



WOMEN'S HEALTH & REPRODUCTIVE NUTRITION REPORT

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BREAST CANCER: Hormone and Diet Connections

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Breast cancer is the most common type of cancer among women, excluding non-skin cancers. According to the American Cancer Society, an estimated 211,300 new cases of invasive breast cancer were predicted for the year 2003 among US women. The majority of risk factors for breast cancer are hormone-related (See Table I). The only well established nutrition-related risks are obesity and alcohol consumption.¹

Insulin resistance and breast cancer Several diseases are either known or suspected to be associated with altered levels of hormones and growth factors influencing the risk of breast cancer. For example, the association of breast cancer with late onset diabetes suggests a role for hyperinsulinemia and insulin resistance, possibly mediated by estrogen metabolism². Increased serum concentrations of free estradiol and free testosterone are similar risk markers and are frequent concomitants of hyperinsulinemia³⁻⁵.

The risk for breast cancer has been evaluated using markers of insulin resistance and sex steroid hormonal activity. Results indicate abdominal adiposity, sebum production, and hirsutism are risk factors in both pre- and post-menopausal women.⁶ Premenopausal women with newly diagnosed breast carcinomas have significantly higher insulin levels.⁷ Another study, of non-diabetic women diagnosed with breast cancer, showed the poorest outcomes in those with high fasting insulin levels.⁸

A recent study examined whether insulin resistance could explain the association of breast cancer risk factors with serum estradiol and sex hormone-binding globulin (SHBG, a binding protein that regulates the bioavailability of circulating sex steroids to tissues). The authors identified a significant correlation between body mass index (BMI) and the ratio of estradiol to SHBG, after controlling for age. The correlations remained significant between BMI and estradiol/SHBG after controlling for fasting plasma insulin. The results of this study strongly suggest both insulin resistance and estrogen metabolism may mediate the reported association of BMI with breast cancer.⁹ According to Kaaks, insulin and insulin-like growth factor (IGF-I, a peptide hormone that acts as a mitogen), stimulate the synthesis of sex steroids and inhibit the synthesis of SHBG.^{10, 11}

The results of a study by Muti et al. investigating the role of fasting glucose as a risk factor for breast cancer, showed chronic alterations of glucose metabolism are also related to breast cancer risk. In postmenopausal women,

Table 1: Risk factors associated with the diagnosis of breast cancer

- * Increased age
- * Family history
- * Biopsy-confirmed atypical hyperplasia
- * Increased breast density
- * Long menstrual history
 - menarche <12 years
 - menopause >55 years
- * Recent use of hormonal contraceptives
- * >5 years postmenopausal hormone replacement therapy
- * Never having children or first live birth after age 30
- * Obesity, especially after menopause
- * Alcohol use >2 drinks/day

the study concluded the associations of glucose, insulin and IGF-1 pattern were associated with breast cancer risk in heavier subjects who had a BMI greater than 26 kg/m².¹²

Obesity and breast cancer

Obesity has complicated relationships to breast cancer risk. It has been related to advanced disease at diagnosis and with poor prognosis in both pre- and post-menopausal breast cancer.¹³ Elevated BMI probably affects endogenous estradiol levels. It has been hypothesized that leptin, a hormone produced predominantly by adipose tissue, can induce aromatase activity with potential for the promotion of estrogen production from androstenedione in adipose tissue. Since leptin is produced by adipose tissue, it may stimulate estrogen-dependent breast cancer promotion.¹⁴ Women with a high BMI will have more adipose tissue

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and produce more aromatase, which catalyzes the conversion of androstenedione to estrone, which can be converted to estradiol.¹⁵ This conversion occurs in women at all ages, but in premenopausal women, estradiol production predominately comes from ovaries and is controlled by negative feedback, so there is little if any association between BMI and levels of free estradiol. In postmenopausal women, the ovaries no longer produce estradiol. Most estradiol is derived from the conversion of androgens to estrogens in the adipose tissue. It is not regulated by feedback; therefore, obese postmenopausal women have up to about two-fold higher serum estradiol concentrations than thin postmenopausal women. SHBG levels also fall with increasing BMI, thus increasing the proportion of estradiol that is freely available to enter the cells¹⁶.

