VITAMIN D: Practice Considerations in Pregnancy and Lactation

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Graduate Candidate, Human Nutrition, University of New Haven, New Haven, CT

Introduction:
Beyond classically understood mechanisms associated with bone integrity and calcium absorption, vitamin D functions as a hormone, potentiating multiple cellular mechanisms. Genetic mapping has identified a vitamin D receptor (VDR) in most tissues in the body. The VDR potentiates transcription mechanisms that ultimately promote cell differentiation, and modulate production of anti-inflammatory cytokines, insulin, muscle fibers and renin. These functions are compromised in a deficient state, lending the individual at risk for developing cancer, autoimmune, neuromuscular and cardiovascular diseases (1-9).

In the context of pregnancy and lactation, vitamin D deficiency has specific effects on the mother/infant dyad. A deficient mother is susceptible to compromise in calcium homeostasis, bone integrity, insulin production and maternal weight gain (10,11). Maternal deficiency also affects fetal and childhood growth (12-17), impairs tooth enamel formation and predisposes the infant to early neonatal hypocalcemia (10,18). In addition, maternal deficiency is theorized to "imprint" the child to long-term health consequences including osteoporosis, type 1 diabetes, multiple sclerosis, cancer and schizophrenia (6, 15, 19, 20). Among exclusively breastfed infants, rickets associated with vitamin D deficiency has resurfaced among populations in the United States (2).

The scientific community is re-evaluating the ideal intake and lifestyle required to achieve optimal nutrient status. Vitamin D, measured by the serum biomarker 25 dihydroxy vitamin D (25 (OH)D), may be optimal with levels as high as 32-40 ng/mL (80-100 nMol/L) (9, 22-24). To achieve this level, attention must be given to both lifestyle and diet. Nutrient intake will need to increase considerably, with recent estimates of infant requirements at 400 International Units (IU) per day (25, 26) and adult requirements, including pregnant and lactating women, up to 4,000 IU per day (10, 27-31). This level of intake is two times the current Adequate Intake (AI) for infants and 20 times the current AI for adults (32). As large-scale trials are underway, the practitioner is advised to be attentive to this nutrient, identifying clients at risk for deficiency and providing recommendations based on information currently available.

Assessment
Vitamin D status is evaluated by measurement of serum 25 (OH)D. This biomarker reflects the contribution of both diet and sunlight exposure to nutrient status (33). Analytic techniques vary, with results reported in ng/mL, micrograms/L and nMol/L. Nutrient status is categorized as optimal, sufficient or deficient. Serum levels remain consistent at all stages of the lifecycle (34). Scientists are in the process of re-defining the optimal serum 25(OH)D as well as the diet and lifestyle required to achieve such levels. Results of large-scale studies in the context of pregnancy and lactation will be published in 2009 and 2012 respectively (35, 36).

Vitamin D: Assessment of Nutrient Status

<table>
<thead>
<tr>
<th>Status</th>
<th>ng/mL</th>
<th>nMol/L</th>
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<tbody>
<tr>
<td>Optimal</td>
<td>32-40</td>
<td>80-100</td>
</tr>
<tr>
<td>Insufficient</td>
<td>20-30</td>
<td>50-80</td>
</tr>
<tr>
<td>Deficient</td>
<td>&lt;20</td>
<td>&lt;50</td>
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Note: 1 ng/mL = 1 microgram/mL = 2.496 nMol/L

Prevalence of Deficiency
Overall, Americans of all age groups demonstrate significant prevalence of vitamin D deficiency, with higher measures among those who are dark skinned or living at northern latitudes. Among North American women of childbearing age, prevalence of deficiency ranges from 1- 25% in light skinned and 29-42% in dark skinned people, with the degree of variation reflected by season (37-41). Among small studies of North American breastfed infants, prevalence of deficiency ranges from 21-78% (42-44). In all of the studies thus far, vitamin D deficiency is defined using the 25 (OH)D level described by the Institute of Medicine [ Infant:<11 ng/mL (<27.5 nMol/L), Adult: <15 ng/mL (<37 nMol/L)](34). Given that subsequent research reveals that sufficient 25(OH)D level is in the range of 32-40 ng/mL (80-100 nMol/L), the prevalence of deficiency, as described in the literature, is significantly underestimated.
Fall is here and we are busy getting ready for ADA’s 2007 Annual Food & Nutrition Conference & Expo (FNCE) which will be held in Philadelphia, home of the Liberty Bell. How appropriate that we should be meeting in this city where the Liberty Bell was rung to call the Assembly together and to summon people for special announcements and events. FNCE will be bringing your Executive Committee together face to face for conducting DPG business and will be summoning members for a special announcement at our DPG’s annual membership reception.

