

Women's Health *REPORT*

A QUARTERLY PUBLICATION OF WOMEN'S HEALTH DIETETIC PRACTICE GROUP

DIETARY SUPPLEMENTS: Research, Regulations and Resources

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The Office of Dietary Supplements (ODS) at the National Institutes of Health offers an intensive week-long practicum for researchers and practitioners to increase knowledge of dietary supplements and stimulate interest in the evaluation of these products for health promotion and disease prevention. This year, the conference was held from June 9-13, 2008 and I was privileged to attend along with approximately 100 other attendees. This article will provide a brief summary of some of the main topics discussed at this training. For more information about the practicum, its speakers, and future opportunities to participate, visit the ODS website at <http://ods.od.nih.gov> and the Dietary Supplement Research Practicum website at <http://odspracticum.od.nih.gov/>.

Dietary Supplement Usage & Motivations for Use

Many practitioners in the field of nutrition and women's health are familiar with the use of dietary supplements by their clients, family members and colleagues. Women, in particular as the gatekeepers of nutrition and health information in the home, are major consumers of dietary supplements. Annual dietary supplement sales are estimated at \$22 billion dollars (1). Vitamin sales accounted for approximately \$7.4 billion in sales in 2007, according to Nutrition Business Journal (NBJ) statistics. Within these sales, the top six vitamins purchased were: multivitamins, B vitamins, vitamin C, vitamins D and H (biotin), vitamin E and vitamin A/carotenoids. Mineral sales were \$1.8 billion in 2007, and top minerals purchased were: calcium, magnesium, iron, chromium, potassium, zinc and selenium. Herb and botanical sales were \$4.5 billion in

2007, and the top sellers in this category were: noni juice, garlic, mangosteen juice, green tea, saw palmetto, echinacea, ginkgo biloba, ginseng, milk thistle and psyllium. Some of the top specialty supplements sold were: glucosamine and/or chondroitin, homeopathics, fish or animal oils, CoQ10, probiotics, plant oils, digestive enzymes, MSM and SAME (2).

Specific patterns of usage of dietary supplements are harder to characterize than sales. This is because sales numbers do not properly reflect prevalence of use; rather they are mainly

indicative of the price of products. For example, some supplements which are infrequently used may have high sales numbers because they are very expensive, while others like generic multivitamins are far cheaper and are purchased in larger quantities. One of the best sources of information available regarding the actual prevalence of dietary supplement use is from the National Health and Nutrition Examination (NHANES) surveys. NHANES is a continuous survey of a nationally representative sample of 5,000 people that assesses the health and nutrition status of American adults and children (3). In NHANES, dietary supplement use is recorded for all interviewees. According to data from NHANES 99-00, 52% of US adults used a dietary supplement. Women accounted for 56.7% of all users and were more likely to use supplements than men in all categories of use (1). Other indicators of dietary supplement use were: healthy weight, greater reported physical activity, health status reported as excellent or very good and non-smoking. These healthful lifestyle factors make it difficult for researchers to differentiate the benefits on overall health from supplement use, rather than these other behaviors (1).

Although some large surveys do collect data on who uses supplements, few investigate the motivations behind supplement use. Gathering information on motivations for supplement use is important because it gives insight into how people think about preventative or curative measures and how supplements may fit into their world view or health belief system. Discussing supplement use at certain key times in a person's life, for example, folic acid use during preconception, offers a teachable moment to encourage supplement use and discuss benefits during this critical time. Similarly, other supplements may need to be discouraged or their use monitored for warning signs of inappropriate use or excessive intake. Some focus group data indicate that people are more knowledgeable about vitamins and minerals than they are about herbs and botanicals and they may confuse these items and their motivations for using them (4). Most consumers report taking supplements for the following reasons: overall health/wellness, general nutrition, performance/energy, to prevent or treat specific health problems, because they are good for themselves and their family or were recommended by an MD. Women, in particular, are more likely to indicate that they are taking supplements for health reasons and because they are good for themselves and their family members (4). When inquiring about supplements and motivations for use, it is helpful to ask about specific supplements used and assess motivation for each, since they may differ from one supplement to another. Groups to be especially vigilant about the type, dosage, duration,

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from the chair **Jamillah Hoy-Rosas, MPH, RD, CDN, CDE**

We are fortunate, as food and nutrition professionals, to be practicing at a time of incredible advances in nutrition research and knowledge. Unfortunately for consumers, these advances can sometimes increase their sense of confusion and doubt about our field. Perhaps in no other area are consumers as perplexed as when dealing with dietary supplements. We know that the majority of Americans regularly use or have tried dietary supplements. Because women are the main consumers of these products and are the gatekeepers in the home for their families' supplement use, this trend has huge implications in our practice area. We are perfectly placed to be the expert guides to help consumers navigate this complex industry confidently. This issue is dedicated to advancing your knowledge of the various issues regarding supplement use, such as the regulatory process, including practical tips and resources to learn more. Hopefully you will find, as I did, that this information stimulates your interest in advancing the field through research. This is why we have included a summary of ADA's Research Agenda as well as funding opportunities and resources to help you build your research resume. The ADA Food & Nutrition Conference Expo (FNCE) is a great place to learn about the research needs in our field and network with potential collaborators. We invite each of you to come to all of our events and take advantage of the opportunities they will provide.

The leadership team continues to work hard to make this DPG as useful to you as possible through our newsletters, eblasts, listserv and website. An effort in this area was the recent successful, first ever WH DPG-sponsored CEU-granting teleconference held on October 2nd. Look forward to other similar opportunities in the coming months! If you have ideas about future topics or want to be a speaker, please contact whdpgmembership@gmail.com.

There are many opportunities to get involved and help shape the future of this DPG. We are currently looking for nominations for the following officer and committee positions: Chair-Elect, Treasurer & Nominating Committee Chair. For more information, please see the call for nominations on our website at www.womenshealthdpg.org or send an email to whdpgnominations@gmail.com. Our leadership team is also looking for members to fill newly created positions of Mentoring Coordinator and Reimbursement Coordinator. If you are interested in reviewing these position descriptions, please contact whdpgchair@gmail.com. Positions are also available with the newsletter. Available positions include: Assistant Publications Editor, Women's Health Section Editor, Member's Spotlight, Resource Reviewer and Calendar of Events writers. We are also interested in writers for a new student spotlight section. For more information, contact whdpgcommunications@gmail.com.

Lastly, I want to thank everyone involved with this issue, as an extra special effort was made to get it to you before FNCE. I want to recognize in particular our Publications Editor and newlywed, Olivia Bletsos (now, Eisner), MPH, RD, CLC and our Communications Chair and new mom, Miri Rotkowitz, MA, RD. Congratulations to both on their new roles and their hard work and dedication to our DPG.



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

I always love the fall...sure, it signals the end of the long, lazy days of summer and teases us about the long wintry days ahead...but, that slight chill in the air also serves to get these lazy bones moving again and the old gray cells churning. Schools are back in session, the workplace picks up its pace, tailored clothing replaces the flowy fabrics of summer, and that part of me that seeks structure and organization goes into 5th gear. As we get closer to FNCE, I am also inclined to start thinking about my career, my obligations and volunteer commitments and my goals for the next year. FNCE provides the perfect place to re-charge and re-energize, to remember why we got into dietetics in the first place and of course to meet old friends and new colleagues!

This season we are proud to showcase our very own chair, Jamillah Hoy-Rosas, MPH, RD, CDN, CDE as the lead author on an ambitious piece that seeks to sort through the very confusing information out there on dietary supplements. She has also pulled together a list of the top 10 herbs and botanicals used by women in an easy-to-reference format for use in your clinical practice. On the subject of dietary supplements, Erin DeSimone M.S., R.D brings to light a little discussed nutrient, choline and the ways in which it's deficiency can impact on special populations.

Toni Piechota, MPH, MS, RD our Public Policy Chair has put together a fantastic summary of the happenings on Capitol Hill from the revised Farm Bill to the expansion of Medical Nutrition Therapy coverage by Medicare. In addition, our new Research Coordinator, Megan Tubman, MS, RD brings us the latest news from ADA and their strategic direction for research in dietetic-related areas. This newsletter is chock full of information that we hope will spark some serious thought about what direction you will be taking with your career after FNCE...perhaps you will be inspired to take on more leadership roles, find funding for that research study you've been wanting to conduct, or finally take the plunge and write that book that's been brewing in your head for years. Whatever you do, we will want to hear about it! See you in Chicago.

motivation and safety of their supplement use include the frail, the ill, young children and women of reproductive age who are most at risk from inappropriate use. These populations are also most in need of quality research.

