More and more organizations are recognizing the value of investing in their employees' health. To this end, employers are implementing health promotion and disease prevention programs targeting the health risks and chronic conditions of their employee populations. Prevention of heart disease, reducing the risk of Alzheimer’s, and promotion of healthy pregnancy represent a few of the programming areas sponsored by employers today. And, they are working. Surveyed employees report increased job satisfaction, reduced health risks, and improved overall health status. Employers are reporting related cost savings in health care, workers' compensation, and a reduction in absenteeism.

In 2005, the University of Florida’s Institute for Food and Agricultural Sciences, Food Science and Human Nutrition Department (UF/IFAS/FSHN) knew three things:

• How difficult it was to get the folic acid message out to those most at risk,
• How important it is to leverage all available resources and partners to do so, and
• Employers represented an untapped folic acid education resource.

Seizing the opportunity to leverage the available support of interested employers, UF/IFAS/FSHN received a grant from the March of Dimes (MOD) Florida Chapter to fund development of a worksite-based folic acid education program that could be easily implemented by existing departments within an organization. Pre- and post-program surveys would be conducted to determine the success of this program in both increasing the awareness of the importance of daily folic acid consumption and the actual daily consumption of 400 micrograms of folic acid among program participants, particularly women of childbearing age.

The first step was to develop and assemble a worksite-focused folic acid education program kit and survey tools to be pilot-tested at five (5) worksites over the course of 24 months.

Early in March 2007, UF partnered with the W. S. Badcock Corporation, Inc. (Badcock) as its initial pilot project partner. Why? Following several months of reviewing employer partner possibilities, Badcock was chosen because of its ongoing dedication and commitment to providing employees and their families with the tools and support they need to take care of themselves.

Founded in 1904, Badcock is one of the largest home furniture retailers in the US, having more than 300 locations throughout the Southeast. Most importantly, as virtually all of its employees will agree, Badcock really cares about its employees. Badcock's culture actively supports the health and well-being of its “family” through a variety of programs and services. Delivered primarily through their Occupational Health department, these programs and services are designed to help employees take the best care of themselves as possible in many different areas.

Badcock’s Wellness Program started out modestly in 1997, using employee donated exercise equipment and a small area of company donated space. Today, this program features a full size employee fitness center and sponsors a Wellness Challenge incentive program to encourage maximum participation by everyone at Badcock. It’s Wellness Program afforded UF/IFAS/FSHN with the perfect platform from which to launch its first worksite-based folic acid education pilot program.

(Continued on Page 3)

"Badcock is a really family oriented company. In big and small ways, we want our employees to know that we care, not only about their work environment but about their health and well-being as well. Since good health is an issue for the entire family, our goal is to reach all Badcock families with the support and tools they need to live healthier, happier, and more productive lifestyles."

Terri Johnson, RN, COHN
Badcock’s Wellness Coordinator
Florida Women’s Health in Focus: Governor’s Conference Reviewed
Contributed by Gretchen M. von Mering, Coordinator, Florida Folic Acid Coalition, UF/IFAS/FSHN

Landmark state legislation, Section 381.04015, Florida Statutes, was passed in 2004 to strengthen Florida's ability to address the health needs of women. The goal of the legislation was to ensure that the state's policies and programs are responsive to gender differences and to women's health needs across the lifespan.

The legislation also created an Officer of Women’s Health Strategy position within the Florida Department of Health. Currently, Jean Kline, RN, BSN, MPH, Deputy Secretary for Health, State Public Health Nursing Director, holds this position. The legislation directs the Department of Health to perform certain tasks including the coordination of a statewide Governor's Conference on Women's Health. The University of Florida (UF) and the Florida Folic Acid Coalition (FFAC) are working to ensure that folic acid awareness and education are included in the Women's Health Strategies for the State of Florida. Gail Rampersaud, MS, RD, with the Food Science and Human Nutrition Department at UF, serves on the Interagency Committee on Women's Health. Lori Reeves, MPH, an FFAC Executive Committee member and State Program Director for the March of Dimes Florida Chapter, and Gail Rampersaud actively participated in the “Strategic Planning Meeting for Florida’s Statewide Plan on Women’s Health” held in November of 2006.

