishment. Whether it is the increased knowledge of cutting edge research that I attain, the ability to network with friends and colleagues who are now working in different areas of the country, or the sense of unity that one feels while at a FNCE meeting due to brainstorming ideas with so many other Registered Dietitians. All work and no play is never a good idea, and those attending FNCE do try to make the most of the meeting. A typical day at FNCE can include attending conference from 8 AM to 5 PM, and then making dinner plans with friends or possibly new colleagues that you meet throughout the day, and then if time permits sight-seeing is a must.

This year at FNCE, WHRN DPG sponsored a session entitled “Complementary and Alternative Nutrition Implications on Women’s Health Issues.” As Americans continually sample new methods of prevention and treatment for things like the common cold, weight loss, and even prevention of major illness, we bring you the facts on this very important subject. Josephine Connolly-Schoonen was one of our presenters on this topic, please see her article in this issue for a glimpse of what she spoke on at FNCE. If you attended FNCE or are reading the articles here in the WHRN DPG newsletter, I hope you take a positive and uplifting message from these two speakers and of this important topic. And, I hope to see you at next year’s FNCE in Hawaii!

Theresa Romano

About the Authors

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Selina C. Mkandawire, MS, RD, EdD is an author, researcher, educator, and administrator. She currently works for St. Joseph’s Hospital in New Jersey. She served WHRN as Reimbursement/Legislative Coordinator.

Miriam Erick, MS, RD is a nationally recognized expert on perinatal morning sickness, and has authored several books on the subject. As an educational affiliate of ACOG, she has trained physicians in morning sickness management.

Heather Baden, MS, RD, CDN, is co-chair of WHRN’s membership committee. She runs a private practice in Rye, New York. Learn more about Heather at www.hbnutrition.com.

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Jessica Setnick, MS, RD, LD, specializes in the treatment of eating disorders. She writes a weekly newspaper column “Making Fitness Fit,” works privately with children and adults, and speaks to community and professional groups about identifying, treating and preventing eating disorders. In 2003, she launched Eating Disorders Boot Camp™, a training workshop for health professionals interested in eating disorders care.
inflammatory cytokines, or hormones produced by immune cells. In addition, antigen-immune cell complexes enter the portal circulation and are sampled by Kupffer cells in the liver. Kupffer cells also release inflammatory cytokines, leading to further escalation of the immune response (1). The liver’s detoxification enzyme systems are also stressed by the increased antigen/toxin load. The capacity of the liver to upregulate the transcription of phase I and phase II detoxification enzyme systems is partially constrained by genetic predisposition. However, an individual’s capacity can be maximized by providing nutrients necessary to support the enzyme systems (4). Free radicals and other reactive oxygen species are byproducts of the detoxification enzyme systems. Therefore, dietary antioxidants and nutrients that serve as cofactors for glutathione peroxidase and superoxide dismutase are also important. Inadequate intakes of B vitamins, antioxidants, zinc, selenium, and manganese could compromise detoxification and protection against oxidative stress (4).

**Oxidation and Inflammation–An Interactive Relationship**

Inflammation is one aspect of the non-specific immune response. The inflammatory process includes increased delivery of immune cells, such as neutrophils, monocytes and lymphocytes, to the area and increased immune activity. Ideally, these cells neutralize and clear antigens or noxious substances, and then the inflammatory process is turned off. The production and release of reactive oxygen species or free radicals is one mechanism by which immune cells destroy foreign cells. Neutrophils, eosinophils and macrophages produce free radicals. If the free radical production is excessive or continuous, local tissue can be damaged. Such damage leads to further escalation of the immune response. A vicious cycle can ensue with immune cells increasing oxidative stress, which results in tissue damage and a further escalation of the immune response (3, 4, 7, 8).

The increase or decrease in immune activity is controlled by mediators, such as cytokines or lipid mediators known as eicosanoids. Eicosanoid production can be directly influenced by the relative amounts of dietary fatty acids–specifically the ratio of omega-3...
polyunsaturated fats to omega-6 polyunsaturated fats. Increasing the relative amounts of omega-3 polyunsaturated fatty acids leads to the increased production of anti-inflammatory lipid mediators, which can down-regulate the immune response. In addition, as noted above, adequate intake of antioxidants can minimize oxidative stress (4, 9). Sometimes the substance triggering the immune response, specifically inflammation, cannot be removed, leading to chronic inflammation. Such a scenario can increase the risk for an autoimmune response in susceptible people. For example, the deposition of immune complexes with a resulting chronic inflammatory response is common in rheumatoid diseases.