Regulation of Dietary Supplements

As practitioners, consumers and particularly researchers, it is vital for us to have a solid grounding in the processes of oversight and regulation by the federal government of the dietary supplement industry. Both the Food and Drug Administration (FDA) and the Federal Trade Commission (FTC) have roles pertaining to supplements and regulation. Legislation exists that governs the labeling of ingredients in dietary supplements and health claims on supplement labels and product advertising. The major regulation regarding supplements is the Dietary Supplement Health and Education Act (DSHEA) of 1994 which amended the Federal Food, Drug and Cosmetic Act (FFDCA). DSHEA created a new category of food: the “dietary supplement” which was defined as a product (other than tobacco) intended to supplement the diet that contains one or more dietary ingredients. These dietary ingredients could be vitamins, minerals, amino acids, herbs or other botanicals or any concentrate, metabolite, constituent or extract of those items. These products must be intended for ingestion by mouth. DSHEA allowed for the inclusion of dietary supplements under the FFDCA adulteration provisions and established requirements for the safety and labeling of new dietary ingredients (5,6). Dietary supplements in their labeling were allowed under DSHEA to make “statements of nutritional support.” These statements called “structure/function claims” are allowed to describe the role of the ingredient or its mechanism as intended to affect the structure or function in humans (Table 1). The claims are forbidden to claim to “diagnose, mitigate, treat, cure, or prevent” disease and manufacturers must have substantiation that their nutritional support statements are “truthful and not misleading.” Unfortunately, manufacturers are not required to submit this proof to FDA and nutrition support statements do not require prior FDA approval. The labels must however, include a disclaimer that: “This statement has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.” (7)

Table 1: Examples of Structure/Function Claims allowed on Dietary Supplements

Structure/Function Claims

- Helps maintain normal cholesterol levels
- Maintains healthy lung function
- Provides relief of occasional constipation
- Suppresses appetite to aid weight loss
- Supports the immune system
- Relief of occasional heartburn or acid indigestion
- For relief of occasional sleeplessness
- Arouses sexual desire

Since the passage of DSHEA, the dietary supplement market has increased dramatically, with new products and new ingredients being introduced regularly. As part of DSHEA, the FDA has very

specific responsibilities for regulating supplements that differ from the manufacturer’s responsibility for marketing them. By law (DSHEA), the manufacturer is responsible for ensuring that its dietary supplement products are safe before they are marketed. Unlike drug products that must be proven safe and effective for their intended use before marketing, there are no provisions in the law for FDA to “approve” dietary supplements for safety or effectiveness before they reach the consumer. Under DSHEA, once the product is marketed, FDA has the full burden of responsibility for showing that a dietary supplement is “unsafe,” before it can take action to restrict the product’s use or pursue its removal from the marketplace (5,6). However, starting December 22, 2007, under the Dietary Supplement and Non-Prescription Drug Consumer Protection Act, any serious adverse events reported to a manufacturer are required to be reported to FDA through MedWatch 15 business days after the report is received (6). One particularly notable case of FDA action against a supplement were its actions to ephedra-containing supplements in the United States in April 2004, after the FDA determined that ephedra posed an unreasonable risk to those who used it. Substantial evidence of harm emerged in 2003, when a major study reported more than 16,000 adverse events associated with the use of ephedra-containing dietary supplements, including heart palpitations, tremors and insomnia. FDA subsequently determined that ephedra presented an unreasonable risk of illness or injury and on April 12, 2004, the agency’s final rule prohibiting the sale of dietary supplements containing ephedra went into effect. This rule was subsequently upheld on May 14, 2007 (8).

Newer regulation has been designed with the safety of the American public in mind. On June 25, 2007, the FDA published the Dietary Supplement Good Manufacturing Practices (DS CGMP) rule. This rule requires that proper controls are in place to ensure that dietary supplements are processed in a manner that guarantees a consistent, high quality product, unadulterated with contaminants or impurities and accurately labeled. The DS CGMPs should help prevent inclusion of the wrong ingredients, too much or too little of a dietary ingredient, contamination (e.g. natural toxins, bacteria, pesticides, glass, and heavy metals such as lead), and improper packaging and labeling. Violators would face product seizure from the marketplace and criminal penalties (6,9).

The FTC has a role as well in the regulation of dietary supplements. The FTC and FDA have overlapping authority and work together closely to coordinate efforts at dietary supplement regulation. Unlike FDA, the FTC is primarily a law enforcement agency and it focuses on the advertising of dietary supplements, rather than their labeling. Advertising is defined as anything endorsing and/or inducing the purchase of a product. The FTC works primarily to ensure that the way products are advertised is truthful and not misleading. The FTC is able to bring federal court action and obtain broad liability and redress from offenders (10).

Resources on Dietary Supplements

For researchers seeking to find out more information about dietary supplements, there are a variety of reputable online resources (Table 2). Consumers may also need guidance on the safety and efficacy profiles of certain herbs and supplements. They may have difficulty establishing which online websites should be used. Questions that should be

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asked when accessing certain websites may include:

1. Who created the site? Is the author of the page named or identified? Does the author have the expertise or credentials to qualify him or her to offer a valued opinion?
2. Is the site current? When was the site last updated? Does the material contained within seem current and relevant?
3. Does the site appear biased? Is it trying to sell a product or service? Consumers should beware of many of the sites that are online, as the information they contain may not be valid or accurate. Similarly, we should exercise caution with dietary supplements, as regulations exist but, in such a large industry, many offenders slip through the cracks. There is great need for more research in the field and practitioners should be at the forefront of this effort as we are the most familiar with the habits of the populations that we serve.

Table 2: Online Resources

Botanical Dietary Supplements: Background Information:
<http://ods.od.nih.gov/factsheets/BotanicalBackground.asp>

Computer Access to Research on Dietary Supplements (CARDS) Database:
http://ods.od.nih.gov/Research/CARDS_Database.aspx

Dietary Supplement Ingredient Database (DSID):
<http://www.ars.usda.gov/Aboutus/docs.htm?docid=6255>

Dietary Supplements Labels Database:
<http://dietarysupplements.nlm.nih.gov/dietary/>

FDA Center for Food Safety & Applied Nutrition:
<http://www.cfsan.fda.gov/~dms/supplmnt.html>

Federal Trade Commission Consumer Education on Diet, Health & Fitness:
<http://www.ftc.gov/bcp/menus/consumer/health.shtm>

International Bibliographic Information on Dietary Supplements (IBIDS) Database
http://ods.od.nih.gov/Health_Information/IBIDS.aspx

International Food Information Council (IFIC) Publication: Guidelines for Communicating the Emerging Science of Dietary Components for Health
<http://www.ific.org/nutrition/functional/guidelines/>

International Food Information Council (IFIC) Publication: How to Understand and Interpret Food and Health-Related Scientific Studies:
<http://www.ific.org/publications/reviews/scientificir.cfm>

MedlinePlus Herbs and Supplements, A–Z list
http://www.nlm.nih.gov/medlineplus/druginfo/herb_All.html

MedlinePlus Herbal Medicine Page:
<http://www.nlm.nih.gov/medlineplus/herbalmedicine.html>

National Center for Complementary and Alternative Medicine (NCCAM) Herbs at a Glance
<http://nccam.nih.gov/health/herbsataglance.htm>

NIH Botanical Research Centers Program
http://ods.od.nih.gov/Research/Dietary_Supplement_Research_Centers.aspx

Tips for the Savvy Supplement User: Making Informed Decisions and Evaluating Information
<http://www.cfsan.fda.gov/~dms/ds-savvy.html>

References

1. Picciano MF. (2008, June 9) "Who's Taking What?" Presentation given at the Dietary Supplement Research Practicum, Bethesda, MD.
2. Thurston C. Nutraceuticals World, Dietary Supplements: The Latest Trends & Issues. Available at: <http://www.nutraceuticalsworld.com/articles/2008/04/dietary-supplements-the-latest-trends-issues>, Accessed on September 10, 2008.
3. National Center for Health Statistics. National Health and Nutrition Examination Survey Home Page. Available at: <http://www.cdc.gov/nchs/nhanes.htm>.
4. Dwyer J. (2008, June 9) "Why Do Americans Take Dietary Supplements?." Presentation given at the Dietary Supplement Research Practicum, Bethesda, MD.
5. U. S. Food and Drug Administration Center for Food Safety and Applied Nutrition "Dietary Supplement Health and Education Act of 1994" Available at <http://www.cfsan.fda.gov/~dms/dietsupp.html>.
6. Frankos V. (2008, June 9) "FDA Regulation of Dietary Supplements". Presentation given at the Dietary Supplement Research Practicum, Bethesda, MD.
7. Thomas P. (2008, June 9) "Claims on Supplements and Foods", Presentation given at the Dietary Supplement Research Practicum, Bethesda, MD.
8. Dietary Supplements Containing Ephedrine Alkaloids Final Rule Summary. Available at: <http://www.fda.gov/oc/initiatives/ephedra/february2004/finalsummary.html>
9. Melethil S. Proposed rule: current good manufacturing practice in manufacturing, packing, or holding dietary ingredients and dietary supplements. Life Sci. 2006 Mar 27;78(18):2049-53.
10. Rusk M. (2008, June 9) "Dietary Supplements: What the FTC Does", Presentation given at the Dietary Supplement Research Practicum, Bethesda, MD.

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BOTANICAL DIETARY SUPPLEMENTS: Focus on Women's Health

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

The University of Illinois at Chicago/National Institutes of Health Center for Botanical Dietary Supplements Research began in 1999 with an emphasis on botanical dietary supplements for women's health. The Center concentrates on plants that may improve women's health, especially to reduce hot flashes in menopausal women, alleviate the symptoms of premenstrual syndrome, and reduce persistent urinary tract infections. Information on the Center and its latest clinical trials and publications can be found at: http://www.uic.edu/pharmacy/centers/uic_nih_botanical_dietary_supplement_research/index.php.