On April 15-16, 2007, the second Annual Governor's Conference on Women’s Health was held in Tampa. Post conference evaluations noted that 96% of all attendees rated the conference a success. There were 310 registered participants. Participants attended daily keynotes and 26 seminars and visited over 40 exhibitors, representing public and non-profit agencies, organizations, associations and educational entities. In addition to the FFAC, several organizations provided information about folic acid as part of their exhibit, including the Florida Chapter of the MOD, Healthy Babies, Orange County Health Department, and Florida WIC.

Two encouraging keynote presentations were made. Jean Kline opened the conference with Major Accomplishments in Florida Women’s Health and Wanda Jones, Dr.P.H., Deputy Assistant Secretary for Health, Women's Health, U.S. Department of Health and Human Services, spoke about the Federal Outlook on Women’s Health. Exhibitors showcased successful, high-quality programs, projects or initiatives that address the needs of women across the lifespan.

For more information about the 2007 conference and/or future conferences, contact: Tiffany Simpkins, MSHA, Coordinator, Women's Health, FL DOH, (850) 245-4425.

The State of Florida’s Definition for Women’s Health:

"Women's Health involves a woman's emotional, social, spiritual, and physical well-being and is determined by the social, political, and economic context of her life, as well as biology."

Around the State
Compiled by Elizabeth Jensen & Staff, Florida VitaGrant Project

MAY 2007

• The Healthy Start Coalition of Hillsborough County Baby Shower targeted moms to be and new moms, offering vital health, nutrition information, and 2-month supplies of multivitamins to attendees.
• At the second Annual Governor’s Conference on Women’s Health, the importance of folic acid education received much added attention via information shared with all attendees by the MOD, FFAC, and VitaGrant.

JUNE 2007

VitaGrant sponsored several activities in June.
• A lecture series on pregnancy that kicked off at the Sterling Library in Broward County
• A folic acid training for staff of Florida International University North Campus Clinic
• On-campus one-on-one info sessions to the predominantly African American Edward Waters College’s female students in Jacksonville
• Folic acid information and multivitamins distributed to attendees at the Children’s Trust Family Expo and Hillsborough County’s Stanley Park Family Fun Days

Health Fair Highlights
Many health fairs scheduled throughout the spring and summer months have included folic acid information tables targeting at risk groups:
• In Collier County, Healthy Start of SW Florida hosted a Health Fair for high school students with a focus on teens and premature birth risk reductions.
• In Collier County, Healthy Start of SW Florida hosted a Health Fair for high school students with a focus on teens and premature birth risk reductions.
• The Alachua County Board of County Commissioners’ hosted an Employees Health Fair. Employees were delighted to receive detailed information about across-the-lifespan benefits of folic acid.
• Hispanic women benefited from attending health fairs such as the Good Samaritan Women’s Health Fair on June 6th, Santa Maria Mission Health Fair on April 14th and the Migrant Farm Workers Health Fair on April 1st.
• Several of the Seminole Indian Tribe’s locations hosted Women’s Wellness Fairs and events throughout the South Florida region. VitaGrant actively participated by providing fun giveaways, literature, and multivitamins to the tribes in Ft. Lauderdale, Big Cypress and the Treasure Coast.
Neural tube defects (NTDs), including anencephaly, spina bifida, and encephalocele, are birth defects that affect the central nervous system. These defects occur very early in pregnancy, often before a woman realizes she is pregnant. NTDs are significant contributors to infant morbidity and mortality, but they can be prevented by consuming adequate amounts of folic acid before and during pregnancy. Consequently, the U.S. Public Health Service recommended that all women of childbearing age consume 400 micrograms of folic acid each day [1]. Data collected by the Florida Birth Defects Registry (www.fbrd.org), a population-based passive surveillance system, was used to assess differences in NTD rates among the offspring of U.S.-born (United States) and foreign-born Hispanic women residing in Florida.