Diet and breast cancer There is evidence diet alters estrogen concentrations, pharmacokinetics, and metabolism in healthy women¹⁷. Dietary factors possibly affecting risk through hormonal mechanisms include alcohol, fat, dietary fiber and phytoestrogens.

Alcohol Alcohol intake is the best-established dietary risk factor for breast cancer¹⁸. The mechanisms for the association of alcohol with breast cancer risk have not been established, but one possibility is it increases endogenous estrogen levels. Results of a controlled feeding study by Dorgan et al. showed when women consumed 15 or 30 g of alcohol per day, serum levels of hormones associated with increased risk of breast cancer rose significantly¹⁹. Dietitians need to address alcohol intake with their patients. The recommendation is no more than one serving per day (12 oz. beer, 5 oz wine, 1.5 oz 80-proof distilled spirits). Adequate intakes of folic acid may reduce the added risk from alcohol consumption in larger amounts.²⁰

Fat The role of dietary fat in promoting breast cancer is less clear. A pooled analysis of eight prospective studies associating dietary fat and breast cancer risk did not indicate any associations in women from Western countries²¹. However, another pooled analysis of case-control (N = 31) and cohort studies (N = 14) indicated an increased risk of breast cancer with a higher intake of meat, saturated fat and total fat²². Other studies indicate certain types of fat may offer some protection against breast cancer. A higher intake of olive oil, for example, was associated with reduced risk, suggesting the beneficial effects of its high antioxidant content^{23, 24}. While the data are not conclusive, these findings are consistent with the dietary guidelines to replace saturated fats with more unsaturated fatty acids. The most recent Dietary Reference Intakes²⁵ recommend women intake 12 grams per day of linoleic acid (n-6 fatty acid), present in high levels in vegetable oils such as safflower or corn oils, and 1.1

grams per day of alpha-linolenic acid (n-3 fatty acid), found in milk and some vegetable oils, such as soybean and flaxseed.

Dietary fiber The metabolism of endogenous estrogen can be altered by dietary fiber. Postmenopausal women consuming a low-fat, high-fiber diet combined with exercise have increased levels of SHBG in comparison to controls. Research indicates this increase in SHBG should reduce the risk of breast cancer risk²⁶. Changes in endogenous hormone metabolism resulting in reduced risk for breast cancer were also observed when postmenopausal women were exposed to a high fiber and high phytoestrogen diet.²⁷ According to the Institutes of Medicine, the recommended daily intake for total fiber for women younger than fifty is 25 grams per day and 21 grams per day for women over 50 years. The report defines total fiber as the combination of dietary and functional fiber. Functional fiber refers to those fiber sources that are shown to have similar health benefits as dietary fiber, but are isolated or extracted from natural sources or are synthetic. The definition of functional fiber aims to exclude fiber-like products, whether extracted or synthesized, that cannot be shown to have proven health benefits.²⁵

Phytoestrogens The role of phytoestrogens and breast cancer is an active area of research. Phytoestrogens are plant substances that are structurally and functionally comparable to estradiol and capable of producing estrogenic effects. They are classified in three main groups: isoflavones, coumestans, and lignans; and have about 1/1000 the estrogenic activity of human estrogens such as estradiol.²⁸ Several epidemiologic studies have examined the relation between soy intake as a rich source of isoflavones and breast cancer risk. In a study of premenopausal Japanese women the correlation between soy products as well as isoflavone intake and serum IGF-1 or IGFBP-3 levels was not significant²⁹. In a randomized trial of postmenopausal women receiving an ad libitum diet low in animal fat and refined carbohydrates and rich in low-glycemic-index foods, monounsaturated and n-3 polyunsaturated fatty acids, and phytoestrogens, compared to the control group, SHBG increased significantly ($P < 0.0001$) and testosterone levels were significantly decreased ($P = 0.0038$). According to the authors, serum estradiol was also decreased, but the change was not significant.³⁰ At the present time data are insufficient to conclude that soy consumption offers a protective effect against breast cancer.³¹ However recent studies show that high soy intake in childhood in Asian-Americans is associated with reduced risk of breast cancer.³² Prospective controlled trials of phytoestrogens to assess its protective role in breast cancer are needed.