Note: The following table contains information about a few commonly used botanicals by women. This table is for informational purposes only, to familiarize women's health professionals with herbal preparations that their clients may use. It is not intended as a guide for treatment and it is strongly advised that the full reference be read thoroughly (only part is presented here) before determining whether any of these products are safe to use. Always speak with a health care provider before starting any supplement.

HERB COMMON & LATIN NAME	USAGE & INDICATIONS	PREPARATIONS	SIDE EFFECTS	SAFETY: PREGNANCY & LACTATION
1. Dong quai (<i>Angelica sinensis</i>)	Used for gynecological disorders, recovery from childbirth or illness, and fatigue. It has weak estrogen-like properties. Unclear if it has the same effects on the body as estrogens or blocks the activity of estrogens, or has no effects.	Powdered or dried root/root slices, fluid extracts, tinctures, decoctions, and dried leaf preparations are available to be taken orally. Topical preparations are also available for use on the skin.	May increase the risk of bleeding due to anticoagulant and anti-platelet effects. Increases sun sensitivity with a risk of severe skin reactions (photosensitivity). Associated with gastrointestinal symptoms such as diarrhea, stomachache, nausea, vomiting, loss of appetite, belching, or bloating.	It is not recommended during pregnancy due to possible hormonal and anticoagulant/anti-platelet properties. Animal research has noted conflicting effects on the uterus, with reports of both stimulation and relaxation. Traditionally viewed as increasing the risk of miscarriage. There is not enough evidence available regarding safety during breastfeeding.
2. Black Cohosh (<i>Actaea racemosa</i>)	Traditionally used for rheumatism, also used to treat hot flashes, night sweats, vaginal dryness, menstrual irregularities, PMS and to induce labor.	The underground stems and roots of black cohosh are commonly used fresh or dried to make strong teas (infusions), capsules, solid extracts used in pills, or liquid extracts	Can cause headaches and stomach discomfort, heaviness in the legs, and weight problems.	It is not clear if black cohosh is safe for women who have had breast cancer or for pregnant women.
3. Ginkgo (<i>Ginkgo biloba</i> L.)	Used for memory enhancement in healthy subjects, mountain sickness, symptoms of PMS, and reduction of chemotherapy-induced end-organ vascular damage.	80 to 240 milligrams of a standardized leaf extract taken orally in 2 to 3 divided doses daily has been studied. Also found in tea and some foods. The seeds are potentially toxic and should be avoided.	Generally well tolerated, with symptoms such as headache, nausea, and intestinal complaints. Can cause bleeding, should be used cautiously in patients on anticoagulant therapy. May affect insulin and blood sugar levels.	Use of ginkgo is not recommended during pregnancy and breastfeeding due to lack of reliable scientific evidence. The risk of bleeding associated with ginkgo may be dangerous during pregnancy.
4. Ginger (<i>Zingiber officinale</i> Roscoe)	Used for hyperemesis gravidarum, migraines, motion sickness, arthritis, speeding up labor, weight loss and an anti-platelet agent.	Common forms of ginger include fresh root, dried root, tablets, capsules, liquid extract, tincture, and tea.	Early studies suggest that ginger may be safe and effective for nausea and vomiting of pregnancy when used at recommended doses for short periods of time.	Some studies suggest that pregnant women should not take ginger in amounts greater than normally found in food (or more than 1 gram dry weight per day). May increase discharge from the uterus in menstruating women, and could possibly lead to adverse pregnancy outcomes, no good evidence available.
5. Red Clover (<i>Trifolium pretense</i>)	It has been used for cancer and respiratory problems. It contains phytoestrogens, helps with menopausal symptoms, breast pain associated with menstrual cycles, and may increase breast milk production.	The flowering tops of the red clover plant are used to prepare extracts available in tablets and capsules, as well as in teas and liquid forms.	Red clover appears safe when used for short periods of time. No serious adverse effects have been reported. Because it contains estrogen-like compounds, there is a possibility that long-term use could increase the risk of certain cancers, but there is not enough evidence to conclude this.	It is unclear whether red clover is safe for women who are pregnant or breastfeeding, or who have breast cancer or other hormone-sensitive cancers. It may cause increased bleeding in labor and delivery.
6. Cranberry (<i>Vaccinium macrocarpon</i>)	Used to prevent or treat urinary tract infections or <i>Helicobacter pylori</i> infections that can lead to stomach ulcers, or to prevent dental plaque. It has also been shown to have antioxidant and anticancer activity.	The berries are used to produce beverages and many other food products, as well as dietary supplements in the form of extracts, teas, and capsules or tablets.	Eating cranberry products in food appears to be safe for everyone, but drinking excessive amounts of juice could cause gastrointestinal upset or diarrhea.	No evidence of harm in pregnancy or breastfeeding,
7. Chasteberry (<i>Vitex agnus-castus</i>)	Chasteberry has been used for irregularities in the menstrual cycle, breast pain and to stimulate the production of breast milk. Also used for premenstrual syndrome, as well as for symptoms of menopause, some types of infertility, and acne.	The dried ripe chasteberry is used to prepare liquid extracts or solid extracts that are put into capsules and tablets.	Chasteberry has not been associated with serious side effects. However, it can cause gastrointestinal problems, acne-like rashes, and dizziness.	Chasteberry may affect certain hormone levels. Women who are pregnant or taking birth control pills or who have a hormone-sensitive condition (such as breast cancer) should not use chasteberry. It is not known if it is safe to use in breastfeeding women.

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HERB COMMON & LATIN NAME	USAGE & INDICATIONS	PREPARATIONS	SIDE EFFECTS	SAFETY: PREGNANCY & LACTATION
8. Fenugreek (<i>Trigonella foenum-graecu</i>)	Used for loss of appetite, and to stimulate milk production in breastfeeding women. It is also applied to the skin to treat inflammation.	The dried seeds are ground and taken by mouth or steeped as a tea. It can also be used to form a paste that is applied to the skin.	Fenugreek may cause an allergic skin reaction. High doses may lower blood sugar or cause diarrhea. Use of this herb may also exacerbate asthma.	Widely used as a breast milk stimulant, but should be used with caution during pregnancy as it was traditionally thought to induce labor.
9. Evening Primrose Oil (<i>Oenothera biennis</i>)	Source of essential fatty acids. Used for eczema, inflammation and rheumatoid arthritis. Also used for conditions affecting women's health, such as breast pain associated with the menstrual cycle, menopausal symptoms, and premenstrual syndrome.	Evening primrose oil is extracted from the seeds of the evening primrose. The oil is usually put into capsules for use.	Evening primrose oil is well tolerated by most people. Mild side effects include gastrointestinal upset and headache.	Evening primrose oil may have modest benefits for eczema, and it may be useful for rheumatoid arthritis and breast pain. However, study results are mixed, and most studies have been small and not well designed. It does not appear to affect menopausal or premenstrual symptoms in large studies. There is no evidence of harm in pregnancy or breastfeeding when used as directed.
10. Feverfew (<i>Tanacetum parthenium</i>)	Used for fevers, headaches, stomach aches, toothaches, insect bites, infertility, problems with menstruation and with labor during childbirth. Also used for prevention of migraine headaches and rheumatoid arthritis.	The dried leaves—and sometimes flowers and stems—of feverfew are used to make supplements, including capsules, tablets, and liquid extracts and the leaves are sometimes eaten fresh.	No serious side effects have been reported for feverfew. Side effects can include canker sores, swelling and irritation of the lips and tongue, and loss of taste. Less common side effects can include nausea, digestive problems, and bloating.	Women who are pregnant should not use feverfew because it may cause the uterus to contract, increasing the risk of miscarriage or premature delivery. People can have allergic reactions to feverfew. Those who are allergic to other members of the daisy family (which includes ragweed and chrysanthemums) are more likely to be allergic to feverfew.

References

Medline Plus Herbs and Supplements. Available at: <http://www.nlm.nih.gov/medlineplus/druginfo/natural/patient-dongquai.html>. Accessed September 25, 2008.

National Center for Complementary and Alternative Medicine. Herbs at a glance: Black Cohosh. Available at: <http://nccam.nih.gov/health/blackcohosh/>. Accessed September 25, 2008.

Medline Plus Herbs and Supplements. Available at: <http://www.nlm.nih.gov/medlineplus/druginfo/natural/patient-ginkgo.html>. Accessed September 25, 2008.

Medline Plus Herbs and Supplements. Available at: <http://www.nlm.nih.gov/medlineplus/druginfo/natural/patient-ginger.html>. Accessed September 25, 2008.

National Center for Complementary and Alternative Medicine. Herbs at a glance: Black Cohosh. Available at: <http://nccam.nih.gov/health/redclover/>. Accessed September 25, 2008.

National Center for Complementary and Alternative Medicine. Herbs at a glance: Black Cohosh. Available at: <http://nccam.nih.gov/health/cranberry/>. Accessed September 25, 2008.

