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Re: Special Supplemental Nutrition Program for Women, Infants and Children (WIC): Revisions to the WIC Food Packages

Dear Ms. Daniels:

Thank you for the opportunity to submit comments on the Advanced Notice of Proposed Rulemaking (ANPRM) on *Special Supplemental Nutrition Program for Women, Infants and Children (WIC): Revisions to the WIC Food Packages,* 68 Fed. Reg. 53,903 (September 15, 2003), on behalf of the doctors and dietitians of the Physicians Committee for Responsible Medicine (PCRM). PCRM is a national, nonprofit health organization that promotes preventive medicine, especially good nutrition. PCRM recommends modifications to the WIC Food Packages in order to meet the goals of improving the nutritional intake and the health and development of preschool children and pregnant and lactating women while at the same time combating childhood and maternal obesity and inappropriate dietary patterns that have become serious problems among WIC's target population.

Typical dietary patterns based on the consumption of eggs and meats for protein, red meat for iron, and milk and cheese for calcium have put Americans into a health crisis. Obesity among adults and children is out of control. The prevalence of obesity among our nation's youth has more than doubled in the past 20 years, with close to 5 million youths aged 6 to 17 seriously overweight or obese. The prevalence of obesity in nine-year-old children in a recent study was about 12 percent for boys and 7 percent for girls (Dwyer 2000). Even the number of young overweight four- to five-year-old girls nearly doubled between the early 1970s and the early 1990s (Ogden 1997). Childhood obesity leads to all manner of health problems, such as adult-onset diabetes and heart disease, which is currently the number one killer of both men and women (Vanhala 1999). Many young children have high cholesterol and are showing signs of arterial damage. The Centers for Disease Control and Prevention recently found that 60 percent of overweight five- to ten-year-olds already have at least one risk factor for heart disease, such as raised blood pressure or insulin levels (CDC 2000).

The WIC program was originally developed to provide foods rich in calcium, iron, protein, and vitamins A and C to low-income and at-risk pregnant and breastfeeding women and preschool children because these populations have an increased need for these nutrients. However, the world of nutrition has been revolutionized since the last time the WIC food package was revised in 1980.

Other key nutrients—folic acid, zinc, vitamin B6, and magnesium—have emerged as especially important for women, infants, and or children. New dietary reference intakes (DRIs) have been established for many of these nutrients. An especially important new addition is the DRI for fiber (14g/1000 kcals).

Now, health professionals recognize the benefits of beans, especially soybeans, for protein; leafy green vegetables, beans, tofu, and calcium-enriched non-dairy beverages for calcium; and both beans, such as soy, navy and great northern, and vegetables, such as broccoli, collards, and squash for iron. Fiber-rich fresh or frozen fruits are recommended over fruit juices since children are not meeting their daily recommended intake of fruit and are getting a disproportionate amount of fruit juice to whole fruit in their diets (Basch 1994). The FDA has issued warnings against the consumption of tuna and other large sea fish for pregnant and lactating women and small children due to its environmental contamination with mercury (Myers 2000). Meats, including poultry, fish and shellfish; cheese and most other dairy products; and eggs are now often recommended to be consumed in limited quantities or avoided altogether because they contain high levels of saturated fat and cholesterol and are devoid of health-giving dietary fiber.

For all these reasons, we are encouraged that the Food and Nutrition Service is reviewing the WIC food packages and preparing to make changes intended to benefit the individuals served by this program.

Our comments are presented in response to the questions outlined in the ANPRM.

1. What elements of the WIC food packages would you keep the same and why?

PCRM recommends that the WIC food packages should continue to include iron-fortified infant formula in Food Package I and II, iron-fortified infant cereals in Food Package II, enriched cereals that do not exceed currently allowable sugar contents in Food Packages IV–VII, vitamin C-rich 100 percent fruit and/or vegetable juice in Food Packages II–VII, and peanut butter and beans and peas in Food Packages IV,V, and VII.