There are no established guidelines for soy intake at this time. However for people considering including soy foods in their diets, consumption of 1-2 servings of soy foods per day



Battle of the Bulge

Kathy Isoldi, MS, RD, CDE

Introduction

He wants a 32-ounce, juicy steak and piles of mashed potatoes. She craves pasta and bread, and would kill for a box of really good chocolate. Men and women may report different food cravings, but in the end overindulgence in these cravings will create an unkind reflection in the mirror for both sexes. A hefty 61 percent of the American population- men and women alike- are overweight or obese¹. There appears to be a real effort by many Americans to shed these pounds of fat. Some surveys report as many as 70 percent of Americans are currently dieting or have been on a diet recently. One could easily anticipate another fact revealed by the surveys- American women are dieting with greater frequency than men^{2,3}.

In addition to the growing number of Americans who are battling to lose weight, there has been a dramatic rise in the rate of overweight and obesity in the past two decades. The healthcare community has suggested a myriad of reasons why obesity has skyrocketed. Fingers have been pointed in many directions. Increases in restaurant dining, fast food meals, inactivity, low fat dieting, too many carbs, as well as "super-sized" food, have all topped the list of obesity-inducing culprits. We may be aware of the main contributors to piling on the pounds, but we are somewhat at a loss for a realistic plan of action for success in the battle of the bulge. In an effort to provide the best possible plan for success, it is useful for practitioners to explore the similarities and differences between the men and women struggling to lose weight.

Weighty Concerns

The body mass index (BMI) is a useful tool to assess one's weight and health status. Body mass is calculated by multiplying weight in pounds by 703 and dividing by height in inches squared:

$$\frac{\text{(Weight in pounds)}}{\text{(Height in inches)}^2} \times 703$$

Americans should achieve and maintain a body mass index of 25 or less for best

overall health. A BMI of 30-34.9 is classified as obesity class I, and a BMI of 35-39.9 is obesity class II. A BMI of 40 or above is considered extreme obesity, and of course, holds the highest level of health risk⁴.

Obesity is the second leading cause of preventable death in this country. More than 300,000 lives are lost annually due to obesity-related illness¹. Excess body weight is associated with an increased risk of cardiovascular disease, type 2 diabetes mellitus, certain forms of cancer (endometrial, breast, cervical, ovarian and gallbladder), osteoarthritis and respiratory illness¹. In a review of data from the Framingham studies, researchers were able to quantify life lost due to obesity and overweight. Table I provides examples of the significant life expectancy changes for overweight and obese non-smoking 40 year olds.

Fat Distribution, Body Mass Index and Hormones

Women are genetically programmed to have a higher percentage of fat than men. Fat is stored as a supply of energy for use during pregnancy. Men have a higher percentage of muscle, which is more "energy needy" than fat, so pound for pound men are able to eat far more calories than women. With dieting, men usually lose at much faster rates than women. This is often a point of frustration for couples deciding to diet together. They follow a similar plan. He loses five pounds, and she loses only two. Oh, the injustice!

Women and men differ not only in the rate at which they lose weight, but also where excess fat is deposited. Women usually accumulate fat on the lower half of their bodies (thighs, hips and buttocks). Fat deposition on hips and thighs in women mimics the shape of a pear. Men tend to add pounds around their abdomen, in an apple shape. Of monumental importance is fat accumulation around the abdomen is associated with an increased risk of obesity-related health risks. The cause of an association between greater abdominal obesity and an increased risk of the development of cardiovascular disease and type 2 diabetes mellitus has been elusive. However, some experts theorize the close proximity between the

the increased health detriment. Waist circumference is therefore an essential measurement to consider when evaluating weight status. Women and men with waist circumference of greater than 35 and 40 inches, respectively, have an increased health risk.