National Center for Complementary and Alternative Medicine. Herbs at a glance: Chasteberry. Available at: <http://nccam.nih.gov/health/chasteberry/>. Accessed September 26, 2008.

Humphrey S. The Nursing Mother's Herbal, Fairview Press, Minneapolis, 2003.

National Center for Complementary and Alternative Medicine. Herbs at a glance: Evening Primrose. Available at: <http://nccam.nih.gov/health/eveningprimrose/>. Accessed September 26, 2008.

National Center for Complementary and Alternative Medicine. Herbs at a glance: Feverfew. Available at: <http://nccam.nih.gov/health/feverfew/>. Accessed September 26, 2008.



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REVIEW OF THE 2008 MATERNAL NUTRITION INTENSIVE COURSE

By Denise Andersen MS, RD, LD, CLC *Women's Health DPG Chair-Elect*

I proudly represented the Women's Health DPG at this year's Maternal Nutrition Intensive Course at the University of Minnesota, School of Public Health from July 30 – August 1, 2008. The setting promoted sharing of new research and facilitated communication among professionals with common interest in the promotion of maternal and child nutrition. The goal of the continuing education program has been to provide nutrition education and support learning practices aimed at improving maternal and infant health outcomes.

Information on next year's program can be found at the following web site: <http://cpheo.sph.umn/events/mnic/home.html>. For additional information contact:

The Centers for Public Health Education and Outreach

University of Minnesota
2221 University Avenue SE #350
Minneapolis, MN 55414
Telephone: 612-626-4515 or 1-800-493-2060
Fax: 612-626-4525

Below is a general summary of select presentations:

A New Paradigm for Depression in New Mothers

Kathleen Kendall-Tackett, PhD, IBCLC

This presentation explored the relationship between post-partum depression, chronic inflammation and the protective effects of breastfeeding. The author examined current research that indicates chronic inflammation plays a large role in depression, specifically through elevated levels of pro-inflammatory cytokines. Psychological and physical stress, pain and sleep deprivation can all increase systemic inflammation. Pro-inflammatory cytokines are known to elevate during the last trimester of pregnancy and may account for why women are at the greatest risk for the onset of depression during this time.

Cytokines act to increase fatigue and depressive moods, perpetuate low energy levels and social withdrawal and may cause decreased appetite. Research points to poor sleep quality and lack of sleep as a major cause of increased stress and depression. One study found that fatigued mothers had increased stress and higher depression levels at 4-6 weeks postpartum. These mothers had lower prolactin levels which can affect breastfeeding success. The mother-baby dyads also exhibited increased rates of infections. Depressed mothers also had increased daytime fatigue and sleepiness. Sleep disturbances are correlated with increased inflammation which can increase the risk of cardiovascular disease and metabolic syndrome.

Breastfeeding protects the maternal mood by lowering stress. According to Groer 2002, breastfeeding down regulates the stress response and directs the mother toward milk production, conservation of energy and nurturing behaviors. On the flip side, difficulties with breastfeeding can cause stress and strain to mothers and thereby increase inflammation. Pain, and in particular nipple pain was also found to be correlated with increased depression. Resolution

of pain led to improvement in mood. Therefore it is crucial for healthcare providers and lactation professionals to detect, address and resolve problems quickly.

In conclusion, inflammation is an important contributor to the onset and severity of depression. Goals of prevention and treatment are to reduce and/or eliminate factors in maternal stress and reduce inflammation. Interestingly, effective treatment for depression including exercise, Omega-3 fatty acids (EPA and DHA) and cognitive therapy are also anti-inflammatory. The following websites provided by the speaker offer additional insight into this topic: www.granitescientific.com and www.breastfeedingmadesimple.com.

Environmental Contaminants

Mishawn Purnell-O'Neal, MPH

This presentation explored the implications of environmental contaminants for pregnancy and lactation. Exposure to environmental contaminants during these vulnerable time periods are particularly important because they impact the viability of new generations, the overall health status of society and quality of life.

The contaminants of focus were: persistent organic pollutants (POPs), as well as metals such as mercury and lead. POPs are defined as those substances which are persistent in the environment, accumulate in the fatty tissue/body fat of humans and animals, are toxic to humans and wildlife, and are transported across the globe. One type of POP is Polybrominated diphenyl ethers (PBDE's), chemicals used as flame retardants in furniture and in the plastic of TV's and computer monitors. Exposure to these substances can contribute to low-birth weight babies, brain development delays, reproductive issues for newborns, and compromised immune systems.

Metals are naturally occurring and infants are most likely to be exposed to high levels while in utero. Mercury is a toxin that impacts the brain and nervous system. People are exposed through consumption of foods high in mercury, and release of mercury from dental work, thermometers or the workplace. Lead, another metal, is considered to be the leading environmental health threat to children due to its ability to retard growth and development. Individuals are exposed to lead via gasoline, water pipes, paints, food from cans with lead and workplace environments.

Pregnant and lactating women need to be educated about the existence of these contaminants. Educators need to dispel the myths and misconceptions about the sources and risks of environmental contaminants. Messaging should be designed and targeted to vulnerable communities such as those that eat large amounts of fish or those who receive vouchers from the WIC program. The presenter recommended making better purchases: buying organic when possible, eating more fresh fruits and vegetables, reducing animal products in the diet, and buying fewer products with PBDEs.

Continued on page 8

WOMEN'S HEALTH DPG FINANCIAL SUMMARY FOR 2007-2008

By Nancy Turnier-Lamoureaux, MS, RD *Treasurer 2007-2009*

Assets

Total Liabilities & Net Assets \$44,538

Revenues

Membership dues \$25,430

Sponsorships \$ 2,621

Interest Income \$ 661

Grants/Contracts \$ 0

Total \$28,712

Administrative Expenses

Lodging \$ 5,811

Subsistence \$ 1,093

Transportation \$ 2,173

Professional/Consulting \$ 550

Postage \$ 223

Mailing Service \$ 166

Office Supplies \$ 94

Telephone \$ 0

Teleconference Expenses \$ 1,341

Other expenses (name rollout) \$ 396

Membership Dues/Seminar Fees \$ 610

Honorariums/Awards \$ 495

Audio Visual \$ 1,791

Meeting Services \$ 106

Food Services \$ 1,618

Printing/Copying) \$ 257

Total \$16,724

Newsletter Expenses

Professional Consulting \$2,212

Postage \$ 433

Printing/Copying \$4,295

Total \$6,940

REVIEW OF THE 2008 MATERNAL NUTRITION INTENSIVE COURSE Continued from page 7

Logic Models

Madeline Sigman-Grant, PhD, RD

Looking for a way to improve program service delivery and outcomes? Then, logic models may be a method to explore. The goal of logic models is to help practitioners identify and offer solutions to patient barriers for behavior change. Using tailored interventions, it helps to identify potential benefits of behavior change in a way that is accessible and relevant to clients. The logic model is a tool that links the problem (situation) to the intervention and to the impact. It helps to bridge the gap between where you begin and where you want to be. It is used for planning, management and evaluation.

Logic models can be a narrative or graphical depiction of processes in real life and help to hone in on the underlying assumptions upon which an activity is expected to lead to a specific result. Assumptions may include: participants have access to and will consume specific foods; resources are adequate and available; participants will have no negative side effects in following recommendations; knowledge change leads to behavior change; and people will be internally motivated to learn/change.

Logic models also illustrate a sequence of cause-and-effect relationships. External factors which influence the intervention's ability to achieve expected results are included. Practitioners are encouraged to think about which factors can be manipulated and which factors are outside the scope of control.

Inputs of the model include financial resources, time, planning process/needs assessment, materials, people, equipment, integrated efforts. Outputs of the model can be meetings, classes, individual counseling sessions, printed materials and those who are reached such as individuals, families and other agencies. Use of the logic model has been shown to help pregnant women eat a recommended diet, gain weight within the recommended range, decrease rates of prematurity and low birth weight and increase rates of exclusive breastfeeding. Outcomes can be short, medium or long term. Short term outcomes are a change in knowledge, skills, attitude, motivation, awareness. Medium term goals include change in behaviors, practices, policies, procedures. Long term outcomes include a change in environment, health status, social conditions, economic conditions, etc. The author gave several references to learn more about the positive use of the logic model.

1) McCrawley PF. The logic model for program planning and evaluation. University of Idaho Extension, 2001.

2) Medeiros LC, Butkus SN, Chipman H, Cox RH, Jones L, Little D. A logic model framework for community nutrition education. *J Nutr Educ Behav.* 2005;37:197-202.

3) Taylor-Powell E. Logic Models: A framework for program planning and evaluation (presentation) Nutrition, Food Safety and Health Conference, Baltimore MD, March 31, 2005. <http://www1.uwex.edu/ces/lmcourse/>.

THE CHOLINE GAP: A Public Health Issue Among Special Populations

Erin DeSimone MS, RD *Nutrition Consultant FoodMinds, LLC*

The following is a summary of the presentation on the public health significance of suboptimal choline intakes to be presented at the ADA Food & Nutrition Conference & Expo, 2008 in Chicago by Kerry- Ann Da Costa, Ph.D. and Elizabeth Ward, M.S., R.D.