Implications for Women’s Health

Autoimmune diseases are defined as a response against a self-antigen involving lymphocytes or antibodies that induce systemic or organ-specific injury. Autoimmune diseases are the third most common category of disease in the United States, after coronary artery disease and cancer. Organ-specific autoimmune diseases include Graves Disease (thyroid), type 1 diabetes (pancreatic islet cells), pemphigus (skin), and idiopathic thrombocytopenia (platelets); whereas systemic autoimmune diseases include systemic lupus erythematosus, rheumatoid arthritis, Sjogren’s syndrome and scleroderma. Five to eight percent of the population is affected, with 78.8% of those afflicted being women. The mechanisms for gender-related differences in immune responses have not yet been fully determined—yet women are known to have more vigorous immune responses and increased antibody production. These differences are likely mediated by sex hormones, such as estrogen, progesterone and testosterone. Receptors for such hormones have been identified on immune cells, and receptors for immune mediators (cytokines) have been identified on sex hormone producing tissues (10).

Three of the proposed mechanisms of autoimmunity are molecular mimicry, loss of tolerance to self-antigens, and microchimerism. Mimicry refers to the presentation of an antigen that closely resembles self-antigens, i.e. the marker of “self” presented on cells. The induc-
tion of an immune response to the antigen results in a cross-reaction with self-antigens and induction of autoimmunity. Molecular mimicry of the gluten protein has been implicated in autoimmune thyroid disease in patients with celiac disease. Oral-induced systemic tolerance refers to downregulation of the specific immune response. Food antigens and probiotics interact with special T helper cells to suppress the immune response to specific antigens. Probiotics are thought to have a role in the processing of gut-derived antigens, and thereby contribute to the development of systemic tolerance to these antigens (2, 3, 11). An overly hygienic environment or loss of health-promoting gut microbiota may lead to negative changes in the development of oral tolerance and an overly stimulated immune system. Microchimerism is associated with decreased placental barrier function, leading to the presentation of fetal cells in maternal blood and an immune response to such cells. Such a mechanism has been implicated in systemic lupus (12).

**Integrative Nutrition Philosophies**
An integrative approach to nutrition therapy for inflammatory or autoimmune diseases includes consideration of the following: 1) functional testing, including gut permeability and IgG food-related antibodies or food challenges; 2) elimination diet; 3) improved dietary quality to increase fiber and antioxidants; and 4) consideration of supplementation of omega-3 fatty acids and probiotics. Hypersensitivities to specific foods are difficult to assess, as they are typically IgG rather than IgE mediated. The use of IgG food antibody tests is very controversial, and patients need to be educated on these issues and participate in the decision-making process (13, 14, 15). IgG food antibody tests may be used to guide the individualization of the elimination diet, but this process may also be guided by double-blind placebo-controlled food challenges. Such challenges can be problematic because a very strict elimination diet must be followed for an extended period of time while individual foods are challenged--only one food can be tested every few weeks (16). Tests for gut permeability are more readily accepted, and can be used to monitor the effectiveness of dietary interventions on decreasing the flow of antigens across the GI tract. Measures of inflammation, such as C-reactive protein, can also be monitored to measure effectiveness of dietary changes. As the dietary intake of food antigens is decreased and the quality of diet improved, gut permeability and systemic inflammation should be decreased.

The Bull’s-Eye Food Guide, shown in Figure 2, clearly identifies the healthiest food choices in each food group—those in the inner (green) circle. The Guide is compromised of 6 food groups, and within each food group the healthiest foods are in the green inner circle, the acceptable foods are in the middle (yellow) circle and the least healthy foods are in the outer (red) circle. A diet comprised of a variety of food within the green inner circle of each of the six food groups will have a high nutrient density and provide fiber, antioxidants, and omega-3 fatty acids, as well as all other essential nutrients. It is possible to obtain adequate antioxidants from dietary sources. However, it is difficult to adequately shift the dietary omega-3 to omega-6 ratio. In order to boost the intake of omega-3 fatty acids, a supplement (verified to be free of mercury and PCBs) may be considered—1 to 3 grams of long chain omega-3 fatty acids (EPA and DHA) a day. In addition, dietary sources of omega-6 fatty acids and hydrogenated fats, such as margarines, bakery products, and vegetable oils, need to be decreased (9, 17). Lastly, probiotic supplements should also be considered as they can appropriately modulate the immune response, i.e. suppress hyper-sensitivities and maintain appropriate oral-induced systemic tolerance. A supplement with a wide variety of strains should be selected.

The management of chronic inflammation and autoimmune disorders is challenging. These types of disorders can have a significant negative impact on quality of life and be very debilitating. By taking an integrative approach that addresses the related processes of gut permeability, liver detoxification, oxidation and inflammation, dietitians have a unique opportunity to have a positive impact on women’s health.

**References**


(continued. page 6)
Book Review
Heather Baden, MS, RD, CDN


In her revised edition of Managing Morning Sickness: A Survival Guide for Pregnant Women, Miriam Erick, MS, RD, offers women remedies, recipes, and menus while providing real life case studies of patients with whom she has worked. Although written for women suffering from the more extreme cases of morning sickness, the book can certainly serve as an excellent resource for nutrition professionals. It is well organized and thorough, but not overly complex. Each chapter is broken down into various topic headings which help keep the reader focused. The author’s significant experience in hospital practice provides a sound basis for the medical conditions that are also discussed.