When assessing health risk, it is important to note the BMI provides only a general barometer of risk. The BMI does not take into account muscle mass, bone density or gender differences. A man and a woman who both have a BMI of 25 are considered to have the same health risk; however the woman with a BMI of 25 will have a greater percentage of body fat than a man with the same BMI. Regardless of the limitation, the BMI is still the gold standard for assessing weight status. The BMI has proven to be a useful tool not only in assessment, but also in guiding men and women towards setting a healthy weight goal.

In considering gender-specific factors contributing to weight gain, we must take note of the effect of ever changing hormonal levels on a woman's body. One physiological reason why women can gain weight easily is perhaps due to the fluctuations in female hormones that occur throughout her life span. Puberty, the childbearing years and menopause are reported as high-risk times in a

Female	Overweight	- 3.3 years
	Obese	- 7.1 years
Male	Overweight	- 3.1 years
	Obese	- 5.8 years

Table I Loss of Life Changes in life expectancy for non-smoking, 40 year olds in comparison to normal weight, non-smokers⁵.

woman's life for weight gain⁶. In fact, these are the precise reasons reported to me as triggers for weight gain by the large majority of women I counsel at The Comprehensive Weight Control Program in New York City. Women often report food cravings and increased appetite during the premenstrual phase of their cycle. Although a definitive reason for this phenomenon has not been identified, a reduction in circulating estrogen levels right before menstruation is suspect. Animal studies show a direct correlation between estrogen reduction and an increase in



food intake. Human studies on the link between estrogen reduction and food intake are confounded by varying emotional and activity levels, however most experts believe that lower circulating estrogen is responsible for increased calorie intake during the premenstrual phase of a woman's cycle⁶.

Pregnancy is also a time when fat deposition is common. The body is storing fat for use during energy-needy lactation. However, for some women too much fat is deposited and retained long after pregnancy and lactation have ceased. The average weight retained due to pregnancy is 2-6 pounds. Unfortunately, some women have reported a retention of over 30 pounds following pregnancy. A woman's higher body weight is often carried over into a second or third pregnancy⁷.

The end of the childbearing years marks another time for weight gain. Menopause is a particularly difficult time for many women. Some women can coast through menopause gaining only 2-3 pounds, while others gain as much as 10 pounds or more.

Decreases in muscle mass, basal metabolic rate and exercise are all culprits in adding on unwanted pounds. Men are often more willing than women to begin an exercise program, however women would benefit greatly by adding more exercise into their daily routine. Many of the symptoms of menopause are alleviated greatly by exercise. Sharing this fact with your patients is a great way to motivate your females to get moving.

Body Image and STRESS

Women are more likely to be overweight, more dissatisfied with their bodies and more likely to diet to lose excessive weight than men⁹. It is easy to understand why women are more dissatisfied with their bodies than men. The media has influenced our concept of how women should look. Over the years models have gotten thinner, presenting women an unrealistic low weight goal. As a woman's BMI rises, so does her body dissatisfaction⁹.

Men, on the other hand, have been given a muscular model as their ideal body image and body satisfaction does not necessarily decline as their BMI rises¹⁰. Nowadays, things are changing and men are catching up to women in their desire to achieve an ideal, lean body shape⁹. The drive behind unrealistic goals must be addressed with a new, more feasible plan for a healthy weight for males and females.