The special announcement is the result of our membership survey and the ADA Board of Directors approval on changing the name of our DPG from Women’s Health and Reproductive Nutrition (WHRN) to Women’s Health (WH). Almost 70% of the members who responded to the survey voted that the name of our DPG should be changed to Women’s Health to encompass all areas of women’s health throughout the life cycle and not just in the reproductive stages.

The strategic planning team that met at ADA headquarters in Chicago last April developed a new mission and vision for our DPG with the 5 goals listed below. The DPG name change to Women’s Health supports and reflects this new mission and vision.

NEW DPG MISSION: Leading the future of dietetics in women’s health.

NEW DPG VISION: WH members are the most valued source of nutrition expertise in women’s health.

NEW DPG GOALS:
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

Your leadership team began in June to actively work on many of the tactics designed to accomplish these goals over the next 3 to 5 years. Copies of the strategic plan will be provided at our annual membership reception at FNCE. If you would like a copy sent to you please contact any member of our Executive Committee.

Hope to see you in Philadelphia!

from the editor  Krista Neal, MS, RD, LD

Hello! Did you notice the new title, Women’s Health Report? I’m so excited we’ve changed the name of our practice group to Women’s Health. We have always tried to focus on women’s health throughout the lifespan, but now the world will know we’re not just about perinatal nutrition. I think it’s a really thrilling change! Another change is the creation of a Communications Director. Some of you may remember Kathy Scalzo, our long time newsletter editor. As the Communications Director, Kathy will make sure we have coordination between the newsletter, the listserv, the website, and group emails. Creating the position was an excellent idea, and I can’t think of anyone more qualified for the job than Kathy. In this issue we feature an article from Carole McCorry. After reading a commentary about Vitamin D in a previous article, Carole wrote to me, wanting to share some of her expertise. I encourage you all to do the same. If you feel you have something to share, or would like to see a topic featured, please contact me. The best ideas come from you! Another article in this issue is about the Nutrition Care Process from Alyce Thomas. Even though I don’t work in a clinical setting, I’ve already figured out how to use Alyce’s article in my job. I hope you find it as useful as I did. As you read this issue, think of topics you would like to see in the future, and tell me about them. As I said, the very best ideas come from you.

from the chair  Cathy Fagen, MA, RD

The Women’s Health Report (ISSN-3233) is a quarterly publication of the Women’s Health Dietetic Practice Group (WH DPG) of the American Dietetic Association. The WH Report features articles, as well as information on programs, materials, positions, and products for use of its readers. News of members, book reviews, announcements of future meetings, requests for information, or other items of interest to women and reproductive nutrition dietetics practitioners should be sent to the Newsletter Editor by the next published deadline date.

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Risk Factors for Deficiency

Sunlight is the most significant source of vitamin D. Exposure to ultraviolet (UVB) radiation induces cutaneous production of cholecalciferol (10). The quantity produced is directly related to the amount of UVB exposure and the degree of skin pigmentation. In general UVB sunrays are not strong enough to induce cholecalciferol production at latitudes north of 37 degrees between the months of October to April. People with dark skin require five to ten times the sun exposure to produce the equivalent amount of vitamin D as their fair skinned counterparts. Use of sunscreen with an SPF of eight reduces the capacity to produce cholecalciferol by 95%. Thus, at risk populations include those who reside north of 37 degrees latitude, have a tradition of being fully clothed, spend a good amount of time indoors, apply sunscreen faithfully, and those who have heavily pigmented skin (7, 9).

Additional risk factors for vitamin D deficiency include limited dietary selections, exclusive breastfeeding without vitamin supplementation, a BMI >30 and consumption of certain medications. Food sources of vitamin D are naturally limited to fatty fish while fortified foods provide the most significant contribution in North American diets (45). Breastmilk is inherently low in vitamin D, with levels reflecting seasonal variation and maternal stores (10). Obese populations have significantly lower vitamin D levels than their non-obese counterparts as 25(OH)D is "sequestered" within fatty stores, making it unavailable for systemic use (46). Individuals taking anticonvulsant medications and/or glucocorticoids have markedly increased requirements for vitamin D (47).

Guidelines for Intervention and Practical Considerations:

- **Sunlight:** One minimal erythemal dose (MED), defined as the amount of sunlight that will not induce sunburn, may be achieved in 15 minutes to 6 hours in a fair skinned or dark skinned person respectively. One full body MED exposure produces the equivalent of consuming 10,000-25,000 IU of a vitamin D3 supplement. A 6% body exposure to one MED will produce the equivalent of 600-1,000 IU’s. There is no advantage to more than one MED of sunlight per day, as the skin will produce photoisomers of cholecalciferol in order to prevent vitamin D intoxication (7). Thus, sunscreen should be applied after one MED is achieved.