Discovered in 1948, choline wasn't established as an essential nutrient until 1998 (1). Choline is known to be required for neurotransmitter synthesis (acetylcholine), cell-membrane signaling (phospholipids), lipid transport (lipoproteins), and methyl-group metabolism (homocysteine) (2). Choline also plays an important role in brain and memory development in the fetus and may decrease the risk of the development of neural tube defects (3, 4). Because of its wide-ranging role in human metabolism, a deficiency of choline is now believed to have an impact on diseases such as liver disease, atherosclerosis and possibly neurological disorders (5).

Choline can be obtained from the diet and the body can synthesize it (5). Dietary choline is absorbed by the intestine and its uptake mediated by choline transporters (5). Once inside the cell, some of the compound is converted to betaine, which plays an important role in the conversion of homocysteine to the essential amino acid methionine (6).

Lack of Choline Awareness

Health professionals, including physicians and registered dietitians, have limited knowledge about the importance of choline and are relatively unaware of the best dietary sources. In a recent survey of health professionals, only about 10% said they were likely to recommend foods containing choline to their patients (7). Among OBGYNs, who care for the population with the greatest choline needs, only about 6% were likely to recommend foods containing choline for health of pregnant women (7).

Pregnancy and Lactation

The demand for choline is especially high during pregnancy and lactation, when a supply of choline is critical. Large amounts of choline are delivered to the developing fetus across the placenta and choline concentration in amniotic fluid is 10-fold greater than that of maternal blood (8). Plasma or serum choline concentrations are 6- to 7-fold higher in the fetus and newborn than they are in adults (9, 10). This transport of choline from mother to fetus depletes maternal plasma choline (11). Despite an increased capacity to synthesize choline during pregnancy, the demand for this nutrient exceeds the supply, and stores can be depleted. Extended depletion of choline stores can also occur during lactation, as human milk is rich in choline, creating further maternal demand (12).

Memory Development

Animal studies have shown that supplementing with choline during critical periods of neonatal development can have long-term beneficial effects on memory. During later periods of pregnancy, the memory center of the brain (the hippocampus) develops and, in humans, continues to develop after birth, closely resembling the adult structure by the age of four (13). There are currently no published studies in humans examining whether choline supplementation during pregnancy enhances memory in children.

Neural Tube Defects

Folic acid has been implicated in the occurrence of neural tube defects (NTDs). Similar to folic acid, choline is involved in the methylation of homocysteine to methionine. Some research suggests that choline and methionine intakes may play a role in reducing the risk of NTDs as well, independent of folate intake from food or supplements (3, 4) One study found that women in the lowest quartile for dietary choline intake had four times the risk of giving birth to a child with a neural tube defect, compared with women in the highest quartile of intake (3).

Breast Cancer

Choline deficiency in cell and rodent models is associated with DNA damage and apoptosis (14, 15). Induced choline deficiency in a group of 51 men and women aged 18-70 for 42 days also showed increased DNA damage and apoptosis in lymphocytes (15).

High dietary intakes of choline also have been associated with a decreased risk for breast cancer. In the first study to look at a possible association between choline and breast cancer, it was found that breast cancer risk was 24% lower among women with high dietary intakes of choline (16). The association did not vary substantially with regard to the women's menopausal status or cancer type.

Choline Requirements

The recommended Adequate Intake (AI) for choline has been set at 425 mg/d for women, 450 mg/d for pregnant women, 550 mg/d for lactating women and 550 mg/d for men (1). An Estimated Average Requirement (EAR) has not been set because of a lack of sufficient human data (1, 17).

There is a significant variation in the dietary requirement for choline as a result of common genetic variations (15). Current recommended intakes do not take these genetic variations into account (18). When the AI for choline was established in 1998, it was assumed that less than 5% of the population would be affected. It is now apparent that as much as 50% of the population may be affected by genetic variations that increase requirements (19, 20). Premenopausal women who are carriers of a common genetic variation have been found to be 15 times as likely as non-carriers to develop signs of choline deficiency on a low-choline diet (20). Research is underway to identify genetic variations that greatly increase the likelihood that women require increased amounts of choline during pregnancy (13).

Choline Consumption: The Problem

At the time the AI for choline was established in 1998, it wasn't known whether there were significant numbers of people who were choline deficient (1). The development of a database of the choline content of foods now makes it possible to track the dietary choline intakes of populations and correlate them with the incidence of disease (24). The results of a study using a subset of subjects from the Nurses' Health Study, suggested that most of the women in the study were not meeting the recommended intake (21). A study of 16 adult men and 16 adult women, ages 18-67, only 6 of the 16 women met or exceeded the AI for choline (17). A recent analysis of data from NHANES 2003-2004

Continued on page 10

revealed that for older children, men, women and pregnant women, ten percent or fewer had usual choline intakes at or above the AI (22). (Figures 1, 2) Additional analysis of NHANES 2003-2004 data found that choline intake decreases with age and that adults ages 71 and older consumed an average of about 264 milligrams per day, about one-half of the AI for choline (23).

Figure 1

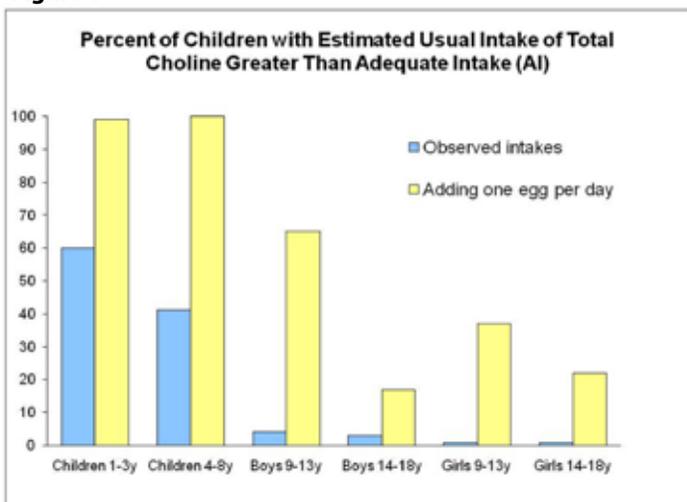
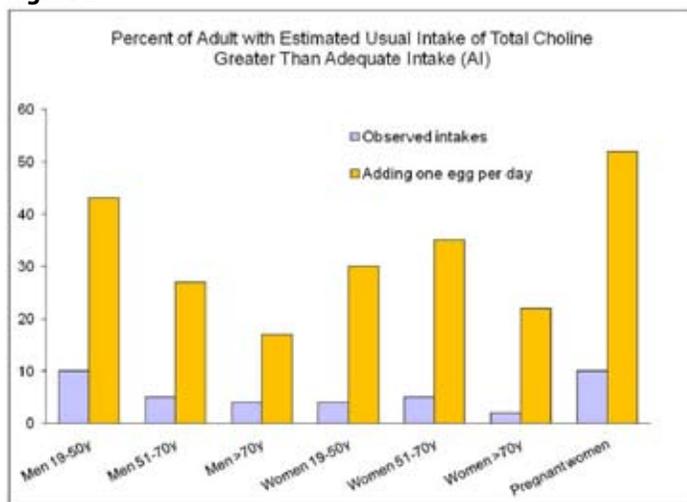


Figure 2



Closing the Choline Gap

Choline is found in a wide variety of foods. (Table 1) Liver, eggs, and wheat germ are among the richest sources of choline in the diet, though egg yolks are the most concentrated source, providing approximately 680 milligrams per 100 grams (24). Two eggs supply about one-half of a pregnant woman's choline needs and about 40% of a lactating woman's choline needs. Adding an extra egg a day to the diet would increase the number of pregnant women meeting the AI for choline from 10% to more than 50%. The addition of one egg a day to the diets of older men and women would increase the percentage meeting the AI from less than 5% to between 18% and 21% (22). Dietary information obtained from the Nurses' Health Study and the Nurses' Health Study 2 revealed animal products, including eggs, milk, chicken, beef, and pork to be the biggest contributors of choline in the diets of the female subjects (21).

Conclusion

There is now evidence that suboptimal intakes of choline in the population are a common problem, a particularly pressing issue for women of childbearing age. Increased awareness by registered dietitians, and all health professionals, of the critical roles choline plays in the body must be a priority to avoid public health problems that may result from low intakes of dietary choline among all age groups.

Table 1: Selected Food Sources of Choline

Food	Choline (milligrams)
Beef liver (3 oz)	362
Chicken liver (3 oz)	247
Egg (1 large)	125
Chicken breast (3 oz)	67
Salmon (3 oz)	58
Soybeans (1/2 cup)	41
2% Milk (one cup)	40
Broccoli (1/2 cup)	31
Wheat Germ (2 T)	27
Milk chocolate (44 g)	20
Bacon (2 slices)	20

Source: USDA National Nutrient Database for Standard Reference, Release 20. 2007.