Rather than simply providing nutritional guidelines for pregnancy or “traditional cures” for morning sickness, Managing Morning Sickness is unique in its emphasis on triggers, research, treatments, and remedies. The author also explores and details the specific effects of morning sickness upon the body, such as dehydration, constipation, anemia, and weight loss. The first few chapters are dedicated to what morning sickness actually is, the theories behind why women get it, and how it affects women and their families. What these chapters make clear is that many women are afflicted with morning sickness in a variety of ways, and at all times of the day.

The chapter on managing morning sickness with food is especially practical and useful. It focuses on adapting the diet to the individual’s preferences for certain tastes and textures. Erick provides lists of foods in each major food taste and texture category and also provides sample “sick-day meal plans” for each category. Whether your patient is able to tolerate salty, tart/bitter, sour, bland, crunchy, sweet, or earthy, there is something that will hopefully give her a chance for relief.

Although the book’s primary focus is to avoid hospitalization, the author relies on her expertise to provide a very informative discussion about hospitalization for morning sickness. In this chapter she discusses criteria for admission, medication, working with dietitians in the hospital, feeding tubes, and intravenous nutrition. The author also provides several insightful tips for coping with hospitalization.

The chapters on alternative therapies offer information ranging from acupuncture, relief bands, hypnosis, to herbal preparations and homeopathy.

Chapter fifteen is dedicated to those women deserving the “Purple Heart of Motherhood.” In this chapter the reader truly learns of the emotional and physical suffering that some women endure as a result of morning sickness. The writer compassionately discusses the most extreme cases, which can range from esophageal rupture to death.

Managing Morning Sickness relies on the author’s significant practical treatment of women in a hospital setting. Erick’s experience has afforded her the opportunity to develop tried and true remedies for morning sickness. Practitioners would be well served by referring to this book to obtain suggestions for treating women who suffer from any degree of morning sickness.

Author’s Note: Erick’s original work, No More Morning Sickness: A Survival Guide for Pregnant Women, won the 1994 Pyramid Award for distinguished medical communication from the New England chapter of the American Medical Writers Association.

From the Editor

Sometimes the best laid plans get derailed by a series of strange or silly occurrences, which is why, with winter upon us, the fall issue of the WHRN Report is just arriving in your mailboxes. The early arrival of outgoing editor Kathy Scalzo’s beautiful twins, and the absolute refusal of my new desktop publishing program to deliver—despite intense labor and hours of tech support—are just a couple of the factors that confounded the timely delivery of this newsletter. On the upside, you now have in your hands the longest WHRN Report of the year, chock-full of of articles and resources we hope you’ll find well worth the wait. In fact, with New Year’s resolutions foremost on many minds, the holistic emphasis you’ll see in several articles seems especially resonant now. FNCE presenter Josephine Connelly Schoonen’s feature on integrative nutrition in autoimmune diseases sheds light on promising nutrition therapies for often confounding conditions. Ginger Carney’s case study on Kangaroo Care is a great reminder that even the tiniest patients (and their moms!) can benefit tremendously from integrative care, and Jessica Setnick’s handout on surviving the holidays offers great advice for keeping a cool head about nutrition—and self care—year round.

I hope you’ll join me in wishing Kathy Scalzo many thanks for her exceptional—and very dedicated run—as WHRN’s Publication Coordinator, and in sending her hearty congratulations on the birth of her adorable twin boys!

Happy reading,

Miri Rotkovitz

P.S. Your comments are important—and we’d love to publish them! Send Letters to the Editor to mrotkovitz@hotmail.com.


Lactation Case Study
Ginger Carney, RD, LDN, IBCLC, RLC

Pregnancy:
Para 2, Gravida 1. Breasts enlarged normally. Vaginal bleeding at 10 weeks; ultrasound revealed possible omphaloce; ultrasound at 11 weeks confirmed omphaloce; spotting continued until 14 weeks; amniocentesis at 18 weeks revealed male infant with no other abnormalities; weekly ultrasounds completed throughout pregnancy to monitor infant’s development; no other problems seen.

Premature rupture of membranes at 33 weeks; meds given to stop labor; steroids given for premature lung development of baby; labor stopped for 50 hours, with eventual delivery.

Birth:
Cesarean planned, but delivered vaginally when baby crowned after long labor; Baby with omphaloce (diagnosed prenatally); BW 1800 grams; no maternal complications.
- Baby taken to NICU immediately; NPO.
- Transferred to Children’s Hospital at 6 hours old for corrective surgery.
- Mother remained in recovery x2 hours; sent to postpartum floor; discharged after 36 hours.
- Mother began using hospital-grade electric breast pump at 12 hours PP (q 3 hours x 15 minutes).