- **Vitamin D supplements** exist as D2 and D3. Over the counter (OTC) vitamin D supplements and fortified foods most often contain D3. D2 is approximately 30% as effective as D3 in altering 25(OH)D levels. Stated differently, the body requires three times as much D2 as D3 to achieve the same effect on 25(OH)D levels (48).

  - The Heaney study of vitamin D supplementation is very commonly sited in the literature. The findings indicate that, on average, humans use 3,000-5,000 IU/day and rely on body stores during winter months. Also "for every 40 IU of intake, circulating 25(OH)D levels increase by 0.7 nMol/L (0.28 ng/ml). Supplementation with 580 IU/day is required to maintain healthy 25(OH)D levels while 4,000 IU/day is required to bring levels to optimal range in those who are deficient. Supplementation with 5,500 and 11,000 IU/day achieves serum 25(OH)D levels well below that associated with toxicity. The overall findings suggest that the current AI recommendation is significantly less than actual requirements and that the current Upper Level of Safe Intake (UL) recommendation is well below the threshold of toxicity (32, 49).

  - **Dietary Vitamin D:** The following table provides an overview of the most significant sources of vitamin D and factors to consider regarding nutritional content.

<table>
<thead>
<tr>
<th>Dietary Sources of Vitamin D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
</tr>
<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>Milk</td>
</tr>
<tr>
<td>Fortified Orange Juice</td>
</tr>
<tr>
<td>Fortified Yogurt</td>
</tr>
<tr>
<td>Fortified Breakfast Cereal</td>
</tr>
<tr>
<td>Salmon, Mackerel, Sardines</td>
</tr>
<tr>
<td>Cod Liver Oil (1 tsp)</td>
</tr>
<tr>
<td>Breastmilk</td>
</tr>
<tr>
<td>Infant Formula</td>
</tr>
</tbody>
</table>

References: Shinchuk (9), Specker (10), Greer (44) Calvo (48)
have demonstrated beneficial effect of supplementing 1,000 IU per day during pregnancy while several Asian studies have documented benefit from supplemental doses of 600,000 IU per month in the last trimester. None of the studies documented adverse side effects related to vitamin D toxicity (51).

Considerations in Lactation
Thus far, studies of lactating women are limited, with available data indicating that a maternal intake of 2,000 – 4,000 IU per day of vitamin D3 is required to achieve an optimal 25(OH)D levels for both mother and child (30, 31).

Vitamin D: Guidelines for Intervention: Given the limitations established by the current DRI and consideration to current evidence, the following guidelines are provided, based on the evidence provided in the literature (9, 10, 44, 48, 53).

<table>
<thead>
<tr>
<th>Vitamin D Status</th>
<th>UVB Sunlight</th>
<th>Estimated Requirement (large trials pending)</th>
<th>AI (IU/day)</th>
<th>UL (IU/day)</th>
<th>Proposed Intake (IU/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy, Optimal</td>
<td>UVB &gt;32ng/mL</td>
<td>15 minutes of UVB on hands and face daily</td>
<td>500-1,000 during winter months</td>
<td>200</td>
<td>2,000</td>
</tr>
<tr>
<td>At Risk for Deficiency</td>
<td>25 (OH)D &lt;20 ng/mL</td>
<td>1 MED/day*</td>
<td>4,000</td>
<td>200</td>
<td>2,000</td>
</tr>
<tr>
<td>Deficient</td>
<td>25 (OH)D &lt;20 ng/mL</td>
<td>--</td>
<td>N/A</td>
<td>N/A</td>
<td>50,000/wk for 2-3 months, 500,000/month thereafter (5)</td>
</tr>
<tr>
<td>Lactation</td>
<td>1 MED/day</td>
<td>2,000-4,000</td>
<td>200</td>
<td>2,000</td>
<td>2,000</td>
</tr>
<tr>
<td>Infancy (Exclusive breastfeeding or receiving &lt; 500 ml/day of Infant Formula)</td>
<td>No direct sun exposure for the first 6 months of life</td>
<td>400</td>
<td>200**</td>
<td>1,000</td>
<td>400</td>
</tr>
</tbody>
</table>

* MED: Minimal Erythemic Dose: Sunscreen with SPF 15 applied after 1 MED achieved.
** American Academy of Pediatrics recommends supplementation within the first two months of life.

Considerations in Infancy:
The American Academy of Pediatrics (AAP) recommends that all infants avoid use of sunscreen and exposure to direct sunlight in the first six months of life (43). Due to limitations in sunlight exposure and the limited quantity of vitamin D found naturally in breastmilk, the breast-fed infant is at significant risk for vitamin D deficiency. Small studies indicate that supplementation of 400 IU per day is required for the breastfed infant to achieve optimal levels of 25 (OH)D (27). In addition, the practitioner is invited to consider a recent large prospective study in which breastfed infants received up to 2,000 IU of vitamin D per day in the first year of life. No ill effects of this level of supplementation are reported. In an evaluation 40 years later, those who had received regular vitamin D supplementation had an 80% reduced risk of developing type 1 diabetes (52).