*It appears
women are
ingesting more
comfort food
than men*

Emotional eating contributes to weight gain in both men and women. It appears though that women are ingesting more comfort food than men. In a 2004

report released from the Centers for Disease Control, women were found to have increased their calorie intake by 22% over the past 30 years while men increased their intake a mere 7%. Salty and sweet snack food constituted the bulk of the additional calories that women are now eating¹¹. Exploring which emotion elicits an unfavorable response of overeating, and finding an alternative behavior to squelch that emotion is useful in derailing poor food behaviors. I encourage many of my patients to find a way to unwind that has nothing to do with food. Reading, listening to music, taking a warm bath or finding a new hobby, are a few of the many ways my patients have put the brakes on emotional eating.

Conclusion

Many men and women in this country are plagued with weight problems. Both genders suffer from social and health discrimination as a result of carrying around unwanted pounds. Numerous studies highlight that losing just 5-10% of body weight would dramatically improve health and decrease risk of illness¹. Men and women look to dietitians, physicians and other health care professionals for guidance and help in successfully losing weight, and in recapturing their health and improved sense of self. Dietitians need to be the voice of reason and compassion during counseling sessions with the overweight and obese. Remind your patients to be realistic when deciding on a goal weight. Take note of what stage of life your patient is at, and discuss how this

may be contributing to weight gain. Patients are happy to know what other influences, besides their own food and exercise behavior, are effecting their weight. This information helps empower them with knowledge about their illness. I've found focusing on ways to keep patients motivated through reminding them of their progress increases the longevity of their healthier diet and exercise plans. Treating each patient as an individual goes a long way in motivating them to continue with their plan- men and women alike.

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CELEBRATION OF HEALTH:

A pilot postpartum weight management study

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Introduction

The Diabetes Treatment Center (DTC) at San Antonio Community Hospital is committed to providing healthcare services which empower patients to manage, treat and prevent diabetes-related complications. The team of educators has implemented the clinical component of the California Diabetes and Pregnancy Program, Sweet Success, a multidisciplinary program designed to improve pregnancy outcomes in women with pre-existing diabetes mellitus (DM) and women who develop gestational diabetes mellitus (GDM). The intent is to achieve active participation by the women in managing their meal plan, insulin, stress management, exercise regimens and psychosocial concerns necessary for optimal glycemic control.

Gestational Diabetes is present in 0.6-15 % of pregnant women and implies a 60% increased risk of developing type 2 diabetes^{1,2}. Pregravid body mass index (BMI) has been shown to be the highest predictive fraction in the development of type 2 diabetes^{1,3}. BMI is a non-gender-specific measure of weight-for height; it can be used to screen for overweight (BMI > 25) and obesity (BMI > 30) in adults. Among people diagnosed with type 2 DM, 67% have a BMI > 27 and 46% have a BMI > 30. In 2001, the cost of type 2 diabetes related to overweight and obesity was \$98 billion⁴.

This article describes the experiences of the DTC implementing the pilot program, "A Celebration of Health", a weight management support group for post-partum Sweet Success patients, from May-October 2003. The program was developed following the 2003 Clinical Practice Recommendations of the American Diabetes Association for postpartum care after GDM⁵.

Target Audience

The target audience included our Sweet Success postpartum mothers with a pregravid BMIs of >25. They were informed about and referred to our monthly support groups at their postpartum appointment. Flyers were also sent by mail to the target audience as reminders of the support group meetings. In April of 2003, one hundred and twenty flyers were sent to the target population. Twenty women (17%) responded and enrolled in the program entitled "A Celebration of Health". Four new postpartum participants were added throughout the six-month period. The average number of participants at the monthly support group was eleven. Nine of the initial twenty women attended only two sessions due to a return to work and were not included in the final results.

Group Design and Methods

Participants received the initial packet, "A Celebration of Health," at their initial visit to the support group. The packet provided the foundation for weight management. Each support group was built upon the key principles in the packet, allowing each new post partum participant to join the support group at any month and still have information on the key principles to weight management.