As infant formula is the only appropriate nutrient source for infants 4 months or younger who are not being breast fed, this element of the WIC food packages should remain unchanged.

Iron-fortified infant cereals, fruit and vegetable juices, and infant formula are foods appropriate for helping to meet the nutritional needs of small children, so these foods should remain in the food package targeted at children 4 to 12 months old. Enriched cereals are easy to use and store and, when chosen appropriately, can be excellent sources of micronutrients and fiber. WIC participants should be given guidance on choosing cereals that are both low in sugar and rich in fiber.

One-hundred–percent fruit and vegetable juices should be retained in the current packages, but this category should be expanded to allow an option of choosing nutrient-dense whole fresh or frozen fruits and vegetables to improve fiber, folic acid, and calcium density of the food choices available.

To meet recommendations for a healthy diet, the peanut butter offered should be free of added sugar and hydrogenated fats.

Dried peas and beans should continue to be offered, and frozen (including black-eyed peas, limas, and soybeans) and low-salt canned versions (of at least several types of beans) should be among the offerings as well. In addition to protein and fiber, beans are a good source of calcium with absorption at 22 percent. Providing easy-to-prepare versions of these fiber-rich, healthy plant sources of protein will encourage their consumption amongst WIC mothers and children. These foods should be offered in Package III and VI, as well as in Packages IV, V, and VII.

2. What changes, if any, are needed to the types of foods currently authorized in the WIC food packages? If you recommend additions or deletions to the types of foods currently offered, please discuss recommended quantities and cost implications.

Recommended Additions to WIC Food Packages

Enriched Soymilk and Rice Milk

In order to meet calcium requirements while at the same time encouraging the consumption of low-fat foods that accommodate ethnic and cultural preferences, non-dairy, calcium-fortified beverages, such as enriched soymilk and rice milk, should be made available to women and children participating in the WIC program. Many U.S. women and children are lactose intolerant (mainly those of ethnicities other than Caucasian) or allergic to milk or choose to avoid milk for other reasons, such as taste preferences, religious or ethical considerations, or health concerns. People of ethnicities other than Caucasian are typically unable to digest dairy sugar; thus, relying on dairy products as the sole source of calcium in federal nutrition programs favors people of Northern European descent. According to the American Academy of Family Physicians' 2002 report on lactose intolerance, 60 to 80 percent of American Blacks, 50 to 80 percent of American Hispanics, 80 to 100 percent of American Indians, 95 to 100 percent of Asian Americans, and 6 to 22 percent of American Whites are lactose intolerant.

Although calcium is an important nutrient for healthy bones, cow's milk and other dairy products are not necessary for bone health and can, in fact, be harmful to health (Chan 2001, Feskanich 2003, Willet 2003). Numerous scientific studies link the consumption of cow's milk to obesity, anemia, ear infections, constipation, diabetes, respiratory problems, heart disease, and some cancers mainly due to the proteins in milk, not the milk sugar lactose, making lactase-added milk an unsuitable alternative (Iacono 1998, Willet 2003, Sacks 1985). Furthermore, dairy products may not be the best source of calcium for children as these foods contain animal products and sodium, two factors known to increase urinary calcium losses (Feskanich 1996). We recently reviewed the 35 studies of dairy, milk, or total dietary calcium intake in youths that controlled for body weight, pubertal status, and exercise level and found that 74 percent (26 studies) found no relationship between dairy or total dietary calcium intake and measures of bone health. In the other studies, the effects on bone health are uniformly small in magnitude, confounded by vitamin D intake (3 studies), detected a relationship in some but not all sites (6 studies), and were more likely to find an effect of dietary calcium intake on bone mineral density or bone mineral content when habitual calcium intake was less than 400 mg/day (2 studies). These findings are consistent with those of other authors who have concluded that the evidence is not available to support broad-based recommendations for the consumption of cow's milk to promote bone health (Weinsier 2000, WHO 2003).