Conclusion
Vitamin D is a key nutrient that functions hormonally in every major organ system. Nutrient status has significant impact on bone and calcium homeostasis, cellular differentiation and production of anti-inflammatory cytokines (1-5). These mechanisms have powerful short and long-term health implications for the mother/infant dyad. Vitamin D deficiency has significant prevalence among American sub-populations, especially those with limited UVB exposure, those exclusively breastfeeding or with limited eating habits, and those requiring anti-seizure or glucocorticoid medications (35-42). While large trials are underway, available evidence indicates that levels of intake required to achieve optimal status may be two to twenty times the current AI (10, 26-33) for infants and adults respectively. Thus, vitamin D supplementation may be a necessary component of dietary recommendations. At the present time, the practitioner is advised to screen individuals for potential deficiency, advocate for serum 25 (OH)D levels to be checked in high risk patients, and to provide logical and safe levels of supplementation when appropriate.

References
THE NUTRITION CARE PROCESS AND MODEL

Alyce Thomas, RD  St. Joseph's Regional Medical Center, Paterson, NJ

The House of Delegates (HOD) adopted a standardized Nutrition Care Process and Model (NCPM) in March 2003. The NCPM is the first standardized care process developed for profession-wide use (see below) and was designed to ensure that nutrition care provided by RDs and DTRs is optimal, measurable and consistent. The focus of the NCPM is on the needs of patients and can be used for the individual as well as for groups. The process can also be used in health care settings and a wide variety of community settings. It is not intended to standardize nutrition care, but to establish a standardized process for providing care.

The NCPM is one piece of the nutrition care process relationship, which consists of:

• Scope of Practice Framework
• Nutrition Care Manual
• Standardized Language
• Evidence Analysis Library
• Evidence Based Guides for Practice
• Dietetics Practice Based Research Network (DPBRN)

The Nutrition Care Process is incorporated into the Nutrition Care Manual and Scope of Practice Framework. The NCPM provides the framework for posing questions to be answered in evidence analyses and areas where additional research through the DPBRN is needed. It also drives the content organization of the Evidence-Based Guides. The Standardized Language contains the terms used to describe the activities that occur in each component of the NCPM.

The NCPM consists of a four-step process: Nutrition Assessment, Nutrition Diagnosis, Nutrition Intervention, and Nutrition Monitoring and Evaluation. A brief description of each step follows:

Step 1. Nutrition Assessment
In the first step, data is obtained, verified and interpreted to identify a nutrition-related problem. The data may be gathered from the medical record, a patient/client interview, health surveys, or a variety of other sources. The practice setting and the individual or group’s health status are also determinants of the existence of a nutrition problem or diagnosis. Components of the nutrition assessment would include a client history, food or nutrition history, biochemical data, anthropometric measurements, and physical examination findings.

Step 2. Nutrition Diagnosis
Nutrition Diagnosis is the identification and naming of the specific nutrition problem after the nutrition assessment. The RD is responsible for independently treating the problem. The nutrition diagnosis should not be confused with a medical diagnosis. The nutrition diagnosis names and describes a problem that may already exist or may be at risk of occurring.

Whenever possible, the nutrition diagnostic statement is written in a PES format that states the Problem (P), Etiology (E), and Statement (S). The problem is the diagnostic label that describes or qualifies the alterations in the patient’s nutritional status. Adjectives useful in describing the human response include: altered, impaired, ineffective, increased or decreased, at risk of, acute or chronic. Etiology defines the causes or factors that contribute to the existence of the problem. The problem is not only stated, but also identified. The etiology is linked to the nutrition problem by the words “related to.” The signs and symptoms are the defining characteristics. These are the cluster of subjective and objective signs and symptoms established for each nutrition category. The defining characteristics provide evidence that a nutrition related problem exists and that the problem is identified, quantified and described in its severity. The signs and symptoms are linked to the etiology by the words "as evidenced by" or AEB. An example of a PES is: excessive calorie intake (problem) "related to” consumption of large portions of high fat meals (etiologic) “as evidenced by" average daily intake of calories exceeding the recommended amount by 400 kcal and an 8 lb weight gain in the past 4 weeks (signs).

Step 3. Nutrition Intervention
The Nutrition Intervention is the third step of the NCPM. An intervention is a specific action used to address the Nutrition Diagnosis or problem. Nutrition Intervention involves planning and implementation. Planning involves prioritizing the nutrition diagnoses based on the severity of the nutrition problem defining the nutrition prescription and intervention, and conferring with the patient, practice guides and policies. Implementation is the action phase of the NCP. During this phase, the RD or DTR communicates and carries out the plan of care.