The support groups met on the last Monday of every month, from 11:00am- 12:00 Noon. At the start of every group meeting, the participants were weighed and their weight change was monitored. In addition, we offered percent body fat testing using the Body Logic body-fat hand-held analyzer. Each new participant was encouraged to complete a weight loss readiness test, adapted from the Diabetes Weight Loss System (see sample questions below)⁶. After the session, the registered dietitian and counselor reviewed the questionnaires; any areas of concern were discussed with the participant at the next monthly support group. If there was an immediate area of concern the counselor contacted the participant by phone.

- | | |
|---|---|
| 1. Compared to previous attempts, how motivated are you to lose weight? | 2. How certain are you that you will stay committed to this weight management support group for the time it will take to reach your goal? |
| a. Not at all motivated | a. Not at all certain |
| b. Slightly motivated | b. Slightly certain |
| c. Somewhat motivated | c. Somewhat certain |
| d. Quite motivated | d. Quite certain |
| e. Extremely motivated | e. Extremely Certain |

Sample questions adapted from the Diabetes Weight Loss System with permission to use by the Diabetes Research and Wellnes foundation⁶

Support Group Dynamics

The "Celebration of Health" support groups offered two unique features to participants: education from a multidisciplinary team and an atmosphere created by group dynamics. Post-partum weight management support groups emphasized maintenance of healthy eating habits learned during pregnancy. Topics for the support groups included weight management, physical activity, stress management, and pre-conceptional counseling

The team of educators (registered dietitians, registered nurses, and a counselor) provided educational materials designed to empower and motivate mothers to lose weight and prevent the onset of type 2 diabetes. The support groups were formatted based on adult learning styles. The creation of a comfortable and relaxed atmosphere was an essential role of the group leaders. Participants used questions and scenarios posed by the leaders in the discussion group to practice independent decision-making skills. The team encouraged active participation from the mothers and facilitated an "environmentally safe" place for mothers to learn from one another. The group dynamic in the support groups promoted self-sufficiency in participants by listening to the comments, examples, and ideas of other mothers.



Results

A total of 15 post partum mothers participated in the monthly support groups. Two of the participants have achieved their ideal body weight. The average monthly weight loss for our participants is 5.06 lbs. per month. The average pregravid BMI of the study group was 33.75. The average BMI of the same participants at the end of the study is 28.25.

Conclusion

"A Celebration of Health" has shown improvement in knowledge and self-efficacy in diet and exercise related behavior change. This is a voluntary program and the achievements of weight loss by the participants were from a highly motivated group. Participant feedback showed changes in their body fat to be a positive motivational factor over changes in weight. The use of body fat measurements was an incentive for the mothers to return to the monthly meetings.

Limitations of the post partum weight management support group included the shortness of intervention duration as well as a large number of non-responders. A reassessment survey sent to all the postpartum mothers revealed lack of childcare for their other children to be the most common barrier to attending a postpartum meeting. The team is currently looking into providing childcare for older children through the hospital volunteers in an educational room during the one-hour support group. In addition, a large number of mothers had already returned to work. Two of our participants attended the support group during their lunch break but they work rather close. In the re-assessment survey, responders suggested offering the support group in the evening between 5:00pm and 7:00pm.

Support groups can be a positive and rewarding learning experience. This program offers an opportunity to incorporate nutrition, exercise and life style changes into daily life while the participants are in the post Sweet Success mode. The authors hope other programs will build upon the ideas presented in their own support groups to prevent and/or delay the onset of type 2 diabetes.

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From the Chair

Barbara Luke, ScD, MPH, RD



Since this issue coincides with Mother's Day, and our work as a DPG centers around women and their health throughout the lifespan, I decided to do some investigating about how this holiday began. Historians claim the predecessor of modern Mother's Day was the ancient spring festival dedicated to mother goddesses. In ancient Greece the spring festival honored Rhea, wife of Cronus and mother of the gods and goddesses. In Rome, the Hilaria festival, which lasted three days, was held to honor Cybele, another mother goddess.