Mother’s Discharge Instructions:
Express breast milk ≥8 x/day with hospital-grade bilateral electric breast pump to establish lactation and collect breast milk for infant’s feedings.
Rest, nutrition, fluids recommended.

Baby’s Initial Hospital Course:
Surgery on DOL #1 for omphaloce reduction; transferred to PICU on ventilator; NPO.
Remained NPO x48 hours; IV fluids; Wt 1560 grams.
Baby extubated.
- Syringe feeds of breastmilk started (5cc q 3h).
- Feeds progressed over 2 days to 30cc q 3h).
- Feeds tolerated well.
- 2-3 soft yellow-green stools each day.

Initiation of Breastfeeding:
Mother allowed to put infant to breast ad lib on DOL #4.
Baby weak @ breast, ineffective latch (mother only puts baby to breast 3-4 times daily because of poor milk transfer).
Baby supplemented with syringe feedings of breastmilk to assure adequate intake.
IV fluids discontinued.

Lactation concerns:
PP day #7–mother notices decrease in milk supply; baby’s weight 1490 grams; baby stooling ~2x/day.
Mother holding baby only a few times daily; baby wrapped in blankets constantly.

Lactation Consultant’s Recommendations:
Mother to maintain good nutritional intake and rest as much as possible (“sleep when baby sleeps”).
Continued frequent emptying of breasts with bilateral electric breast pump.
KANGAROO CARE with infant (skin-to-skin contact, holding baby chest to chest twice daily for 2 hours each time).
- PP day #9–mother feels breasts getting fuller between feeds and is expressing more milk.
- Continues to offer breastfeedings to infant; supplementation w/ syringe feedings of breastmilk.
- Infant stools x3 (soft-liquid yellow).
- Baby’s weight: 1550 grams.
Baby’s Progress:
As mother’s milk supply increases, baby becomes more effective at breast; less need for supplemental syringe feedings. KANGAROO CARE continues. At 2 weeks of age, baby weighs 1640 grams; frequent soft, yellow stools. Baby continues to nurse at breast 10-12 x/day (10-30 minute feedings). Mother notes that milk supply is increasing as baby increases effective nursing times, and she makes rest and nutrition a priority. Lactation consultant notes breast softening during feedings, good latch, audible infant swallowing; baby content after feedings without any supplementation. At 3 weeks of age, baby is being exclusively breastfed. Baby discharged @ 3½ weeks of age; weight 1810 grams.

Discharge plans:
Baby to return to surgery clinic in 1 week for post-op & weight check. Final omphalocele repair planned at 6 months of age. Mother to make appointment with pediatrician for follow-up. As weight gain progressed well during hospital course, mother to call lactation consultant only if problems arose or baby failed to gain weight appropriately according to pediatrician.

Important to note:
Premature baby with birth defect--mother unable to begin breastfeeding at birth due to infant illness; mother became dependent on artificial means of establishing lactation. Even though mother was using bilateral electric breast pump on a regular basis, lack of contact with infant was likely causing sluggish milk supply. After beginning KANGAROO CARE, mother realized notable increase in milk supply. Many times, this process may be overlooked or viewed as low priority by medical personnel because of focus on recovery of infant; normal mother-baby interaction may not be encouraged by staff. Many mothers find that after prolonged milk expression, even when regular and often, milk supply decreases progressively. Initiation of regular sessions of KANGAROO CARE can offer the following benefits:
❖ Psychological benefits for mother.
❖ Stabilization of vital signs in infant.
❖ Maternal-infant bonding.
❖ Enhanced infant growth.
❖ Increase in hormones for maternal milk production.
❖ No use of artificial feedings.
❖ Enough breastmilk for ALL of infant’s feedings = OPTIMAL NUTRITION FOR BABY!

KANGAROO CARE assisted in increasing milk production which led to baby’s efficiency at breast (improved milk transfer); eventually, the goal of exclusive breastfeeding was possible.

Kangaroo Care Resources


A Mega Issues Primer
Alyce M. Thomas, RD, Professional Issues Delegate

As an ADA member, you may have an issue that could eventually impact the profession. If so, you could have a “Mega Issue” on your mind. The following is a brief overview of the Mega Issues process and how it affects you as a dietetics professional.

What are Mega Issues?
ADA defines a Mega Issues as “overriding issues of strategic importance, which cut across multiple goals or outcome areas” (ie community/public health, food service management, research, education, clinical, food & culinary). “They address key strategic questions that [ADA] must answer, illuminating choices the organization must make and the challenges that will need to be overcome in moving toward the envisioned future. They articulate the questions that will need to be asked and answered by the Association in the next five to ten years.”

ADA’s Mega Issues Process Description further states, “the... process is an important tool for responding to members’ needs related to far-reaching professional concerns. Mega Issues related to the profession of dietetics will be addressed by the House of Delegates (HOD) as part of their role in governing the profession. The outcome of this process is meant to empower members and leaders to engage in dialogue and deliberation, and then to take action to address the issue. If a Mega Issue concerns the organization, it is forwarded to the ADA Board of Directors.”