Step 4. Nutrition Monitoring and Evaluation
This is last step of the NCPM. Monitoring refers to the review and measurement of the patient or group’s status at a follow-up point with regard to the nutrition diagnosis, intervention plans, goals, and outcomes. The evaluation is the systematic comparison of current findings with previous status, intervention goals, or a reference standard. The purpose of monitoring and evaluation is to determine the degree to which progress is being made and goals or desired outcomes of nutrition care are being met.

Documentation
Documentation is an integral component of the each step of the NCP. All documentation should be relevant, accurate and timely. Also, at the end of the nutrition assessment, the RD or DTR must determine the feasibility of continual care.

More information on the NCPM, including a figure of the NCPM can be found on ADA’s website at: www.eatright.org/qs/rda/scgp/ada/fsa/ci/governance_9000_ENU_HTML.htm
Patient: 39 year old Caucasian female, G1 P0, new diagnosis Diabetes in Pregnancy. Note that although this pt has several nutrition problems, the nutrition diagnosis used reflected the intervention that was done at this particular visit (education for Diabetes in Pregnancy).

Nutrition Assessment:
- Current weight: 225#
- Height: 62"
- Prepregnancy weight/BMI: 210#/41.2
- Prenatal vitamins: yes, but contributing to nausea, pt to try Flintstones: 1 BID
- Nausea/Vomiting: some nausea Pica: no
- Appetite: moderate

In household, who cooks: self and husband
Who shops: self and husband
PMHx: per pt "Pre-Diabetes" prior to pregnancy
Labs: 1 hour glucola 214-pt referred to high risk Thursday clinic for Diabetes in Pregnancy program H/H: 13.7/39.6

Typical Meal Pattern: Pt works 3-11 shift, so note timing of meals:
- Breakfast: (2:00 pm) 1 hot pocket, diet Coke
- Snack: (5:00 pm) pretzels, fruit
- Lunch: (7:00 pm): sandwich (cheese), 3-4 chips, can diet Coke
- Snack: (9:00 pm): can diet Coke
- Dinner: (11:30 pm-12:00 am) hot dog or barbecue

Beverages: Milk: occ; 100% juice: 0; Koolaid/sugar drinks: 0; Soda: 2-3 (diet Coke); H2O: 3+; Coffee/tea: 0

Diet adequacy: diet inadequate in calcium, fruits, vegetables; excessive processed foods; monitor caffeine intake (diet soda)

Nutrition Diagnosis:
Food and nutrition-related knowledge deficit is related to lack of prior exposure to Diabetes in Pregnancy information as evidenced by new diagnosis Diabetes in Pregnancy by 1 hour glucola of 214

Nutrition Intervention:
- Discussed weight gain goal up to 15#
- Pt educated on 2000-2100 calorie DM in Pregnancy diet stressing 6 feedings/day, portion control.
- Pt provided "Meal Planning for DM in Pregnancy" booklet with sample meal plan.
- Pt provided with overview of Diabetes in Pregnancy program and Diabetes in Pregnancy booklet reviewed.
- Pt has meter at home. Pt provided with blood sugar log and was instructed to test her blood sugars 4 times a day; a fasting blood sugar and one hour after each meal.
- Pt currently states she has all needed supplies for her meter.

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As a lactation consultant in a busy pediatric hospital I have often received requests to meet with a mother who had previously been breastfeeding and now desires to relactate. However, this case seemed different. The consults seemed more urgent. Not only did the admitting nurse leave a consult the evening they were admitted, but also the resident, the medical student and the day nurse called to alert me that this mother needed my help.

When I walked into the room I was pleasantly surprised to see a young mother sitting in a rocking chair nursing her 3 month old baby. The mother was 22 years old and had a 20 month old son at home that she attempted to breastfeed but was unsuccessful because he was unable to latch. Her second baby actually enjoyed nursing and had latched on at birth.

The mother developed a UTI shortly after delivery and was treated with antibiotics that she was told were incompatible with breastfeeding. She stopped breastfeeding and pumped for one week, and then when she completed the course of medication she resumed breastfeeding. Her nipples became increasingly sore and painful and standard treatment such as using lanolin was not effective. She continued to breastfeed off and on. Whenever her nipples became unbearably sore she would stop breastfeeding to let them heal for a few days. She would pump only when her breasts became uncomfortably full.

Her baby was admitted to the hospital with vomiting. He was receiving 5-6 oz of Isomil every 3 hours by bottle. His mother was anxious to provide him with breast milk only and desired to increase her milk supply to meet all his needs. I found it interesting that this baby could go days without breastfeeding and then return willingly and happily to the breast to nurse. We often hear about “nipple confusion” that occurs when a baby is fed from an artificial nipple and then has difficulty latching on to the breast. There was no nipple confusion for this baby.