References

- Food and Nutrition Board, Institute of Medicine, 1998. Dietary Reference Intakes: Thiamin, Riboflavin, Niacin, Vitamin B-6, Vitamin B012, Pantothenic Acid, Biotin, and Choline. National Academy of Sciences, Washington, D.C. 390-422.
- Penry J, Manore M. Choline: an important micronutrient for maximal endurance-exercise performance? *Int J Sport Nutr Exerc Metab.* 2008;18:191-203.
- Shaw G, Carmichael S, Yang W, Selvin S, Schaffer D. Periconceptional dietary intake of choline and betaine and neural tube defects in offspring. *Am J Epidemiol.* 2004; 160:102-9.
- Rees W, Wilson F, Maloney C. Sulfur amino acid metabolism in pregnancy: the impact of methionine in the maternal diet. *J Nutr.* 136:1701S-1705S, 2006.
- Li Z, Vance D. Phosphatidylcholine and choline homeostasis. *J Lipid Res.* 2008;49:1187-94.
- Zeisel S, Mar MH, Howe J, Holden J. Concentrations of choline-containing compounds and betaine in common foods. *J Nutr.* 2003;133:1302-7.
- StrategyOne Health Professionals Survey, April, 2007.
- Zeisel S. Perinatal choline influences brain structure and function. *Nutr Rev.* 2006b;64:197-203.
- Zeisel S. Developmental changes in rat blood choline concentration. *Biochem J.* 1981;198:565-70.
- Ozarda I, Uncu G, Ulus I. Free and phospholipid-bound choline concentrations in serum during pregnancy, after delivery and in newborns. *Arch Physiol Biochem.* 2002;110:393-9.
- Zeisel S. Choline: Critical role during fetal development and dietary requirements in adults. *Annu Rev Nutr.* 2006;26:229-50.
- Stegers-Theunissen R, Boers G, Trijbels F, Finkelstein J, Blom H, Thomas C, Borm G, Wouters M, Eskes T. Maternal hyperhomocysteinemia: a risk factor for neural-tube defects? *Metabolism.* 1994;4:1475-80.
- Zeisel S. The fetal origins of memory: the role of dietary choline in optimal brain development. *J Pediatr.* 2006a;149:5131-5136.
- daCosta KA, Badaea M, Fischer L, Zeisel S. Elevated serum creatine phosphokinase in choline-deficient humans: mechanistic studies in C2C12 mouse myoblasts. *Am J Clin Nutr.* 2004;80:163-70.
- daCosta KA, Niculescu M, Craciunescu, Fischer L, Zeisel S. Choline deficiency increases lymphocyte apoptosis and DNA damage in humans. *Am J Clin Nutr.* 2006;84:88-94.
- Xu X, Gammon M, Zeisel S, Lee Y, Wetmur J, Teitelbaum S, Bradshaw P, Neugut A, Santella R, Chen J. Choline metabolism and risk of breast cancer in a population-based study. *FASEB J.* 2008;22:1-8.
- Fischer L, Scarsee J, Mar M-H, Patel J, Blanchard R, Macintosh B, Busby M, Zeisel S. Ad libitum choline intake in healthy individuals meets or exceeds the proposed adequate intake level. *J Nutr.* 2005;135:826-9.
- Zeisel S. Choline: Critical role during fetal development and dietary requirements in adults. *Annu Rev Nutr.* 2006;26:229-50.
- Niculescu M, Zeisel S. Diet, methyl donors and DNA methylations: Interactions between dietary folate, methionine and choline. *J Nutr.* 2002;132:2335-55.
- Kohlmeier M, da Costa KA, Fischer LM, Zeisel SH. Genetic variation of folate-mediated one-carbon transfer pathway predicts susceptibility to choline deficiency in humans. *Proc Natl Acad Sci USA.* 2005;102:16025-30.
- Chiuvé S, Giovannucci E, Hankinson S, Zeisel S, Dougherty L, Willett W, Rimm E. The association between betaine and choline intakes and the plasma concentrations of homocysteine in women. *Am J Clin Nutr.* 2007;86:1073-81.
- Jensen H, Batres-Marques, Carriquiry A, Schalinske K. Choline in the diets of the U.S., Population: NHANES, 2003-2004. Presented at the National Nutrient Data Bank Conference, 2007.
- Keast D. Food sources of choline in the diets of US older adults: NHANES, 1999-2004. Presented at the National Nutrient Data Bank Conference, 2007.
- Patterson KY, Bhagwat SA, Williams JR, Howe JC, Holden JM. USDA Database for the Choline Content of Common Foods Release Two, January, 2008. www.nal.usda.gov/fnic/foodcomp/Data/Choline/Choln02.pdf (Accessed September 18, 2008)

I. Farm bill contains significant domestic nutrition improvements

The 2008 Farm Bill includes several provisions in food assistance programs to help low-income Americans. The nutrition title includes more than \$10 billion over ten years in increases in these programs, including \$7.8 billion for the Food Stamp Program, \$1.26 billion for the Emergency Food Assistance Program (TEFAP), and \$1 billion for the free fresh fruit and vegetable snack program. Most of these provisions will be effective October 1, 2008.

Some significant provisions in the 2008 Farm Bill include:

- **Renaming of the Food Stamp Act and Program:** to the Supplemental Nutrition Assistance Program (SNAP).
- **Strengthening the food purchasing power of low-income Americans:** This provision raises the minimum standard deduction and indexes it to inflation starting in FY 2010. It also increases the minimum benefits.
- **Supporting working families with child care expenses:** Eliminates the cap on the deduction for dependent care expenses, allowing working families with children to deduct the entire amount of child care expenses when calculating eligibility and benefit levels.
- **Nutrition Education:** Clarifies the legal basis and requirements for nutrition education in the Supplemental Nutrition Assistance Program.
- **Pilot projects to evaluate health and nutrition promotion in the supplemental nutrition assistance program:** Authorizes USDA to carry out pilot projects to develop, test and evaluate methods of using the SNAP program to improve the dietary and health status of participating households and to reduce overweight and obesity. It provides funding for a project to test point-of-purchase incentives for healthful foods.
- **Joint nutrition monitoring and related research activities:** Directs USDA and HHS to continue to provide jointly for national nutrition monitoring and related research activities.
- **Assessing the Nutritional Value of the FDPIR Food Package:** Authorizes \$5 million for USDA to purchase traditional and locally-grown foods for FDPIR participants if cost-effective, and requires study of the FDPIR food package in comparison to the SNAP, to the Dietary Guidelines, and to the needs of low-income Native Americans. (No funds provided.)
- **Commodity Supplemental Food Program:** Eliminates the preference requirement for women and children in the CSFP.
- **Healthy Food Education and Program Replicability:** Expands grant priorities to include promotion of healthy food education in the school curriculum, and establishes a pilot program in up to 5 States to develop and operate community gardens at high-poverty schools. (No funds provided.) Other provisions provide grants to all States to make free fresh fruits and vegetables available in elementary schools throughout the day and to increase requirement to use funds to purchase of fruits, vegetables and specialty crops for distribution to schools and service institutions.
- **Whole Grain Products** – Authorizes the purchase of whole grains and whole grain products for use in school meals.

P.L. 110-246 was enacted on June 18, 2008 after the House and Senate voted to override the President's veto of the legislation. The same bill (except with the Trade title missing) cleared the Congress on May 22nd.

II. Congress overrides Medicare veto, allows for MNT expansion

Both House and Senate voted overwhelmingly in July to let the Medicare Improvements for Patients and Providers Act bill become law. A new preventive services title is of significance to Registered Dietitians. Title I, which goes into effect January 2009, establishes a procedure by which Medicare may expand coverage of preventive services, including Medical Nutrition Therapy.

To gain approval for coverage, a preventive service has to meet three requirements:

1. Medicare must determine that the service is reasonable and necessary for the prevention or early detection of an illness or disability;
2. It has to be recommended with a grade of A or B by the United States Preventive Services Task Force
3. It has to be appropriate for individuals entitled to benefits under part A or enrolled under part B.

The United States Preventive Services Task Force has given “intensive behavioral dietary counseling for adult patients with certain known risk factors for cardiovascular and diet-related chronic disease” a B rating. The USPSTF also recommended that “intensive counseling can be delivered by primary care clinicians or by referral to other specialists, such as nutritionists or dietitians.” In order to determine if a service is “necessary and reasonable” Medicare will use the National Determination Process. NCDs are made through an evidence-based process, with opportunities for public participation. ADA has already contacted Medicare offices to begin the NCD process for MNT. Also, RDs participating in Medicare will notice an increase of .5 percent (2008) and .6 percent (2009) in reimbursement rates. Additional information will soon be posted on CMS' Web page, <http://www.cms.hhs.gov/PhysicianFeeSched/> and included in ADA's Medicare MNT Provider newsletter.

III. Medicare providers to see financial rewards for quality reporting

Recently the Centers for Medicare & Medicaid Services announced payment of more than \$36 million in bonus payments to health professionals – including RD providers -- who reported data on the quality of care delivered between July 2007 and December 2007, as part of the agency's Physician Quality Reporting Initiative. The PQRI is the first step toward bringing about changes in the way Medicare pays providers and restoring stability and predictability to Medicare's physician payment program. The current payment system has been acknowledged by many health care policy experts for its several failings, including rewarding volume and episodic care over quality; exposing Medicare to rapid growth in spending without evidence of more spending leading to better care; and failing to focus on prevention and coordination of care.