Previous Mega Issues addressed by the HOD included:
❖ Membership in ADA and credentialing by CDR.
❖ Creating a more diverse dietetics profession to fit the shifts in population trends in the U.S.
❖ “Communicating with the Constituent.”
❖ ADA and industry relationships: “selling out” to industry versus the need to collaborate with industry.
❖ “Role of the Dietetics Professional in Supporting a Sustainable Food Supply that is Healthful and Safe.”
❖ “Dietetics Education Task Force Report.”

How Are Mega Issues Identified?
Mega Issues are identified several ways: individual members may submit issues to ADA or through their delegates; or delegates may ask their constituents to identify potential Mega Issues. All issues are triaged by the Issues Management Committee to determine if it is a Mega Issue. If so, it is then forwarded to the HOD House Leadership Team (HLT), who determines how to manage the submitted Mega Issue. If the issue is considered high priority, a dialogue session will be conducted with the HOD either electronically or face-to-face.

How Are Mega Issues Developed? With each Mega Issue, a HOD Backgrounder is developed by the HOD Governance Staff.

This includes:
❖ The Mega Issue Question that will be addressed by the HOD during a Dialogue Session, with the Expected Outcome.
❖ An Executive Summary, which is a separate two-page document.
❖ Four questions that relate to the issue under discussion.
❖ A review by the ADA Executive Team, member experts and staff, after which the Mega Issue is published. It can be located on the HOD page of the ADA member only web site.
❖ A HOD Member Fact Sheet that is developed to provide a short overview of the Mega Issue for use by the delegates to solicit member input. Delegates may post the Fact Sheet with links to the Executive Summary, Backgrounder and Appendices on their constituents’ list serves or web sites.

Member input is important and everyone is encouraged to share their thoughts with their delegates. All comments will be published on the HOD website (Col). Delegates will dialogue through the HOD Col with the comments used to develop motions or a plan of action. If a motion is developed, the HOD will conduct a vote electronically. Members will be notified of the final action via the Speaker’s Message posted to the HOD page of the member only web site, the CEO Digest or ADA Times. Delegates may also communicate the final action to members via their newsletters, web sites or list serves.

If you have an issue, or to respond to a Mega Issue, please feel free to contact me at thomasam@sjhmc.org or 973-754-2596.

Update:
At the 2005 Fall HOD meeting, the following motions were adopted:

1) Sustainable Food Supply: A task force will be established composed of ADA member experts, in but not limited to, environmental nutrition, food management, food and culinary science, public policy, nutrition business and communications, and public health nutrition. The Task Force will utilize the identified Guiding Principles to develop a plan to address the various issues related to the ADA members’ role in sustainable food practiced. A task force report with recommendations will be submitted to the HOD by April 2006 for pre-meeting review and approval following the Spring Meeting.

2) Industry Relationships: The HOD requests the HOD Leadership Team, in collaboration with ADA staff, develop guidelines based on the critical components and key elements to assist members, affiliates and DPGs when examining the risks, benefits and opportunities of industry relationships. These guidelines will be presented to the HOD in advance of the Spring 2006 Meeting to allow for member input and subsequent approval by the HOD.
In the March 2005 issue of Obstetrics and Gynecology, aka “The Green Journal” six of the thirty-five articles—a full seventeen percent—pertained to nutrition. Miriam Erick of Brigham and Women’s Hospital in Boston highlights those articles, and shares her editorial thoughts below.

**Article Review**
Miriam Erick, MS, RD, CDE, LDN

1) “Editorial: Gestational Diabetes Mellitus: A Pill or a Shot?” Saade, G.

The use of metformin for glucose management is now becoming standard therapy as adverse effects hypothesized from the first generation of oral hypoglycemic agents has not been seen. Glyburide does not cross the placenta. Starting dose is 2.5 mg to 5 mg once or twice daily until a maximum dose of 20 mg/day is achieved. Glyburide may fail to achieve optimal glucose control in 10%-20% of women with GDM who would then be started on insulin.

**ME:** Unfortunately we don’t know the etiology of “Glyburide Failure”. It would be important to know if there is an upper limit to the grams of carbohydrates, which may be exceeded by these glyburide does. Is the client eating 3 big meals or multiple well-controlled portions? Did she start pregnancy in a morbidly obese state or was her gestational weight gain excessive? As perinatal dietitians, learning the anthropometric profiles of women for whom glyburide fails may result in a revised nutrition plan to keep women off insulin.

2) “Acute Myocardial Infarction in Pregnancy and the Puerperium: A Population-Based Study.” Ladner, HL, Danielson B, and Gilbert, WM.