The night they were admitted to the hospital the mother hadn’t breastfed him or pumped for 24 hours. She was offered the use of a hospital grade electric pump and expressed 8 oz. So, here was a mother who had maintained some level of milk production despite going for days without any breast stimulation. This was very encouraging indeed. Although her supply was diminished, her milk-producing glands had not involuted.

I needed to examine her breasts and observe her latch on the baby. At first glance her nipples looked very unusual. They were large and puckered in the center. On closer examination I realized that her nipples were truly inverted, a rare occurrence that is not often observed. Flat nipples that are difficult to grasp are fairly common, but true inverted nipples occur much less frequently.

I then asked her to position the baby at the breast and latch him on. She held him in the cradle position with his chin down on his chest and his body away from hers. In this position he could only grasp the tip of the nipple and very little breast tissue. I demonstrated the cross cradle position and emphasized the importance of not pushing on the back of the baby’s head. In this position he can tip his head back with his chin deeply into the breast and his nose away from the breast. I showed mom how to use her forearm to hold the baby’s body close to hers so that he could obtain a deeper latch. She reported that this position was more comfortable and she experienced less pain.

My recommendations for this mother-baby dyad included warm saline soaks for the sore nipples and use of Soothies™ hydrogel breast pads to help with healing. I suggested that she contact WIC for an electric breast pump, and that she breastfeed or pump at least six times per day to increase her milk supply. Over time she may be successful in providing breast milk for all of her infant’s feedings. It was very rewarding to meet this young mother who was so motivated to increase her milk supply in order that her infant could receive the best nutrition possible. She had persisted to offer the breast because her son enjoyed it and she too enjoyed the closeness but certainly not the pain. Hopefully with proper management her comfort will increase and breastfeeding will become a truly enjoyable experience.

Editor’s note: This case reflects three important themes in lactation. One, the range of normal is wide. This baby transferred from breast to bottle and back again easily, despite the mother’s low milk supply and the mother maintained a partial milk supply, despite very little breast stimulation. Two, it is important to go back to the basics when assisting breastfeeding dyads. In this case, improving the position and latch improved the situation, despite inverted nipples and low milk supply. Three, as Paul Fleiss, MD says, “Breastfeeding is a confidence game.” This young mother confidently followed her heart in breastfeeding her son, despite painful nipples.
This year we have several members who have been a part of ADA for 50 years. We asked them questions about their professional lives. Here we feature one of those members (please note: due to her extensive experience and space constraints, we were only able to include part of her responses).

Shirley M. Ekvall, PhD, RD, LD, FAAMD

Where have you worked? What was your first job?
After interning at the University of Wisconsin, I took my first job as the dietitian in charge of metabolic research at the UCLA Medical Center in Los Angeles. It was challenging but I had worked with Ruth Leverton PhD, RD while in college, who later became the head of USDA. I was a subject for her amino acid study on isoleucine requirements for college students.

What articles (if any) have you written?
The experience with Dr. Leverton in research helped me publish a first paper for the ADA journal while at UCLA. After the job in Los Angeles, I became interested in the pediatric area at the UCSF Medical Center, and moved to San Francisco. Since then, I have published over 33 peer-reviewed articles and about 84 chapters in books, including a recent invited chapter in the S&B Baker MD, PhD’s book on Nutrition Support. The most recent article I have published is entitled “In Home Toxic Chemical Exposures and Children with Intellectual and Developmental Disabilities”. It is an interdisciplinary article and included nursing and psychology as well as nutrition.

What are your favorite tools and resources on women’s health?
The Women’s Health Initiative, Maternal and Child Health resources, the ADA position paper on women’s health, our DPG newsletter, and a portion of our book, Pediatric Nutrition in Chronic Diseases and Developmental Disorders are important resources. The most significant chapters in our book (i.e., the ones that relate to women and health), are the ones that focus on pregnancy, fetal alcohol syndrome, lead and pica, drug/nutrient interactions, vegetarianism, nutritional factors in birth defects, and maternal PKU.

How have things changed since you started practicing? For example, how has your life as a dietitian and professional woman evolved through the years?
Today women’s health is more important as our lives are much busier and more diverse. Food is often eaten outside of the home and women have less time to exercise. Television also takes time from our lives. We have to be more careful about taking care of ourselves, and become better organizers, so we can have enough energy to contribute to our families. I personally have done a lot of networking in my position. This helps spread the word in a cost effective way. My experience working with interns and children has been enjoyable. Both the pediatric and internship experience, and graduate work on Vitamin E and cystic fibrosis at the University of California, Berkeley, were helpful to me in my move to the University of Cincinnati and Cincinnati Children's Hospital Medical Center, Division of Developmental Disabilities (i.e., mostly funded by a Maternal and Child Health grant).