All women and children, whether or not they experience discomfort or ill health upon consuming dairy products, should have the opportunity to choose a nutritious, non-dairy beverage, such as

enriched soymilk or rice milk, through the WIC program. Enriched soymilk contains protein, calcium (absorption: 24–34 percent), and vitamins A and D at levels comparable to cow's milk (calcium absorption: 32 percent), but without the disadvantageous saturated fat, cholesterol, and hormones found in dairy milk.

Enriched soymilks should be offered as an option in all of the packages that currently contain cow's milk at the same maximum amounts. The consumption of these plant-based milks should be encouraged for women and children to meet calcium, vitamin D, fiber, and protein requirements and to help reduce digestive problems and to decrease the risk of chronic disease. Foods rich in soy protein, such as soymilk and tofu, have been shown to protect against heart disease, the number-one killer of women in the United States.

The Soyfoods Association and soymilk companies could provide a cost analysis for the distribution of soymilk through federally funded nutrition programs.

Fruits and Vegetables

The most glaring omission of the WIC food package is its failure to provide fruits and vegetables. Vitamin C–rich 100-percent fruit and/or vegetable juice is currently part of most of the WIC packages, and lactating women are able to receive carrots in the enhanced package (VII). However, WIC recipients are, on average, not meeting their recommended intake of fruits and vegetables on a daily basis (Thompson 1999). Fresh and frozen vegetables and fruits provide necessary vitamins, minerals and healthy plant fiber needed for weight control as well as healthy immune systems in mothers and young children. For example, dark green, leafy vegetables, such as collard greens, kale, mustard greens, turnip greens, and bok choy, are especially good sources of highly-absorbable calcium (absorption: 52-59%) (Keller 2002), vitamin C, beta-carotene and folate, which is especially necessary during pregnancy to ensure proper development of the growing baby's nervous system. Broccoli is a good source of protein, calcium (absorption: 61 percent), folate, and a number of other cancer-fighting phytochemicals. Corn, spinach, mushrooms, and even potatoes are good sources of zinc. Vitamin B6 is found in corn, cabbage, and green leafy vegetables.

Also, fruits, such as oranges (which contain vitamin C), cantaloupes (which contain folate and vitamin B6), grapefruits (which contain vitamin C), apples (which contain vitamin C), bananas (which contain vitamin B6), strawberries (which contain vitamin C and folate) and blueberries (which contain vitamin C), are not only loaded with vitamins, fiber, and other nutrients, but they also satisfy a sweet tooth and may replace empty calorie sweet snacks such as a candy bars or sugary candies.

WIC participants would greatly benefit from the addition of frozen or fresh fruit. To keep costs modest, the fruit could be added as a preferred option in the juice category and a few nutrient dense fruits that have longer holding value could be selected for inclusion.

Tofu and Tempeh

In addition to the legumes already available in the WIC program, providing soy products such as tofu and tempeh would give WIC recipients additional choices for healthy plant protein without the fat and cholesterol present in cheese or other animal foods. Aside from providing all the necessary amino acids, tofu and tempeh contain needed fiber and phytochemicals and offer health advantages

that meat and dairy products lack.

Recommended Deletions from WIC Food Packages

Eggs

As noted in the ANPRM, eggs are included in the WIC food package because of their protein and iron content. Protein is used for growth and repair in the body. Iron is essential to our red blood cells, carrying into our cells the life-giving oxygen from the air. Iron deficiency can cause lethargy, apathy, inability to concentrate, a tendency to feel cold, and loss of productivity. Maintaining adequate iron stores is important, especially for pregnant women and small children post-weaning.

One large egg has approximately 6 grams of protein and virtually no iron (less than 1 milligram). Beans are a much better and healthier source of protein and iron. For instance, one-half a cup of soybeans has more than 16 grams of protein and 4.5 milligrams of iron and one-half a cup of navy beans has almost 10 grams of protein and more than 2 milligrams of iron (USDA nutrient data laboratory). Additionally, vitamin C increases iron absorption. Thus, adding fresh fruits to the WIC program and encouraging their consumption with iron-rich beans and iron-fortified cereals would help ensure that women and children are getting sufficient iron.