Medical records over a 10-year period were evaluated for incidence of acute MI. Although rare, the incidence is 1/35,700 births. Thirty-eight percent of 151 women had MI’s in the antepartum period, 21% in the intrapartum period and 41% in the six week postpartum period. Multivariant analysis suggests that chronic hypertension; diabetes, advanced maternal age, eclampsia and severe pre-eclampsia are independent risk factors for MI during this time. Authors comment as more women are delaying childbirth to the fifth decade of life, the incidence of AMI may increase.

**ME:** Women with the above risk factors should be referred to perinatal nutritionists for an aggressive approach to a heart healthy diet. Although MI in pregnancy is rare, it is catastrophic for the entire family.

3) “Obesity-Related Complications in Danish Single Cephalic Term Pregnancies.” Rode L, Nilas L, Wojdemann K, Tabor A.

As many as 30-40% of the Danish population is overweight and 10-13% are obese. These statistics are also reflected in the maternal population, which increases the incidence of complications of pregnancy. Rode’s survey found BMI >25 in 21.85% of the 9122 women: 16.3% were considered overweight and 5.5% were classified as obese. The frequency of diabetes, hypertension and pre-eclampsia increase with higher BMI.

**ME:** Obesity complicates pregnancy and can result in premature delivery, which increases subsequent admissions to neonatal intensive care units (NICU). Obese women considering pregnancy need to be actively recruited into pre-natal weight loss programs. The subsequent savings may include reduced admissions to high risk antenatal units during a pregnancy and reduced need for NICU’s for the baby. Researchers have also documented poor lactation performance in obese postpartum women. Since breastfed infants have fewer overall health problems, this is another benefit which is foregone often among obese women.

4) “Body Mass Index, Provider Advice and Target Gestational Weight Gain.” Stotland NE, Haas JS, Brawarsky P, Jackson P, Jackson RA, Fuentes-Afflick E, Escobar GJ.

In 1990 the Institute of Medicine (IOM) issued guidelines for weight gain in pregnancy, which were based on pregravid body mass index. Several studies of US women found 30-40% of women gain above or below IOM guidelines even after more than 10 years of their publication. Project WISH (Women and Infants Starting Healthy) was a longitudinal cohort study of pregnant women in one of six areas in San Francisco. This study found a strong indication that prenatal care providers were not following the IOM guidelines when they advised their patients as to weight gain. Whereas 87% of women with normal pre-pregnancy BMI reported advice to gain an appropriate amount of weight, 50% of high BMI women reported advice to over gain and 35% of low BMI women reported advice to under gain.

**ME:** In 1990, when the IOM guidelines for weight gain in pregnancy were issued, the original text provided no formula for various BMI’s to achieve the weight gains recommended! Without documented kcals/kg for various body habitus, achieving recommended weight gains is virtually impossible. Examining weight performance without verified formulas to achieve same documents the need to then ask the next question: **HOW MANY CALORIES/KILOGRAM DOES IT TAKE TO ACHIEVE A SPECIFIC WEIGHT GOAL FOR A SPECIFIC BODY SIZE?**

Perinatal dietitians often review the myriad of formulae found in the literature—which have never had the benefit of metabolic cart testing—and ponder exactly what weight is the author talking about, or intends for use in the kcal/kg equation! In pregnancy, there are several weights which can be considered:

a) Pregravid actual body weight (which could be an underweight situation).

b) Ideal pregravid body weight.

c) Body weight at particular gestational age (which could represent a weight loss—consider hyperemesis gravidarum—or excessive weight gain due to hyperphagia, twins or preeclampsia).

d) Adjusted obesity body weight (which has never been verified).

In addition, since very few women are given a calorie prescription by their care providers to accompany weight gain expectations, few pregnant women have any idea of what to consume for an expected weight performance. The pregnant
woman who is directed to a perinatal dietitian is more likely to have this specific information. Whether said calories can support the suggested weight performance is another question. A discussion of this “Calorie Confusion” can be found in the commentary after Review 6.

5) “Relationship of Maternal Body Mass Index and Height to Twinning.” Reddy UM, Branum AM, Klebanoff MA.

The increasing use of fertility drugs is considered one of the primary reasons for the increase in twin gestations. However there is an association between maternal BMI and spontaneous dizygotic twinning. The odds are increased with a BMI >30 or more, and is considered significant (P=.001). Women in the tallest quartile of height had a significant increase in the odds ratio of dizygous twins pregnancies, although not of the same magnitude as women with a BMI >30. Since there is a higher incidence of premature delivery with twins and an increased risk of adverse outcomes, perinatal morbidity, and mortality, this is a concern. The influence of maternal weight as a factor for twinning will continue to grow in importance as the percentage of obese women in the United States continues to rise.

ME: There are three areas to explore—preconception, pregnancy and lactation.

Preconceptually, let’s take four women with different body sizes who are arbitrarily 5’5” and the same age. IBW range: 124-139#

Ms. A: pregravid 90# and is 64-72% IBW medium range. (Likely an in vitro fertility patient!) BMI: 15. Term weight goal: 28-40 #.