What do you consider a highlight of your career?
These experiences promoted my interest in training and research as a graduate student advisor, internship director, and nutrition director for the MCH grant. A fellowship from ADA helped with my graduate work and 30 years later I was given the ADA award for excellence in dietetic education. Training, research, and writing have been highlights. My key highlight is the recent second edition of our book Pediatric Nutrition in Chronic Diseases and Developmental Disorders (Oxford University Press), co-edited with my daughter, Valli Ekvall, PhD, RD. There is a 35 credit ADA approved self-study for the book. Also, recently my son, Brad, is writing and designing a book on pain management with an illustrated index www.winoverpain.com.

What are your recommendations for WH DPG?
The most cost effective health care is prevention! In my opinion, women and children are our greatest long-range investment in nutrition and health care.

To join the Women’s Health listserv send an email to: WHRN_list-subscribe@yahoogroups.com
WH MEMBER HIGHLIGHTS

FNCE Poster Sessions

Kathleen Pellechia, RD, WH website/listserv coordinator
Poster Session: Tuesday, October 2
Title: Identifying web-based resources on toddler nutrition and feeding for staff of the Special Supplemental Nutrition Program for Women, Infants & Children. Kathleen will also be exhibiting the WIC works Resource System as part of the Tech Pavilion.

Joanne Volpe, MS, RD, WH Newsletter, Perinatal Section Editor
Poster Session Co-author: Sunday, September 30
Title: Low-carbohydrate, high-protein and high-carbohydrate, low-fat diets similarly lower body weight and body fat measurements in overweight pre-menopausal women.

Maria Duarte-Gardea, PhD, RD, LD, Former WHRN Treasurer 2003-2005
Poster Session: Tuesday, October 2
Title: Attitudes towards prenatal and breastfeeding practices on food consumption of Mexican American women.

Member Publications

"Oh Yes, You Can Breastfeed Twins…Plus More Tips for Simplifying Life with Twins" by WH Member April Rudat, MS Ed, RD, LDN, www.ohyesyoucanbreastfeedtwins.com

Introduction of new WH leaders

Maria Pari-Kenner, MS RD CDN CPT-NASM, Appointed as Membership Chair
Maria is a dietitian and personal trainer in private practice in New York, specializing in maternal health. She has been a member of WHRN since 2002. As Membership Chair, Maria will serve as the liaison between WHRN members, the Executive Committee and ADA. You can find out more about Maria by visiting her website, www.maternalhealthmatters.com. She can be reached at mpkeener@yahoo.com.

Joanne Volpe, MS, RD, Appointed as the Perinatal Section Editor of the Women's Health Report. Joanne is a dietitian in private practice in Virginia, relocating to North Carolina. As section editor, Joanne will help recruit authors for articles relating to perinatal nutrition and serve on the editorial board reviewing all articles for the newsletter. She can be reached at jovolpe@vt.edu.

Kathy Scalzo, MA, RD, CDN, Appointed as Communications Director.
Kathy was a dietitian for the student health services at a high school and community college in New York until she took leave to raise her twin boys. She served as Publications Editor for our newsletter in 2004-05. As Communications Director, Kathy will ensure the communication of information to the WH DPG membership via the newsletter, website and listserv is coordinated and provided in a timely manner. Her email address is jscalzo@nyc.rr.com.

Congratulations to all of our members for their professional accomplishments! Please send all member highlights to Jamillah Hoy-Rosas, MPH, RD, WH Chair-Elect, at jhoyrosas@gmail.com.

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2007 LEADERSHIP INSTITUTE CONFERENCE
Nancy Turnier-Lamoureux, RD

As the newly elected Treasurer and first time member of the Executive Committee, it was truly an honor for me to be invited to attend the Leadership Institute Conference. It was held in early June of this year, in beautiful San Diego, California. I couldn’t think of a more inspiring location to become energized, and optimistic about leadership opportunities that this DPG has afforded me.

Arriving to delightful weather, the first evening was a frenzy of activity. There were opening remarks by newly elected President, Connie Diekman, who discussed the future role of dietitians and our impact as Nutrition Experts. This was followed by a great opportunity to network with other attendees. Over 250 people representing various DPGs and state affiliates were invited to this 4th annual event. I met a dietitian from Amman, Jordan who represented the Overseas Dietetic Association, and dietitians from across the country, from Hawaii and Maine.

In preparation for this meeting, we were asked to do some advance reading, a book by Mark Sanborn, You Don’t Need a Title to be a Leader – How Anyone, Anywhere, Can Make A Difference. It illustrated what strong self-leadership actually requires. This was the underlying premise of the meetings over the next 4 days. Wasn’t it 2 days?