IV. Heart Association calls for population-based approach to reduce obesity

A new American Heart Association scientific statement calls for a population-based approach to address the obesity epidemic. According to the statement, a broad range of policy and environmental strategies (at the local, state and federal levels) can help people adopt healthy behaviors, such as being physically active and eating right. Modifying the environment to affect people's choices includes assessing the following areas to identify targets for change:

- Locations of fast-food restaurants
- Restaurant portion sizes
- Availability of high-fat, low-fiber foods and sweetened drinks
- Community design and infrastructure, which involves assessing land use mix and “walk-ability” of neighborhoods, including: a) adequate sidewalks and areas for physical activity, b) accessibility of jobs, schools and recreation by walking or cycling and c) availability of public transportation.

“Population-Based Prevention of Obesity” is published in *Circulation: Journal of the American Heart Association* and is available at <http://circ.ahajournals.org/cgi/content/short/CIRCULATIONAHA.108.189702v1>

SUMMARY OF THE AMERICAN DIETETIC ASSOCIATION'S "PRIORITIES FOR RESEARCH – AGENDA TO SUPPORT THE FUTURE OF DIETETICS" By Megan Tubman, MS, RD *Research Coordinator*

As ours is a relatively new field of study, we have the opportunity to be pioneers in the continued pursuit for greater understanding of human nutrition. Through formal research studies we can obtain knowledge that will enhance the education provided to dietetics students, enable better provision of care to patients and more valuable information to the public, and garner greater respect for dietitians from other health care professionals.

With all of the potential gains that nutrition research can yield, it may be surprising for readers to learn that between the years 2002 and 2004, there was no change in the number of dietitians reporting involvement in research. Luckily those already active in research continued to take on more projects. The percentage of dietitians in research initiating two or more studies per year jumped from 10% to 32% between 2002 and 2004.

The American Dietetic Association (ADA) recently put emphasis on the importance of our involvement in nutrition research through the publication of their "Priorities for Research – Agenda to Support the Future of Dietetics". The agenda was set after the committee reviewed nutrition research published to date, surveyed members for their opinions and current research activity, and then considered what types of projects would be most beneficial for "the advancement and promotion" of our profession. The agenda is intended to be dynamic as goals are to be reevaluated and priorities updated as the authoring committee sees fit. While a brief summary will be provided here, the complete document can be accessed via the members' section of the ADA website at www.eatright.org/ada/files/ADA_Priority_for_Research.2007.pdf.

Authors of this report call for our involvement in researching priority topics that they distinguish as falling into core research and dietetics research areas. Core research is identified as research that "reflects and expands

knowledge of nutrients, food and the lifestyle behaviors needed to best encompass optimal nutrition status both in prevention and treatment of disease." Behavioral and social sciences, food science, and basic physiology and nutrition research are all core research areas, and research that should be taken on by dietitians collaborating with other experts in the specific area of study.

Priority topics include...

- Nutrition and Lifestyle Change Interventions that Prevent or Treat Obesity and Chronic Disease
- Safe, Secure and Sustainable Food Supply
- Nutrients and Systems Biology

Dietetics specific research builds on core research by examining nutrition research questions in the context of dietetics practice. Examples of such research include studies evaluating the effectiveness of medical nutrition therapy as delivered in a hospital or outpatient setting. Authors of the ADA Priorities for Research note that dietitians should lead these studies.

Priority areas of study include...

- Nutrition Care Process and Health Outcome Measures
- Delivery and Reimbursement of Dietetic Services
- Dietetics Education and Retention

The ADA's identification of priority research issues will influence the organization's research goals, evaluation of success, and allocation of funding. In addition, their emphasis on the importance of research may inspire some of us to become researchers and others to initiate more than one project this year.

 American Dietetic Association

Interested in doing research, but lack funding?

There are many opportunities for obtaining funding for research on women's health and nutrition. Such grants, with title, purpose of funding, and links to additional information, can now be found on the WH-DPG website, in the members' section, under "Find research funding opportunities". This new resource will be updated as new appropriate grants are identified.

www.womenshealthdpg.org

trends networks experts discussion

NEW...Prepare for 2009 at the 2008 ADA Food & Nutrition Conference & Expo!

Are you interested in speaking at the 2009 ADA Food & Nutrition Conference & Expo? Have you thought about planning an educational session?

Plan on attending the **2009 ADA FNCE Educational Sessions: Open Discussion Session** on Sunday, October 26 at 1:30 p.m. – 3 p.m. This session will be the perfect opportunity to meet with the ADA FNCE Program Planning Committee and discuss your ideas, learn tips for online submission and receive feedback.

In addition, there will be computers and mentors/tutors in the ADA FNCE Speaker Ready Room to help you plan and submit your session online.

Call for 2009 ADA Food & Nutrition Conference & Expo Educational Sessions Opens September 1, 2008 and closes November 12, 2008

Visit www.eatright.org/fnce2009-sessionproposals

education

...knowledge acquired by learning and instruction

ADA Food & Nutrition Conference & Expo | Chicago, IL | October 25-28, 2008

MyPyramid for Pregnant and Nursing Moms

By Kathleen Pellechia, RD *Nutrition Information Specialist, USDA WIC Works Resource System*

Are you searching for new tools that can better help your pregnant and breastfeeding clients? Look no further than MyPyramid for Pregnant and Nursing Moms. Launched as a new section of the MyPyramid Web site <http://www.mypyramid.gov> this resource provides individualized guidance for this special target audience. It addresses nutritional needs, healthy weight gain, physical activity, use of dietary supplements, and food safety during pregnancy and breastfeeding. An interactive tool is also available on the site where a user can input personal data to receive an individualized meal plan, called "MyPyramid Plan for Moms." This meal plan provides recommended amounts women should eat from each food group, by trimester of pregnancy or stage of breastfeeding.

The launch of the online tools was followed by the release of three MyPyramid in Action Fact Sheets: Tips for Pregnant

Moms, Tips for Breastfeeding Moms and Dietary Supplements During Pregnancy and Breastfeeding. The fact sheets are available in English with a Spanish translation coming in the near future. Finally a poster was developed that is a great addition to any health professional's office. The tip sheets are available to download from the WIC Works Resource System at http://www.nal.usda.gov/wicworks/Topics/MyPyramid_Resources.html and hard copies of the tip sheets and poster are available to order (while supplies last) from the WIC program at www.nal.usda.gov/wicworks/Learning_Center/WICpub_order_form.pdf.

Additional information on the development of these materials can be found on the MyPyramid Web site. Questions can be directed to the WIC Works Resource System Team at wicworks@nal.usda.gov.

LEGISLATIVE UPDATE Continued from page 11

V. ADA creates health care reform task force

An ADA task force was formed in anticipation of a major national debate in 2009 on health care reform. The goal of the task force is to help the ADA Board of Directors focus on the key elements of a reform package that address the needs of Americans and protect the unique role of dietitians in health care. Chairing the new task force is Michele Chynoweth, RD, CDE from California.

VI. AAP Okays low-fat milk for toddlers

The American Academy of Pediatrics recently approved the use of reduced-fat milk for children between 1 and 2 years of age. The new guidelines advise that for children between 12 months and 2 years of age for whom overweight or obesity is a concern or who have a family history of obesity, dyslipidemia, or cardiovascular disease, the use of reduced-fat milk is appropriate. After their second birthday, low-fat and fat-free milk is appropriate for all children.

VII. US obesity rates continue to rise

Forty-five states are reporting that the prevalence of obesity increased by 1.7 percent between 2005 and 2007. Overall, the proportion of U.S. adults who reported being obese in 2007 rose to a record 25.6 percent, or about 54 million people. The greatest increases were for men and non-Hispanic black women (39 percent)

References

Rosenbaum, Dottie. "Farm Bill Contains Significant Domestic Nutrition Improvements." Retrieved August 10, 2008 from Center on Budget and Policy Priorities: <http://www.cbpp.org/5-8-08fa.htm>

Regulatory Comments. American Dietetic Association. Retrieved on August 10, 2008 from http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/advocacy_768_ENU_HTML.htm

SAVE THE DATE!
Public Policy Workshop 2009
 February 8-10, 2009 in Washington, DC.

SAVE THE DATE FOR FNCE EVENTS

Member Breakfast & Roundtable Discussions

Sponsored by the United Soybean Board

Monday, October 27, 2008 from 7:00-9:00 AM

Hyatt Regency on Wacker

DPG Showcase

Monday, October 27, 2008 from 10:30 AM-1:00 PM

McCormick Place West

Priority Research Session

Hormonal Help: Functional Foods for

Women of Reproductive Age

Tuesday, October 28, 2008 from 9:45 AM - 11:15 AM

McCormick Place West

Research and Public Policy Session

Maternal Weight Gain: The Scientific Evidence

Tuesday, October 28, 2008 from 12:00 PM - 1:30 PM

McCormick Place West

As usual, the Women's Health DPG will be in need of volunteers to help with the Mother's Room at FNCE. Please contact Maria Pari-Keener, Membership Chair at whdpgmembership@gmail.com if you are interested.