More contemporary celebrations can be traced back to England's Mothering Sunday, also called Mid-Lent Sunday, observed on the fourth Sunday in Lent. Some historians suggest the ancient ceremonies honoring mother goddesses were adopted by the church to venerate Mary, the Mother of Christ. Others say the Mother Church was substituted for mother goddesses and that custom dictated that individuals should visit the church where they were baptized on this day. Young men and women who were apprentices or servants returned home on Mothering Sunday, bringing their mothers small gifts. Specially-prepared cakes became a part of Mothering Sunday throughout England and Scotland, including furnety (made from wheat grains boiled in sweet milk, sugared, and spiced), carlings (pancakes made from steeped pease fried in butter, with pepper and salt), and simnel (a very rich fruit cake boiled in water, baked, topped with almond icing and colored with saffron).

In the United States, Congress passed a Joint Resolution in May, 1914, designating the second Sunday in May as Mother's Day, and President Woodrow Wilson issued the first proclamation making Mother's Day an official national holiday. Carnations have become the symbol for Mother's Day because they represent the sweetness, purity, and endurance of motherly love. Red carnations have become the symbol of a living mother, and white carnations signify that one's mother has died.

To me, mothering is a state of mind, something we choose to be. Whether it is in the traditional sense of being the mother to one's children, or in a broader context, of living one's life with kindness, understanding, love, and forgiveness to our students, colleagues, friends, and acquaintances, Mother's Day is an opportunity to honor those who have helped us throughout our lives, and to acknowledge our own gifts to others in this role. Happy Mother's Day!

ERRATUM

Florence Rotondo's credentials in the summer 2003 issue were listed incorrectly. It should have read, "Florence Mojta Rotondo, IBCLC." WHRN apologizes for this error.



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From the Chair

Barbara Luke, ScD, MPH, RD



Since this issue coincides with Mother's Day, and our work as a DPG centers around women and their health throughout the lifespan, I decided to do some investigating about how this holiday began. Historians claim the predecessor of modern Mother's Day was the ancient spring festival dedicated to mother goddesses. In ancient Greece the spring festival honored Rhea, wife of Cronus and mother of the gods and goddesses. In Rome, the Hilaria festival, which lasted three days, was held to honor Cybele, another mother goddess.

More contemporary celebrations can be traced back to England's Mothering Sunday, also called Mid-Lent Sunday, observed on the fourth Sunday in Lent. Some historians suggest the ancient ceremonies honoring mother goddesses were adopted by the church to venerate Mary, the Mother of Christ. Others say the Mother Church was substituted for mother goddesses and that custom dictated that individuals should visit the church where they were baptized on this day. Young men and women who were apprentices or servants returned home on Mothering Sunday, bringing their mothers small gifts. Specially-prepared cakes became a part of Mothering Sunday throughout England and Scotland, including furnety (made from wheat grains boiled in sweet milk, sugared, and spiced), carlings (pancakes made from steeped pease fried in butter, with pepper and salt), and simnel (a very rich fruit cake boiled in water, baked, topped with almond icing and colored with saffron).

In the United States, Congress passed a Joint Resolution in May, 1914, designating the second Sunday in May as Mother's Day, and President Woodrow Wilson issued the first proclamation making Mother's Day an official national holiday. Carnations have become the symbol for Mother's Day because they represent the sweetness, purity, and endurance of motherly love. Red carnations have become the symbol of a living mother, and white carnations signify that one's mother has died.

To me, mothering is a state of mind, something we choose to be. Whether it is in the traditional sense of being the mother to one's children, or in a broader context, of living one's life with kindness, understanding, love, and forgiveness to our students, colleagues, friends, and acquaintances, Mother's Day is an opportunity to honor those who have helped us throughout our lives, and to acknowledge our own gifts to others in this role. Happy Mother's Day!

ERRATUM

Florence Rotondo's credentials in the summer 2003 issue were listed incorrectly. It should have read, "Florence Mojta Rotondo, IBCLC." WHRN apologizes for this error.

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