Ms. B: pregravid 120# or 86-96% IBW. BMI: 20. Weight goal: 25-35 #.

Ms. C: pregravid 160# or 115-129% IBW. BMI: 26.5. Weight goal: 15-25 #.

Ms. D: pregravid 180# or 129%-145% IBW. BMI: 30. Weight goal: 15#.

Let’s assume Ms. A is 10 weeks pregnant and has gained 10#. If we use 40 kcal/kg pregravid body weight (100# or 45.4 kg) her caloric Rx is 1818 calories per day. Can we assume this level will result in a 28-40# weight gain by term? Should we be using her actual pregravid weight or her weight at the time of the nutrition encounter?

Ms. D, now at 10 weeks, has lost 20# because of hyperemesis—her current weight is 160#/72.7 kg. Using 24 kcal/kg would suggest 1745 calories a day could result in a gain by term of 15#. Is this possible? Should we use an adjusted body weight-pre gravid? How should her weight loss be addressed?

As one considers the various “kgs” when dealing with the obstetrical client, it is difficult to have consistency in determining calories since the kg is not labeled specifically. There is a basic connection between calories consumed and weight performance. To achieve the IOM parameters listed above, there needs to be verified kcals/kg for each body size.

Regarding diet prescription and calorie distribution: It appears that the distribution patterns included in this paper are more for for diet-controlled gestational diabetes than the woman with Type 1 DM. A higher percentage of calories at breakfast could be covered by an adjustment in insulin. A breakfast of ten percent calories of a 2000 calorie plan is 200 calories, comprising 2 carbohydrate exchanges and 1 protein exchange—which is not huge!

A breastfeeding prescription of 500 calories a day may be too generous for the obese woman who gains more than the recommended 15#. A “one size fits all” calorie Rx does not make sense, since the actual cost of breast milk production is about 0.7 calories per cc of breast milk output. Breast milk output of approximately 720 calories will require 500 calories of energy. This output generally does not happen in the first few days of the postpartum period.

One source suggests that an intense lactation session can drop glucose by as much as 50-100 mg/dL over a 30 minute session. Women with Type 1 DM may confuse let-downs for hypoglycemia and must be alert to consume small snacks as needed. (ref: Core Curricula Volume 4, page 125). For the woman who desires weight loss, a reduced calorie prescription is warranted. It should be pointed out that during labor and delivery fluid boluses are commonplace and the postpartum weight status will not be accurate until 2 weeks post discharge. A postpartum diuresis is expected and should not be construed as gross under-consumption of calories.
Dispatch from ADA’s Public Policy Workshop

Selina C. Mkandawire
MS, RD, EdD

In March of 2005, I had the privilege of attending the American Dietetic Association’s Public Policy Workshop (PPW) in Washington, DC. This annual conference addresses many political issues that directly affect our profession. While attending this event, I quickly learned that policy initiative and advocacy are critical to our organization’s growth. Fortunately, there are those who advocate on our behalf, emphasizing that food and nutrition issues are important to us and to the communities we serve. But we too can play an important part in the political process and in raising awareness of key issues. By attending the PPW, we join ADA’s efforts to advocate for and support legislation that will allow women and others to benefit financially. That, in turn, empowers our profession and ourselves. For example, in March 2005, we advocated for the Ryan White CARE Act to ensure that MNT is covered beyond patients with diabetes and/or kidney disease.

What bills are coming up in the 2006 Congressional sessions that will affect WHRN members?

CMS (Centers for Medical Services) has proposed adding MNT to telehealth services, enabling clients better access to these services in rural areas. If the proposal is approved, Registered Dietitians will be added to the list of telehealth providers.

Another critical issue involves possible cuts in the Food Stamp Program. This bill will affect our patients and clients—particularly women and children. Politicians need to know that as nutrition experts and constituents, we oppose the proposed cuts. WHRN members concerned with the welfare of women and children, can help by visiting local congressional offices, and voicing concerns regarding the potential decrease in Food Stamp funding.

Ironically, the United States Department of Agriculture (USDA) has awarded grants of $5 million to increase access to USDA’s Food Program for low-income families. Yet only six states received those grants throughout the U.S. This is another concern WHRN members might choose to address with their local congressional representatives.

I learned the following political slogan from the American Dietetic Association’s Political Action Committee (ADAPAC): “If Dietetics is your profession, Politics is your business.” ADAPAC is an important body that advocates for political issues that affect our organization. I do hope WHRN members will consider supporting ADAPAC. Here are some help ways to help further ADAPAC’s advocacy efforts:

1. Donate money, which in turn can help candidates who support our governmental interests.

2. Meet with your political representatives to share thoughts and concerns about any upcoming bills in the congressional agenda that impact your communities.


I believe that working together with ADAPAC, we will all benefit. Remember—nutrition matters, and “politics is our business.”