This fall we are delighted to honor one of our own movers and shakers! Gail Frank, DrPH, RD, CHES, is the recipient of this year's ADA Foundation Award for Excellence in Dietetic Education and the focus of our Fall Member Spotlight. She has made tremendous contributions to dietetics having authored over 110 scientific articles, presented at hundreds of conferences and meetings around the country on dietetic related topics, and continued to train and mentor students and dietetic interns as a Professor of Nutrition and the Dietetic Internship Director at California State University, Long Beach (CSULB). In addition she acted as a Spokesperson for the American Dietetic Association for 19 years (1986-2005).



Gail Frank, DrPH, RD, CHES

**How did you get into dietetics?
What have been some major career
steps for you?**

I graduated from Texas Tech University and chose the field because it was so very interesting. I loved organic and biochemistry but also liked studying about disease and how to help people by planning and counseling them. I thought I might become a physician but decided to finish in nutrition and complete an internship which I did at Touro Infirmary in New Orleans.

I completed my first master's degree in Public Health Nutrition from Tulane University. Immediately following my internship I had the rare opportunity to study under Dr. Grace Goldsmith who had been the Chairman of the Food and Nutrition Board in the National Academy of Sciences and was Dean of the School of Public Health at Tulane. Having taken my first job as the Head of Nutrition for the Bogalusa Heart Study, I was responsible for the design and implementation of the dietary component of the study and grew to enjoy being a part of community-based research. It was at this time that I completed a second master's degree and a doctorate in epidemiology also from Tulane University. After 16 years of research and over 40 publications, I accepted a position as a Professor of Nutrition, California State University Long Beach.

Now in California for 20 years, I have remained a Professor of Nutrition at CSULB and began the Accredited Dietetic Internship now in its 18th year. For 10 years, I also served as Co-Principal Investigator for the Clinical Center of the Women's Health Initiative at the University of California Irvine focusing on the Diet Modification Trial. My writing has continued

and the 2nd edition of my textbook, *Community Nutrition--Applying Epidemiology to Contemporary Practice* was published this year.

What resources do you find most helpful in your daily work?

I scan the articles in JADA monthly and find citations and topics mentioned in the ADA Daily News from the Knowledge Center very helpful. I receive several journals and am on the editorial Advisory Board for *Obesity Management Journal* which I find very informative.

Tell us about any current research you are doing and/or any publications to your name.

My major research currently is as Co-Project Director for a USDA-funded project, **Comienzo Sano: Familia Saludable (Healthy Start, Healthy Family)**, which offers an innovative approach to the low numbers of Latino bilingual/bicultural students majoring in health science and/or nutrition studies at California State University Long Beach (CSULB) by training them in community participatory research. By helping to meet the needs of underserved Latinas and their families through a partnership with the Women, Infants and Children (WIC) Program, students are trained and work with faculty to assist with behavioral change efforts at the community level.

Latino students are severely underrepresented in the Nutrition Science undergraduate program and the Accredited Dietetic Internship averages only 1 out of 12 interns. This project will help to remedy the lack of Latino professionals in these disciplines by involving them in a project that provides cutting edge training in a community-based setting while allowing an opportunity for students to give back to their community.

Tell us about the award you received and why you received it.

The award for Excellence in Dietetic Education is presented annually to a registered dietitian who has performed at a very high level consistently contributing to the ongoing education of RDs and future dietetic professionals with presentations, scientific and newsletter articles, training and educational opportunities and mentoring. This can involve undergraduate education, graduate education and training during the Dietetic Internship.

NUTRITION CODING & COVERAGE

Advocating on your behalf, ADA committee brings nutrition coding and coverage to the forefront

Regardless if you are a registered dietitian (RD) working in a private practice, a hospital, nursing home or other practice setting, the members of the Coding & Coverage Committee (CCC) are some of your biggest advocates. The committee's goal – to empower RDs to expand nutrition services coverage and receive competitive reimbursement-- impacts all RDs. If you've ever wondered what the American Dietetic Association (ADA) is doing about reimbursement or coverage for nutrition services (and the problematic lack of), know that some of the most business savvy RDs in the association are working hard to develop strategies for increasing RD recognition and coverage.

The CCC is a small but passionate group of RDs who envision a financially bright future for the dietetics profession. Members of the CCC come from a variety of work settings and are appointed by the ADA President-elect to a two or three-year term. Their focus is on both internal and external stakeholders in the nutrition reimbursement arena. During their tenure, they are charged with planning for future nutrition code development and maintenance; educating members on coding and coverage, and creating strategies to promote recognition and the benefits of RD-provided nutrition services.

Former ADA President Susan Laramee, MS, LDN, RD, formed the CCC in 2005 upon recognizing a crucial need within ADA to strategically plan and monitor coding and coverage activities. Since its formation, the CCC has already made significant strides; from educational outreach and awareness efforts at FNCE and affiliate meetings, to third party payer outreach and physician recognition of RD-provided services.

Outgoing committee chair, Keith Ayoob, EdD, RD, FADA serves as a liaison to the American Medical Association's (AMA) Current Procedural Terminology Health Care Professional Advisory Committee (CPT HCPAC). This allows him to participate in the development of CPT (procedure) codes for RDs through the AMA process. "It is a very arduous process," said Ayoob, "but constant presence at such meetings reinforces the value of registered dietitians in the coding and coverage process."

Also representing ADA within the AMA on national coding activities is Jane White, PhD, LDN, RD, FADA, an ex-officio member of the CCC. White is the liaison to the AMA's Relative Value Scale Update Committee (RUC). This group has the ability to influence code values, or the rate at which codes, such as the MNT codes, are reimbursed by the Centers for Medicare & Medicaid Services. White sees coding and coverage as the "lifeline" of the RD profession. "It is important that ADA be present at the AMA coding related meetings so that all members of the health care team are exposed to RDs and understand the vital nature of the work that we do to optimize the nutritional status, health and well-being of the American public," said White. "We must be at the table when the discussions of health care and nutrition services delivery occur so that we can have input into the decisions that impact services provision, code creation and services reimbursement."

Due to ADA's involvement in AMA coding meetings, new codes for team conferences, phone and email services, and education and training are available for RDs. Depending on payer policies, these codes may be used among private insurance companies. White and Ayoob's appointments to the HCPAC ensure ADA will have a strong voice among many competing interests in the health care field.

In addition to these external groups, members of the CCC work closely with internal ADA groups to advance opportunities for RDs. For example, CCC members contributed to the development of performance measures for outcomes reporting to the government and insurance groups. The CCC also funded and is involved with the MNT Effectiveness Evidence-Analysis Workgroup to review research on cost-savings of RD-provided clinical nutrition services and the value and impact of RD nutrition services compared with services provided by other healthcare professionals. (Information will soon be posted on the Evidence Analysis Library.) In addition, members participate on the Evidence-Based Practice Committee and helped draft the August 2008 Journal of the American Dietetic Association article, "Referral Systems in Ambulatory Care— Providing Access to the Nutrition Care Process."

During the past year, committee members have reached out to the larger ADA membership in many ways. At affiliate meetings across the country, hundreds of ADA members attended a "Cracking the Code- Billing Potential Beyond Medical Nutrition Therapy" seminar presented by the CCC members. Thousands of ADA members received email requests to participate in an ADA 2008 CPT Code Survey, requests to participate in an ADA/AMA Practice Information survey, and requests to participate in a phone and email procedure code survey, all CCC projects. Also during the year, thousands of ADA members downloaded the "MNT Works Kit" and marketing materials on "How to sell MNT message" to use to expand coverage with local insurance companies. All this, and more, was made possible through the hard work and dedication of the CCC members.

According to Ayoob, the CCC's success during 2007-2008 can be attributed largely to the unique perspective and passion that each member brought to the table. Looking ahead, 2008-2009 Chair Charlotte Thiessen, MS, RD, LMNT, hopes to add to the strong foundation by expanding the educational "Cracking the Code" presentation schedule and developing strategies for increasing RD recognition and coverage among private sector third party payers. "The work of the coding committee is critical to the profession," said Thiessen. "Assisting RDs on interacting with insurance companies and understanding code use and billing procedures for nutrition services is fundamental to ensure MNT remains an effective and covered benefit."

To learn more about the Coding & Coverage Committee and to view member coding and coverage resources go to www.eatright.org/mnt.

Members of the 2008-2009 Coding & Coverage Committee include: Charlotte Thiessen, MS, RD, LMNT, Keith Ayoob, EdD, RD, FADA, Susanne Luchetti, MS, RD, LDN, Linda Arpino MA RD CDN, Jane White PhD RD FADA LDN, Diane Machcinski, MEd, RD, Mary Ann Hodowicz, MBA, RD, CDE, Legislative and Public Policy Liaison. Three-year veteran Mindy Benedict, MS, RD, CDE, LDN just ended her term with the CCC. Staff partners include Hellen Coleman, Tori Bender and Pam Michael from the Nutrition Services Coverage Team.

GOALS OF THE WH PRACTICE GROUP

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

The objectives of the Women's Health DPG are:

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

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

Laura J. Couillard, MS, RD
6202 Mighty Elm Court
Kingwood, TX 77345

Women's Health

a dietetic practice group of the
American Dietetic
Association

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www.womenshealthdpg.org