The overall rate of live births in Florida with NTDs between 1998 and 2004 is approximately 4.6/10,000. However, the rates of NTDs have decreased since peaking in 1998 and 1999 (Figure 1). In spite of the observed decreases, some Hispanic women are more likely to have a baby with an NTD. In general, babies born to Hispanic women of Mexican or Puerto Rican origin may be more likely to have an NTD-affected pregnancy than non-Hispanic women. Risk also differs by maternal country of birth (Figure 2). Data suggest that Puerto Rican women born in Puerto Rico are 30% more likely to have an infant with an NTD than Puerto Rican women born in the U.S., but the differences are not statistically significant. Similar results were found among Hispanic women of Mexican origin. When compared to U.S.-born non-Hispanic women, foreign-born Mexican women were 36% more likely to have an infant with an NTD whereas foreign-born Puerto Rican women were 50% more likely to have an infant with an NTD. However, the small number of cases (n=660) prevented the analyses from reaching statistical significance.

There are several potential explanations for these findings, including differences in folate metabolism and genetic variation [2,3]. Regardless, many studies have suggested that folic acid is not as effective in preventing NTDs in Hispanics [4-6]. Florida currently ranks third in the number of Hispanic births, surpassed only by Texas and California [7]. The number of Hispanic births in Florida has continued to increase, thus escalating the importance of understanding the factors that contribute to the excess NTD risk in some Hispanic subpopulations. Additional research with larger sample sizes is needed to further explain these findings.

**Figure 1**

**Figure 2**

<table>
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<th>NTD Rate per 10,000 Live Births, Florida 1998-2004</th>
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<td>Year</td>
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<td>Rate per 10,000 Live Births</td>
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**References**

Research Update
Contributed by Gail Rampersaud, MS, RD, LDN, Assistant in Nutrition Research and Education, UF/IFAS/FSHN

The following summaries offer the results of recent research studies or nutrition and health policies regarding recommendations on folic acid.

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A meta-analysis was conducted to assess the efficacy of folic acid supplementation in the prevention of stroke. Data from eight randomized controlled trials and over 16,800 participants were evaluated. Folic acid doses in the studies ranged from 500 micrograms to 15 milligrams per day for as short as 24 months and as long as 72 months. The results indicate that the overall folic acid intervention was associated with an 18% reduced risk for stroke (95% confidence interval 0.68-1.00). Stratified analysis showed that risks were further reduced with folic acid supplementation of longer duration (i.e., > 36 months), homocysteine lowering by at least 20%, no history of stroke, and in an environment with no folic acid grain fortification. The authors conclude that folic acid supplementation may effectively reduce the risk of stroke in primary prevention. [Wang et al. Efficacy of folic acid supplementation in stroke prevention: a meta-analysis. Lancet 2007;369:1876-1882.]

***
A study was conducted to assess the impact of folic acid fortification on orofacial clefts in the US. Birth certificate data from 45 states and the District of Columbia were used to identify cases based on the fortification status (i.e., pre- or post-fortification) at conception. The incidence of orofacial clefts declined 6% following fortification, a statistically significant reduction. The decline was limited to non-Hispanic Whites but not other racial/ethnic groups, women who did not smoke, and women who received prenatal care during their first trimester of pregnancy. The timing of the decline was consistent with the onset of fortification, although the reduction was not as high as that seen in neural tube defects following folic acid fortification. [Yazdy et al. Reduction in orofacial clefts following folic acid fortification of the U.S. grain supply. Birth Defects Research (Part A). 2007;79:16-23.]

***
A new American Heart Association (AHA) Scientific Statement highlights the lifestyle steps that parents can take to increase the chances that their babies are born with a healthy heart. The statement was issued by the AHA’s Council on Cardiovascular Disease in the Young and is endorsed by the American Academy of Pediatrics. The four key recommendations of the committee are:
- Parents should seek pre-conception and prenatal care
- Women should take a daily folic acid containing supplement,
- Parents should review their use of medications (including over-the-counter medications),
- Prospective mothers should have limited contact with individuals who have the flu or other fever-related illnesses.