Moreover, even though eggs contain protein, they are not a healthy source of protein. Animal products high in protein encourage the loss of calcium, which passes from the bones into the bloodstream, then through the kidneys into the urine. This is due not only to the amount of protein in animal products, but also to the type of protein they contain. Eggs (and milk) are rich in sulfur-containing amino acids, which are especially likely to carry calcium out through the kidneys (Abelow 1992, Feskanich 1996).

Tuna

Tuna is available for breastfeeding women in the WIC program despite its being an unsafe food for this population. Fish absorb waterway pollutants, such as mercury, polychlorinated biphenyls (PCBs), and other contaminants, as the water around them passes over their gills. Many of these chemicals do not break down in the environment, but dissolve easily in oils and can accumulate in the fatty tissues of the fish. Tuna and a number of other flesh-eating fish contain dangerously high levels of mercury and contaminants. The FDA strongly cautions lactating women against consuming several types of fish since heavy metals and waterway pollutants may end up in breast milk and cause developmental problems in children (Myers 2000). Healthier and safe sources of protein for pregnant and breastfeeding women and children are beans, whole grains, nuts, nut butters, and soy products.

Cheese

Adults and children in the U.S. of all income brackets are becoming increasingly overweight, and rates of diabetes are on the rise—largely because of the availability of high-fat, calorie-dense foods. Regular and even "low-fat" cheese and other dairy products contain saturated fat and cholesterol, which collectively contribute to the development of obesity, heart disease, and diabetes. As reported last year by Duane Alexander, director of the National Institute of Child Health and Human Development, dairy products are the number-one food source of saturated and total fat in a child's diet. To reduce these health risks, WIC participants should be provided with low-fat calcium and

protein-rich plant foods that provide a variety of health advantages without the artery-clogging saturated fat and cholesterol present in cheese and other dairy products.

5. Keeping in mind that foods provided by WIC are designed to be supplemental, can the WIC food packages be revised (beyond what is allowed under current regulations) to have a positive effect on addressing overweight concerns? If so, how? Please be specific.

Increasing the availability of fiber-rich, low-fat foods, such as beans, fruits, vegetables, and non-dairy milks, and decreasing the availability of high-fat foods, such as eggs, cheese, and dairy products, offered in the WIC food package will help to combat the obesity concerns in the WIC population. Building a diet from plant foods is a simple way to achieve or maintain a healthy weight and offers the most disease-fighting protection of any dietary pattern. Vegetarians have been shown to be leaner than their meat-eating peers in a number of scientific studies (Snowdon 1985, Melby 1989).

As a way of promoting optimal health, Dr. Benjamin Spock advised in the most recent revision of his book *Dr. Spock's Baby and Child Care* in 1998 that children's diets should be made up entirely of plant foods with no meat of any kind, nor eggs, nor dairy products included. Scientific studies support Dr. Spock's conclusion that the healthiest diet consists of vegetables, grains, legumes (beans, peas, and nuts), and fruits because they are cholesterol-free, high in fiber, low in fat, and rich in health-promoting substances found only in plants, including beta-carotene, lycopene, folic acid and genistein. They are also rich in healthy carbohydrates, protein, and calcium, nutrients once thought to be mainly in meat and dairy products. Moreover, a plant-based diet will help children and adults avoid weight problems and will promote a healthy heart. It will protect from many forms of cancer, including lung, breast, colon, bladder, stomach, and pancreatic cancers (Spock 1998).

Efforts to improve the eating habits and health of pregnant and lactating women as well as small children will pay off well beyond the short term and extremely important reduction in malnutrition and hunger. Children introduced early to healthy fruits, vegetables, grains and legumes tend to maintain these eating habits into adulthood (Nicklas 1995).

Thank you for the opportunity to submit these comments. Please feel free to contact me if you have questions.

Sincerely,

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