Keynote speakers included Jim Sorensen, Mark Levin, Gervase Busch and Jennifer Deal, all of whom exhibit strong leadership skills within their areas of expertise.

These leaders have years of experience in various capacities, and really convey what leadership characteristics are all about. All were very entertaining, while providing us with knowledge and skills to apply in our own leadership roles, both professionally and personally. I learned about the different generation styles, and while we may have different perspectives, ultimately we all have similar values. We understand that creditability, and the ability to listen and encourage are among the most important leadership characteristics.

My own intentions are to challenge myself to understand other people’s perspectives and to have those Fierce Conversations, i.e. one in which we come out from behind ourselves, into the conversation, to make it real.

I plan to put this knowledge into practice not only in my new role of WH Treasurer but also in my capacity as Outreach Coordinator at my local WIC agency, and as a mother of a 5-year-old son!

PREPARE FOR PUBLIC POLICY WORKSHOP

Collaboration between the American Dietetic Association’s (ADA) Dietetic Practice Groups (DPGs) and the association’s policy initiatives and advocacy program has been the source of several of the most significant nutrition and health breakthroughs in the past three years. In Washington DC and the states, issues affecting dietetics practice in all specialty areas continue to bubble up.

"This kind of liaison was at the heart of ADA’s legislative work on the Older Americans and the Ryan White CARE Acts," said Mary Hager, PhD, RD, FADA, who is part of ADA’s Washington team. "To create these kinds of collaborations, ADA reaches out – with DPG meetings at every Food & Nutrition Conference & Expo (FNCE), multiple conference calls with DPG leaders, extended conversations on practice issues and collaborations on legislative and regulatory affairs."

The scope of these conversations frequently is specific to DPG interests. "But there is one meeting where ADA focuses on the big picture, with attention going to strategic priorities for all practitioners," Hager said. "Every DPG needs to be represented at ADA’s Public Policy Workshop to hear and see how public policy affects food, nutrition and health, and to be trained in messages and tactics for taking our causes to a higher level."

In 2008, PPW is scheduled for February 4-6 in Washington DC. To ensure broad representation and a legacy of informed advocacy, ADA again will offer each DPG a scholarship to cover the cost of registration.

"Considering that the 2008 PPW will be in the middle of the 110th Congress, it’s an important time for dietitians to look at the status of issues we care about, and to work for results while in Washington. Also, our dates coincide with Presidential primaries – and we’ll be in a place to witness landmark events," she said.

Health care for Americans, nutrition and food safety issues, access to nutrition care services and food assistance are topics likely to dominate national headlines next year.

In 2007, PPW hosted a session on some of the emerging and ongoing issues ADA members face in their areas of specialty. Join the discussion and be part of ADA’s voice on Capitol Hill and throughout the country. Go to www.eatright.org this fall to register, for scholarship applications and other travel-related details, or call ADA’s Washington office at 1 / 800 / 877-0877.

our mission

“Leading the future of dietetics in women’s health.”
June 1, 2006-May 31, 2007
(Based on Final May 2007 Statements)

**Assets**
Total Liabilities & Net Assets $ 43,563

**Revenues**
Membership Dues $ 20,625
Publication Sales/Subscription Income $ 174
Grants/Contracts $ 0
Investment Income $ 2,936
Sponsorship $ 5,000

**Expenses**
Lodging $ 3,306
Subsistence $ 1,040
Transportation $ 7,876
Postage $ 2,222
Mailing Service $ 487
Office Supplies $ 0
Stationery/Forms $ 0
Telephone $ 43
Teleconferencing Expenses $ 854
Temporary Help $ 0
Other Expense $ 314
Membership Dues/Seminar Fees $ 0
Honorariums/Awards $ 132
Audio Visual $ 1,457
Expo/Meeting Services $ 0
Food Service $ 6,517
Printing/Copying $ 8,556

**$28,735**

Please note that expenses are greater than normal this fiscal year due to the participation of the Executive Committee in Strategic Planning for the DPG. This meeting was held in April 2007 and was funded through the DPG reserves.

A NEW WEB SITE TO GO WITH OUR NEW NAME!

What an exciting time of year with back to school, FNCE and the launch of the brand new Women’s Health DPG Web site at www.womenshealthdpg.org! Based on member input, we have given the Web site a new design and will be adding more resources and features in the coming months. Visit the general section for announcements and news and then log in to the members section to access DPG guidance documents and past issues of the newsletter. We hope you will visit and tell us what you think! Questions and comments can be directed to info@womenshealthdpg.org.

Future Women’s Health Report Submission Deadlines:

Winter Issue
October 15th

Spring Issue
January 28th

Summer Issue
April 28th
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"