The recommendations are based on the committee’s review of published medical and scientific literature. [Jenkins et al. Non-inherited risk factors and congenital cardiovascular defects: current knowledge. A scientific statement from the American Heart Association Council on Cardiovascular Disease in the Young. Circulation. 2007;115:2995-3014.]

A double-blind, placebo-controlled randomized clinical intervention trial was conducted to assess the safety and efficacy of folic acid supplementation for preventing colorectal adenomas. Participants included over 1,000 individuals who had already been diagnosed with adenomas prior to the study period. They took a placebo or a 1-milligram folic acid supplement daily. Follow-up consisted of two colonoscopies at 3 years and 3 to 5 years later. Results show that there was no benefit of folic acid supplementation on the overall incidence of adenoma formation. However, when the data were examined by the number of adenomas detected, folic acid was associated with more than a 2-fold increased risk of having 3 or more adenomas, suggesting that folic acid supplementation at this level may have promoted lesion growth in certain individuals. The observed increased risk needs to be further investigated. Because the study was conducted in individuals with a previous history of adenomas and therefore assessed folic acid’s efficacy in secondary prevention, further study is needed regarding the efficacy for folic acid supplementation in primary prevention of adenomas. [Cole et al. Folic acid for the prevention of colorectal adenomas. A randomized clinical trial. JAMA. 2007;297:2351-2359.]
Blood Folate Levels Decrease in Women of Childbearing Age

Contributed by Gail Rampersaud, MS, RD, LDN, Assistant in Nutrition Research and Education, FSHN/University of Florida

Some of the increases observed in blood folate levels following grain fortification with folic acid may have been lost in 2003 and 2004. An analysis by the Centers for Disease Control and Prevention (CDC) using data from the National Health and Nutrition Examination Survey (NHANES) previously reported that median serum folate concentrations in non-pregnant women of childbearing age increased substantially following folic acid fortification of grain products [1]. The analysis compared blood folate levels from NHANES 1988-1994 (pre-fortification) to NHANES 1999-2000 (post-fortification). In early 2007, CDC updated these findings by comparing the 1999-2000 data with the subsequent NHANES time periods 2001-2002 and 2003-2004 [2]. The three post-fortification time periods were compared to assess any further changes and trends in blood folate levels post-fortification. The updated analysis indicates that median serum folate concentrations decreased by 16% and red blood cell folate concentrations decreased 8% between 1999-2000 and 2003-2004. When the data were stratified by race and ethnicity, the largest decrease (16%) in serum folate was noted among non-Hispanic whites when compared to non-Hispanic blacks and Mexican Americans. However, non-Hispanic blacks had the overall lowest median serum folate concentrations. Likely explanations for the decrease include fewer women taking supplements containing folic acid, decreased consumption of folic acid fortified foods or foods naturally rich in folate, or increased risk factors associated with lower serum folate concentrations (e.g., obesity). A plausible explanation is the popularity of low carbohydrate diets during these time periods, which could have resulted in lower intake of folic acid fortified grain foods during the most recent survey periods. Unfortunately, the data are not yet available to determine whether the incidence of neural tube defects (NTD) was significantly affected during this time period.

“The drop observed in serum folate concentrations is worrisome”, said Lynn Bailey, professor and folate researcher at the University of Florida. “Women of childbearing age need to be consistently encouraged to take a folic acid-containing vitamin on a daily basis, while consuming foods fortified with folic acid and rich in natural folates. This will ensure they get the folic acid they need to reduce their risk of having a baby with an NTD.” As a reminder, public health recommendations state that all women of childbearing age get 400 micrograms of folic acid on a daily basis while making sure they have a healthy diet that includes natural folate from food. Link to the newest MMWR article at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5551a2.htm.