EDITOR’S NOTE: Visit www.adapac.org to learn more about ADAPAC, one of the nation’s top 30 health professional-run political action committees, and the only PAC dedicated to food, nutrition, and health issues.

Free CE’S!

The new MyPyramid and the USDA 2005 Dietary Guidelines for Americans now recommend consuming at least 3 servings of whole grains per day to help reduce the risk of several chronic diseases and to help with weight maintenance. Nine out of ten Americans fall short of this goal.

At ADA FNCE, General Mills Bell Institute of Health and Nutrition announced the new Go With The Whole Grain educational resource to support the 2005 Dietary Guidelines and MyPyramid. The Go With The Whole Grain program includes free approved continuing professional education credits for RDs and turn-key consumer materials to educate Americans about whole grains. The CPE self-study guide provides new research on phytonutrients in whole grains, including phytoestrogens, antioxidants and phenols which might be of particular interest to WHRN members. Members can download the program at www.bellinstitute.com/wholegrain. The program updates the original Go With The Grain program. An estimated 18,000 health professionals currently use the program to educate their clients about whole grains.
# WHRN ANNUAL REPORT 2004-2005

June 1st--May 31st

Women’s Health and Reproductive Nutrition DPG 28 Financial Summary

Maria Duarte-Gardea, PhD, RD WHRN DPG Treasurer 2003 - 2005

## REVENUES

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Surviving the Holidays: Body, Mind and Spirit

Regardless of which holidays you celebrate, our lives at this time of year are filled with activities, stress, and food. One or more of the following tips may help you survive the fall in better shape than usual. Pick your favorites and don’t forget to feed every part of yourself during the holidays—mental, emotional, spiritual, AND physical.

Body
This holiday season it will be harder to take care of others if you are not taking care of yourself. As much as possible, maintain your regular sleep, exercise, and eating patterns. This is not the time to go on a diet or make drastic changes to your lifestyle. It is also not a good time to be sleep deprived. Schedule time for yourself, and keep the appointment, just as you would if it were a business meeting. Don’t skip meals, even if you have a big one coming up soon. It is so helpful to eat on time so that you are not starving when you are surrounded by food. If you eat more than usual at a holiday meal or party, remind yourself that overeating occasionally does not cause instant weight gain, and that your body knows what to do with that food. It is normal to eat more than usual during the holidays, and it really is okay. In all likelihood you will return to your normal eating habits the next day, and your body will normalize. In fact, if you honestly listen to your hunger, you probably won’t be hungry again for quite a while, and your total food intake for the day may be the same.

Recognize your limits and practice saying no. This includes when people offer you food. Never overeat because of pressure from others.

Listen to your body! Eat when you’re hungry, stop when you’re full, rest when you’re tired, and relax when you’re stressed. Think of activities the whole family can do instead of sitting around eating.

Mind
Be flexible about your expectations—almost nothing can turn out exactly as planned, so hoping for it will only lead to disappointment.

Plan ahead how you will cope with uncomfortable situations. Have a “safe spot” you can escape to if family gatherings become stressful, and plan a way to excuse yourself. Think about realistic scenarios that might occur and plan how you will respond. Walk away from no-win situations. Arguing when everyone’s stress is high tends to lead to more stress.

Get as organized as possible so you don’t have to duplicate efforts. Write shopping lists and errands lists and organize them by geography. Take things with you on the way to work so you can do them on your way home from work.

Try not to count calories or weigh yourself if either of these adds to your stress. If the thought of not weighing worries you, find a friend who will weigh you backward and reassure you as long as you are within a 5 pound range. This way you will know you are within your usual weight range without panicking over a 1 or 2 pound gain that could easily be due to water retention after a big meal.

Spirit
Don’t schedule so many activities that you become exhausted. List all the parties to which you are invited, all your errands, etc. Prioritize, then cross off those that are honestly not necessary or that will only add to your stress. Determine what you enjoy most during the holidays and schedule time for it. Determine what you enjoy least and cross it off your list! If you are really honest with yourself, you may realize most of your time is scheduled to make others happy. A little selfishness goes a long way this time of year toward making you happy.

Find a prayer, affirmation, or saying that is meaningful to you, and carry it in your wallet or purse. Turn to it for comfort or a reality check when stress gets high. Try to look “on the bright side” whenever you can; laugh as much as possible, even (especially!) at your own mistakes.

Accept the things or family members that you cannot change. Figure out how you can change your behavior or attitude to cope and to take care of yourself. Prepare responses to things people may say that make you uncomfortable. Make a pact with a friend or loved one to “just listen” to each other for 5 or 10 minutes each day. No talking, no advice giving, just listening.

Finally, find time to be spiritual and make this time of year meaningful in your own way, whether it is through religion, faith, meditation, giving thanks, art or your own expression of yourself. Taking care of your body, mind, and spirit is the best way to survive the holidays without sacrificing your health.

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