References

2006 Gallup Survey Results Support Continued Need to Promote Folic Acid

Contributed by Gretchen M. von Mering, Coordinator, Florida Folic Acid Coalition, UF/IFAS/FSHN

In November 2006, The Gallup Organization released its updated report, “Folic Acid and the Prevention of Birth Defects: A National Survey of Pre-Pregnancy Awareness and Behavior Among Women of Childbearing Age”. The survey assessed folic acid awareness and intake practices of women ages 18-24 years. Unfortunately, despite the efforts of so many invested in promoting the folic acid message to women of childbearing age, the results of this 2006 survey are disappointing.

Overall, there has been an increase in awareness of folic acid among women age 18-34 years, from 46% in 1995 to 83% in 2006. However, only three in ten (29%) take a multivitamin daily. And, in 2006, the number of women age 18-24 years taking a daily multivitamin dropped from 24% in 2005 to 18%. In fact, among women age 18-24 years, awareness of the importance of folic acid is only 72% versus 91% for older women. Only 6% of women age 18-24 years know that folic acid should be taken before pregnancy.

Frustrating? Yes. Should we throw up our arms? Not at all. In fact, we need to rise to the challenge and focus our educational efforts, especially for younger women. How? Utilize the very important market research data surfaced by this latest Gallup survey and sources of related information; and use our creativity, to get the folic acid message heard, seen and digested by all women of childbearing age, especially younger women.

When developing folic acid education campaigns and programs, focus on messaging venues most likely to reach the target audience. The 2006 Gallup Survey indicates that:

- 25% of women 18-34 years compared to 12% of women 18-24 years learned about folic acid through their health care provider(s).
- 24% of all women surveyed and 21% of those 18-24 years, read about folic acid in magazines/newspapers.

Additionally, through both focus groups and informal conversations, we know more and more younger women are turning to the Internet as their primary source for news, medical, and health information learning. In short, FFAC recommends building your folic acid programs around the messaging venues that are most likely to reach your target audience.
Florida Folic Acid Coalition
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Gainesville, FL 32611-0720
Phone: 352-392-1978 Ext. 406
Fax: 352-392-1988
Email: gmvonmering@ufl.edu

Mission:
To decrease the incidence of folic acid preventable birth defects and to reduce chronic disease risk in Floridians.

Vision:
As a result of the Coalition’s efforts, this simple primary prevention strategy will result in fewer pregnancies affected by folic acid preventable birth defects. More Floridians will experience the indirect health benefits of taking a daily multivitamin to enhance health throughout their lifespan.

Visit Us on the Web!
www.FolicAcidNow.net

Published by the Florida Folic Acid Coalition
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Current & Upcoming Events

September 1 - 30, 2007
National Fruit and Vegetable Month
Promote consumption of folic acid during September.
Contact Joseph Ralph for materials.
Fruit and Vegetable Program Office, Centers for Disease Control and Prevention/Produce for Better Health Foundation
4770 Buford Highway NE, MS K-26
Atlanta, GA 30341
(770) 488-5545
(800) 243-7889 TTY
emq8@cdc.gov
www.5ADay.gov

October 1 - 31, 2007
National Spina Bifida Awareness Month
Help reduce neural tube defects by promoting folic acid during October.
Materials available.
Contact: Maya House
Spina Bifida Association of America
4590 MacArthur Boulevard NW, Suite 250
Washington, DC 20007-4226
(800) 621-3141
(202) 944-3285
(202) 944-3295 Fax
sbaa@sbaa.org
www.sbaa.org

October 15 - 19, 2007
National Health Education Week
Make folic acid education this month’s health education topic.
Contact: Ray Marks
National Center for Health Education
Society for Public Health Education
375 Hudson Street
New York, NY 10014
(212) 463-4053
ray@nche.org
www.nche.org

October 18 - 20, 2007
Florida State Association of Occupational Health Nurses (FSAOHN) annual 2007 conference
FFAC will be exhibiting.
This conference will be held at Walt Disney Resorts Coronado Springs.
For attendance and exhibiting information, contact: