

State of California—Health and Human Services Agency
Department of Health Services

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California
Department of
Health Services

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December 8, 2003

Patricia Daniels, Director
United States Department of Agriculture
Supplemental Nutrition Programs
Food and Nutrition Service
3101 Park Center Drive, Room 520
Alexandria, Virginia 22302

REVISIONS TO THE WIC FOOD PACKAGE, 7 CFR PART 246

Dear Ms. Daniels:

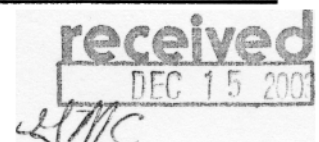
Thank you for the opportunity to comment on Public Notice 7 CFR Part 246, Revisions to the Women, Infants, and Children (WIC) Food Packages. The California WIC Program considers this a very important issue and is pleased that the U.S. Department of Agriculture (USDA) is authorizing this review in order to bring the food package in line with current dietary guidance, address emerging nutrition related health issues and accommodate WIC's highly diverse population.

As you know, WIC was established in 1974 on the premise that poverty and hunger predispose women, infants, and children to poor nutrition and its negative consequences, particularly poor outcome of pregnancy, infant mortality, iron deficiency anemia and other nutritional deficiencies resulting in poor growth and development. Based on available research at the time, five "target nutrients" including vitamin A, vitamin C, protein, calcium and iron were identified as lacking in the diets of the WIC eligible population. Therefore, the original WIC food package included foods that are good sources of these nutrients.

Now, almost 30 years later, the WIC community is facing new challenges. The WIC food package – the centerpiece of WIC's benefit to low income participants – needs an overhaul to effectively address: (1) New Dietary Guidelines, Dietary Reference Intake (DRIs) and applicable research; (2) Current public health issues such as obesity, diabetes, heart disease and cancer; (3) Special needs i.e. ethnic/cultural food preferences, allergies, vegetarianism, etc; and (4) Food industry issues pertaining to product safety and efficacy.

Given the magnitude and social costs of the current nutrition related public health issues, some bold changes in WIC's approaches to food package design should be

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considered. Congress urgently needs to update WIC food benefits for today's realities, and then re-tool outdated nutrition education strategies to accompany a new food package. An updated food prescription that meets the Dietary Guidelines, especially by including fresh fruits and vegetables, is badly needed if WIC is to successfully change shopping and eating behaviors to combat obesity, while at the same time continuing to prevent household food insecurity, hunger, and its negative consequences. We urge USDA to support pilot testing the delivery of fruits and vegetables through the WIC food package in advance of making changes to the food package, as this may be the most challenging food group to offer in terms of food delivery and other operational issues.

This review is an opportunity to re-tool WIC's "cornerstone," the food prescription. The WIC food package is a major driver of the individual, family, community and even national market changes to food choices and the overall food environment. The impact of even small changes in the food package needs to be carefully considered when overhauling to meet new challenges. Thus, the WIC food package "delivers target nutrients" but also:

Introduces tastes for new foods to infants, toddlers and new immigrants

- Directly affects shopping (brand loyalty) and eating behavior
- Models food choices for young families (who have little access to detailed nutrition information) at a critical time in their development
- Serves as the most important teaching tool for WIC staff in direct counseling, classes and social marketing efforts
- Influences overall grocery industry trends, including wholesale and retail prices, shelf location, branding and marketing
- Supports several sectors of the agribusiness industry, from farmers to retailers

Our recommendations regarding the WIC food package are summarized in Enclosure #1. They address: target nutrients, change in quantity of existing WIC foods, new foods, food substitutions, policy changes needed, and criteria for food selection. Our comments to the individual questions are provided in Enclosure #2 along with sample food packages in Enclosure #3. Supporting documentation is enclosed in Enclosure #4.

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Lastly, we urge USDA to consider inviting key members of the WIC community to assist the Institute of Medicine (IOM) subcommittee, in-charge of Phase II of the review, with operational implementation issues prior to recommending specific foods. Individuals with WIC experience can offer the valuable expertise needed to develop food packages that are practical and feasible in terms of food delivery, participant acceptance, and versatility.

Thank you for the opportunity to provide comments on this important issue. Should you have any questions or require additional information, please call me at (916) 928-8806.

Sincerely,



Linnea Sallack, MPH, RD, Chief
WIC Supplemental Nutrition Branch

Enclosures

1. Summary of Recommendations
2. Comments – Questions and Responses
3. Sample Food Packages
4. Supporting Documentation

1. Please indicate what elements of the WIC food packages you would keep the same and why.

- Maintain calcium and iron as target nutrients. There is abundant evidence in the literature that demonstrates the need for these nutrients for all WIC participants as well as consumption data identifying the low intake among WIC eligible populations.

Consider maintaining protein as a target nutrient because of food insecurity prevalent in the WIC population. Also, protein foods are good sources of zinc and magnesium, which are low in the diets of WIC's target population.

- Maintain the cereal sugar limit at 6 gram per dry ounce of cereal. There is a wide selection of cereals including high fiber cereals within this limit and it helps to tangibly support the education message of low sugar intake.
- Continue to include the foods currently authorized (with the exception of canned tuna) because they do supply some of the nutrients of concern.
- Continue to allow states the flexibility of offering milk and cheese in varying fat levels. (See additional comments in question 2 and 5.)

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.

- **Juice:**

- Decrease juice for all women and children to provide a maximum of 4-6 ounces per day.

- Eliminate juice from the infant food package.

- **Fruits and vegetables:** Add at least one serving each of fruits and vegetables per day to the WIC food package for each participant category, including infants beginning at six months of age.

- Fruits:** Allow fresh and canned fruits (leave choice to states). Canned fruits should be packed in water or juice.

- Vegetables:** Include fresh, frozen, and canned vegetables (leave choice to states).

- **Grain Products:**

Add a requirement that any cereal offered to women must have a minimum of 400 ug of folate, i.e. cereal label must say 100% of the Daily Value (DV) of folate per serving, and cereal offered to children must claim a minimum of 50% of the DV of folate per serving.

Add whole wheat bread, calcium fortified corn tortillas or brown rice as options to the pregnant and breastfeeding women's package (Food Package V). Offer the option in the children's package to choose whole wheat bread in partial replacement of cereal.

- **Dairy Products and alternatives:**

Milk:

Provide reduced fat (2 percent), lowfat (1 percent) or nonfat milk for all categories above two years of age. Allow states to continue to provide whole milk based on participants' individual nutritional need.

The IOM committee should investigate the impact of using 1 percent lowfat milk as the standard for all women and children, including children under two years of age. They should consider participant acceptance, education needed, and situations where exceptions are indicated.

Add **soymilk** fortified with calcium and vitamin D to this food category as an acceptable substitute for milk.

Cheese:

Require states to offer reduced fat and lowfat cheeses in addition to the regular cheeses.

Add **tofu** processed with calcium and **plain lowfat yogurt** as acceptable substitutes for cheese.

Protein Foods:

Allow choice of dried or canned beans to all participant categories, except infants.

Allow dried or canned beans as an alternate for peanut butter.

Allow canned sardines, salmon, or chicken as a substitute for eggs.

Offer canned sardines, salmon, or chicken instead of canned tuna in the exclusively breastfeeding women's food package (Food Package VII) due to the methylmercury toxicity concerns surrounding tuna.

3. Should the quantities of foods in the current WIC food packages be adjusted? If yes, by how much and why? Please discuss cost implications.

Cost savings could result from these changes:

- Eliminate juice from the infant food package. Fruit juice is not necessary for the optimal nutrition of infants and may displace breast milk or formula, reducing intake of important nutrients for infants over six months. Fruit juice offers no nutritional benefits over whole fruits. It contains no fiber and does not promote eating behaviors associated with consumption of whole fruit. Malnutrition, obesity, short stature, and failure to thrive have been associated with excessive consumption of fruit juice. Prolonged exposure of the teeth to the sugars in juice is a major contributing factor to dental caries.

Decrease juice for all women and children, setting the maximum at 4 – 6 ounces per day depending on the category.

- Split Food Package IV so that the quantities of foods offered reflect the difference in nutrient requirements of children 1 – 3 years old (i.e. 12 through 47 months) and 4-5 years old (48 through 60 months), consistent with the DRI age cut-offs. The California State WIC program received a waiver from USDA in 1993 to offer less than the federal maximum allowed amount of milk and juice to children 1 – 3 years old. This lower quantity still provides significant amounts of the target nutrients to young children. (See attached report: Show Me the Nutrients, March 2001)

Decrease milk in the food package for children 12 through 47 months from 24 quarts to 15 quarts per month. See attached sample food package.

- Re-examine the current federal policy allowing a partially breastfeeding woman to receive a full food package until the infant's first birthday, while also receiving the maximum quantity of formula. This policy acts as a disincentive to breastfeeding and undermines breastfeeding promotion. It also conflicts with education of parents about appropriate feeding quantities to prevent the development of overfeeding behaviors. We propose that the Institute of Medicine (IOM) committee review the nutrient needs of a mother who breastfeeds once a day compared to a postpartum woman who is not breastfeeding and design the food packages based on this analysis.

Increased costs could result from these changes:

- Augment food packages for pregnant and breastfeeding women in order to provide at least 50 percent of the Dietary Reference Intake (DRI) for all current and proposed target nutrients except folate. Folate should be at least 65 percent of the DRI for these women. See proposed sample food package. In addition to foods offered in the current standard federal food package, it includes fruits and vegetables and whole wheat bread. Some of the increase in cost will be offset by a reduction in the quantity of juice.

As the food packages for other categories are modified, it will be important to maintain the perceived value of the food package for the exclusively breastfeeding women so that it remains an incentive for them, as originally intended in 1993 when the package was augmented.

Modify Food Package III for children to allow issuance of up to a full standard child's food package in addition to the formula. Give the WIC nutritionist latitude to tailor the food package based on the participant's individual nutritional needs as defined by the nutritionist and the health care provider. This would be helpful in promoting the transition to solids and decreasing the intake of formula among toddlers. Although this change will add to the cost of the package, the need for this package will likely decrease to some extent based on the authorization of soymilk. There is no need to modify Food Package III for women receiving formula, as this food package will not be chosen very often when soymilk is allowed as a substitute for milk.

Cost of the current and proposed food packages is listed in the attached sample food packages.

- 1. Recognizing that the WIC Program is designed to provide supplemental foods that contain nutrients known to be lacking in the diets of the target population, what nutrients should be established as priority nutrients for each category of WIC participant, e.g., pregnant women, children 1 - 5, etc.? Please provide the scientific rationale for them.**

Maintain calcium and iron as target nutrients.

Determine if protein should remain a target nutrient, considering food insecurity issues among the low-income population.

The IOM committee should evaluate if vitamin A and C should remain target nutrients for the WIC population. Since the inception of the WIC program when these target nutrients were identified, many food products have been fortified with vitamin C. There is little evidence in recent literature that these nutrients are lacking in the diets of the WIC population.

- According to the 1994-96 Continuing Survey of Food Intake by Individuals (CSFII) analyzed in the report "WIC and the Nutrient Intake of Children"

Comments – Questions and Responses

(March 2000), 75 percent of the children 1-5 years old met the RDA for vitamin A and 81 percent met the RDA for vitamin C. There was no significant difference between the WIC participants and income-eligible non-participants.

The Third National Health and Nutrition Examination Survey (NHANES III) data shows that 1-5 year old children consume well above 100 percent RDA for these nutrients (Review of the Nutritional Status of WIC Participants, 1999, Appendix A-3 and A-4). Pregnant women also had intakes of vitamin A and C at or above 100 percent RDA level. However vitamin C intakes of breastfeeding and non-breastfeeding postpartum women were at 71 percent and 60 percent of the RDA, respectively, even though the WIC food package they received provided more than 100 percent of the RDA for vitamin C.

Add fiber, vitamin D and zinc as new target nutrients for all categories of WIC participants.

- Add folate, magnesium and vitamin B6 as new target nutrients for pregnant, breastfeeding and postpartum women on WIC.

Recommend the food packages be designed (i.e. type and quantity of food) to provide a minimum defined percentage of the Daily Recommended Intake (DRI) of each target nutrient. Currently, there is no such definition in the regulations. The attached proposed sample food packages provide 50 percent or more of the DRI of all current and proposed target nutrients except fiber for which it was difficult to reach this goal without adding more fruits and vegetables, which would cost more. Folate level is at 65 percent of the DRI or higher. The NWA Culturally Sensitive Food Prescription Task Force recommends that “WIC food prescriptions contribute no less than 65 percent of DRI for the current target nutrients, and additionally for folic acid.”

- Recommend that the target nutrient percentages should be set for the whole food package, not broken out on a food by food basis. This will allow states the needed flexibility in accommodating the food preferences/medical needs and cultural dietary patterns, thus increasing the acceptance of the food package by a diverse population of participants.

Please refer to the following chart for information on how the nutrient functions in the body, food sources of the nutrient, and references supporting its maintenance or addition as a target nutrient.

Maintain these target nutrients for WIC

Nutrient	Literature/Papers Supporting Need / Deficiency in the target population	Function	Sources in WIC Food Packages
Protein	<ul style="list-style-type: none"> • Protein should be assessed to determine if it should remain a target nutrient. It is needed during critical periods of growth and development of the fetus and the young child. In addition, there remains a concern of <u>food insecurity</u> among the low-income population. • Protein foods are major sources of zinc and magnesium, which we are proposing as additional target nutrients. 	<ul style="list-style-type: none"> • Tissue growth and repair 	<p>Current: Eggs, milk, cheese, peanut butter, beans and lentils, and tuna (exclusively breastfeeding package)</p> <p>Proposed: Soy milk, tofu</p>
Iron	<ul style="list-style-type: none"> • Iron-deficiency anemia remains high in women and preschool children in low-income populations. Year 2010 objective to reduce iron-deficiency. • About 21 percent of WIC women and 12 percent of children have hemoglobin or hematocrit, which fall within current CDC criteria for anemia. (WIC Participant and Program Characteristics 2002) 	<ul style="list-style-type: none"> • As a part of hemoglobin, helps transport oxygen to the tissues 	<p>Current: Cereals, beans and lentils, and tuna (exclusively breastfeeding package)</p> <p>Proposed: Canned chicken</p>
Calcium	<ul style="list-style-type: none"> • CSFII 1985-1986 documents women and children 1-5 have inadequate intakes of calcium. Increased calcium intake is a Year 2010 objective. • Mean intake of calcium was below the Estimated Average Requirement among the pre-menopausal women who participated in the NHANES III survey (1988-1994) • Osteoporosis is a serious public health concern 	<ul style="list-style-type: none"> • Main structural component of skeleton and teeth • Blood clotting • Nerve transmission • Contraction of muscles 	<p>Current: Milk, cheese</p> <p>Proposed: Soy milk (fortified brands), tofu processed with calcium, yogurt</p>

Recommend Adding these Target Nutrients for All Categories

Nutrient	Documents Supporting Need/Deficiency in the target population	Function	Sources in WIC Food Packages
Fiber	<ul style="list-style-type: none"> • Year 2000 Nutrition Objectives encourage consumption of complex carbohydrates and fiber • CSFII indicates women and children of low-income households consume approximately only 9 gm per day (National Cancer Institute recommends 20-30 gm/day) • NAWD supports (1991) • The Dietary Guidelines for Americans support eating fruits and vegetables, whole grains and legumes to increase fiber intake. 	<ul style="list-style-type: none"> • Associated with promotion of normal bowel function and prevention of gastrointestinal disorders, prevention and treatment of childhood obesity, reduction of blood cholesterol levels, and the modulation of hyperglycemia and glucose intolerance. • Fiber may reduce the risk of chronic diseases such as cancer, cardiovascular disease, and Type II diabetes. • Fiber-rich meals promote earlier satiety with a larger volume and is usually less energy dense 	<p>Current: High fiber cereals, beans and lentils</p> <p>Proposed: Fruits and vegetables</p>

Recommend Adding these Target Nutrients for All Categories

Nutrient	Documents Supporting Need / Deficiency in the target population	Function	Sources in WIC Food Packages
Zinc	<ul style="list-style-type: none"> • Technical Review, Penn State, 1991. • National Advisory Council supports (1991) • NAWD Supports (1991) • Dietary surveys show low in diets of potential participants • Surgeon General's Report on Nutrition and Health shows mean intake for women is less than 70 percent of RDA • Center for Nutrition Policy and Promotion's (CNPP's) Report (1999) based on NHANES III data (1988-1999) shows pregnant women's intake is less than 70%. Intake of 1-3 year old children was less than 66 percent and that of 4-5 year old children was less than 80 percent of the RDA. • The Colorado supplementation studies in the 1970s and '80s showed that zinc deficiency limits growth in otherwise apparently normal infants and young children (Hambidge, 2000) and increase in growth velocity is associated with modest dietary zinc supplements (Brown et al. 1998) • Bioavailability of zinc is variable under a wide range of different dietary and host circumstances. • Due to the potential of zinc toxicity, we need to be mindful of the upper limit for elemental zinc intake. 	<ul style="list-style-type: none"> • About 300 enzymes require zinc for their activities • Required for DNA synthesis, cell division and protein synthesis • Needed for cell growth and repair • Supports healthy immune system • Helps maintain sense of taste and smell. • Maternal Zn deficiency can slow fetal growth. • Among the urban poor in the US, a marginal zinc intake during pregnancy was associated with increased risk of preterm and very preterm delivery. (Prasad, 1996) • Substantially greater birth weight, length and head circumference in infants whose mothers had received a zinc supplement during pregnancy (Goldenberg et al, 1995) • Marginal and moderate growth impairment in children as a consequence of inadequate zinc intake has been reported from many developed and developing countries. (Prasad, 1996) • Growing fetus, infant and young child or individuals mounting an immune response or requiring tissue repair are vulnerable to an inadequate supply of zinc.(Hambidge, 2000) • <u>Vegetarians</u> may need 50% more Zn than non-vegetarians. 	<p>Current: Fortified breakfast cereals, kidney beans, chickpeas, baked beans, cheese, milk</p> <p>Proposed: tofu, yogurt, and canned chicken</p> <p>Note: Absorption is greater from a diet high in animal protein than in a diet rich in plant proteins as phytates can decrease zinc absorption. Also, taking iron supplements between meals will help decrease its effect on zinc absorption.</p>

Recommend Adding these Target Nutrients for All Categories (cont'd)

Nutrient	Documents Supporting Need / Deficiency in the target population	Function	Sources in WIC Food Packages
Vitamin D	<p>Clinical Report, American Academy of Pediatrics, Prevention of Rickets and Vitamin D Deficiency: <u>New Guidelines for Vitamin D Intake</u>, (April 2003) recommends: Supplementation for all breastfed infants until they take 500mL vitamin D-fortified milk or formula, all non-breastfed infant on less than 500 ml formula or fortified milk; children and adolescents without regular sunlight exposure, or who do not ingest at least 500mL fortified milk or a daily multivitamin with at least 200 IU vitamin D.</p> <p>Mean intake of US Women for vitamin D was below the Estimated Average Requirement. (from NHANES III data)</p> <p>African American women had the lowest mean intake of <i>vitamin D</i>. (from NHANES III data)</p>	<ul style="list-style-type: none"> • Calcium absorption and mineral deposition into skeleton (bones/teeth) • Cell growth and development, especially white blood cells and epithelial cells • Activity and response of white blood cells against infection • Deficiency in children can cause delayed growth and development, rickets, irritability, spinal deformities, delayed tooth eruption and poorly formed tooth enamel, impaired immune response and increased risk of infection. • Deficiency in adolescents can impair growth of bones and musculature and impaired immune response with increased risk of infection • Deficiency in adults can increase risk of osteoporosis, fractures, hearing loss, muscle weakness, high blood pressure, impaired immune response, higher risk of infection • Increased risk of deficiency related to breastfed infants, vegan diets, inadequate sunlight exposure, fat malabsorption 	<p>Current: Fortified milk, egg yolk, canned tuna</p> <p>Proposed: Canned sardines, salmon, and chicken</p>

Recommended Adding these Target Nutrients for Women Only

Nutrient	Documents Supporting Need / Deficiency in the target population	Function	Sources in WIC Food Package
<p>Folate*</p>	<ul style="list-style-type: none"> • Technical review, Penn State (1991) • National Advisory Council (1991) • American Dietetic Association (1991) • NAWD supports (1991) • Surgeon General's Report on Nutrition and Health shows mean intake for women is less than 60 percent of RDA • Center for Nutrition Policy and Promotion's (CNPP's) Report (1999) based on NHANES III data (1988-1999) shows pregnant women's intake is less than 60% of RDA. • National Council on Folic Acid recommends that folic acid be established as a target nutrient. Food packages for all women should provide 400ug of folic acid per day. <p>*Intake was adequate among children according to the CNPP report (1999).</p>	<ul style="list-style-type: none"> • Necessary for proper cell growth • Prevents neural tube defect • May lower chances of having a baby with birth defects of the heart, lip, or mouth <p>Helps lower homocysteine levels in the blood which can help prevent cardiovascular disease.</p> <ul style="list-style-type: none"> • Helps prevent breast, cervical and colon cancer. • May help prevent Alzheimer's disease. 	<p>Current: Orange juice, fortified cereals, dried beans and lentils</p> <p>Proposed: Fruits and vegetables</p>

Recommended Adding these Target Nutrients for Women Only (cont'd)			
Nutrient	Documents Supporting Need / Deficiency in the target population	Function	Sources in WIC Food Packages
Magnesium *	<ul style="list-style-type: none"> Center for Nutrition Policy and Promotion's (CNPP's) Report (1999) based on NHANES III data (1988-1999) shows pregnant and non-breastfeeding postpartum women's intake is less than 70% of the RDA. Intake was adequate among children according to the CNPP report (1999). 	<ul style="list-style-type: none"> Helps maintain normal muscle and nerve function Maintains steady heart rhythm and strong bones Involved in energy metabolism and protein synthesis may influence release and activity of insulin in carbohydrate metabolism (diabetes) 	<p>Current: Shredded wheat, Bran Flakes, Peanut butter, beans and lentils</p> <p>Proposed: Soy milk, tofu, fruits and vegetables</p>

Recommended Adding these Target Nutrients for Women Only (cont'd)

Nutrient	Documents Supporting Need / Deficiency in the target population	Function	Sources in WIC Food Packages
Vitamin B6*	<ul style="list-style-type: none"> • Technical Review, Penn State supports(1991) • National Advisory Council supports (1991) • American Dietetic Association Supports (1991) • NAWD supports (1991) • Dietary surveys show low in diets of potential participants • Literature citations indicate women and children are at risk for deficiencies. • Surgeon General's report on Nutrition and Health shows mean intake for a woman is less than 70 percent of RDA. • Center for Nutrition Policy and Promotion's (CNPP's) Report (1999) based on NHANES III data (1988-1999) shows pregnant women's intake is less than 80% of RDA. • Intake was adequate among children 1-5 years old according to the CNPP report (1999). 	<ul style="list-style-type: none"> • Needed for more than 100 enzymes involved in protein metabolism • Essential for red blood cell metabolism • Needed for immune and nervous system functions • Needed for conversion of tryptophan (an amino acid) to niacin (a vitamin). • Needed to make hemoglobin. Deficiency can result in a form of anemia. • Helps maintain blood glucose in the normal range. 	<p>Current: Fortified cereals, beans, peanut butter</p> <p>Proposed: Fruits and vegetables, canned chicken, salmon and sardines</p>

2. 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.
- Selected foods should, for the most part, provide no more than 30 percent of their calories from fat. With the current food packages this would affect the selections in the dairy and protein groups.

The IOM committee should investigate the impact of using low-fat milk and cheese as the standard foods for all women and children, in terms of participant acceptance, education needed, situations where exceptions would be warranted.

Adding low-fat or nonfat plain yogurt as an option would offer more choice and perhaps improve the perception of the food package for some.

Mozzarella string cheese is lower in fat and popular with children.

Fortified soymilk should be allowed as a substitute for cow milk, and tofu (processed with calcium) should be allowed as a substitute for cheese.

The amount of milk and cheese provided seems excessive in some packages (particularly for children) and could be reduced in order to provide other needed nutrients. The quantity of milk provided should be no more than the recommended amount per day for each age group.

The protein group currently offers beans, peanut butter, and eggs.

While beans tend to be a low-fat choice, many participants bypass that option because only dried beans that take lengthy preparation are offered. Allowing canned beans would encourage more participants to choose this low-fat option.

While peanut butter is a higher fat product, the fat content is high in monounsaturated fats, provides folic acid, magnesium and fiber, and is well received by many participants. Lower fat products may be too costly and/or have too much additional sugar to qualify for the WIC program, but WIC staff can encourage participants to purchase natural peanut butter and pour off some of the oil. WIC education can also encourage and support more use of beans instead of peanut butter.

The amount of eggs given should not exceed the current recommendations for keeping cholesterol levels below 300 mg. per day. Since eggs are reasonably priced and provide highly bioavailable protein, they should continue to be provided. Education of participants can help them to avoid over-consumption of cholesterol.

Comments – Questions and Responses

Other canned meats and seafoods (packed without oil) as well as tofu should be included in the food package for some categories of participants to meet the desired level of the target nutrients.

Grain products should be low in fat and sugar and at least moderately high in fiber. The grain group should include other whole-grain products also. Some possibilities are whole-grain breads, corn tortillas and brown rice. Only one serving of cereal should be provided per day for each category of participants.

- Vegetables and fruits (fresh, frozen and canned) should be included as a standard component of each food package. The fiber content can be helpful in preventing obesity, and the vitamins and antioxidants provided by the fruits and vegetables can replace most of those currently provided by juice. Canned fruits should be packed in water or juice.

At least one serving each of vegetables and fruits should be provided per day for each category (including infants beginning at six months).

Juice should be removed from the infant food packages, as juice is not needed in an infant's diet, and juice tends to be overconsumed by infants, toddlers and preschoolers.

For all categories other than infants, the amounts of juice provided should not exceed one 4 – 6 ounce serving per day.

- As a means of helping to prevent overweight in children, WIC could provide more support for breastfeeding via the food package for exclusively breastfeeding women. This food package could be made more valuable when compared with the packages for formula and non-breastfeeding women because of the increased amounts of high protein foods such as canned salmon or chicken and the higher quantities of fresh fruits and vegetables.

WIC education opportunities can also help promote appropriate weight by teaching all participants about physical activity during individual and group education sessions. WIC can teach parents about limiting their children's screen time (TV viewing and other sedentary media), and give them ideas on how to model an active, healthy lifestyle for their family.

6. **Are there other concerns that affect foods issued through the WIC food packages that should be considered in designing the food packages? For example, should WIC provide options to address allergies (the American Dietetic Association notes that the most common food allergies are to milk, eggs, peanuts, soybeans, tree nuts, fish, shellfish and wheat), cultural patterns or food preferences?**

Comments – Questions and Responses

Yes, the WIC food packages should provide flexibility to be responsive to participants' food intolerances, allergies, preferences, and cultural dietary patterns. See recommendations below.

Intolerance and Allergies:

Allow substitution of:

- cow's milk with fortified soy milk or plain yogurt.
- cheese with plain yogurt or tofu processed with calcium.
- eggs with canned beans, canned chicken or canned fish.
- peanut butter with canned beans, canned chicken or canned fish.

Dietary Preferences:

Offering more choices such as soy milk, tofu, canned beans, canned fish, canned chicken, and fruits and vegetables will allow participants more flexibility in meeting their nutrient needs within the context of their preferences. This will ultimately increase acceptance, and thus consumption of the WIC foods.

Cultural Dietary Patterns:

Refer to response to question # 9.

7. **What data and/or information (please cite sources) should the Department consider in making decisions regarding revisions to the WIC food packages, e.g., nutritional needs of the population, ethnic food consumption data, scientific studies, acculturation practices, and participant surveys, etc.?**

See enclosed supporting documentation (Enclosure #4).

8. **Recognizing that current legislation requires WIC food packages to be prescriptive, should participants be allowed greater flexibility in choosing among authorized food items? Is so, how?**

Allow participants to select from several food packages that accommodate their medical/cultural food preferences and meet the standard nutrient requirements for their category. This introduces flexibility for the states to design packages that meet that state's participant diversity needs while maintaining controls in terms of food delivery and food expenditure forecasting. If a participant is allowed to design their own food package, the possible number of unique food packages increases exponentially and the ability of a state to accurately forecast their costs is lost.

Comments – Questions and Responses

9. How can WIC food packages best be designed to effectively meet nutritional needs in culturally and ethnically diverse communities?

- Allow states flexibility to provide food packages that will meet the nutrient requirements and cultural preferences of the diverse cultural/ethnic groups that reside in that State. This should not be limited to a food-for-food substitution, as current regulations require. Rather, the whole food package should be considered.
- Recommend that the IOM committee review the report and recommendations of NWA's Culturally Sensitive Food Prescription Task Force, recently approved by the NWA Board. This Task Force was formed in December 2001 and its members reflected the many different regions and cultural groups of the country and serviced by the WIC program.

The purpose of this group was to:

Identify foods that would nutritionally benefit the diverse cultural groups served by the WIC program and

Design examples of potential cultural food prescriptions for State WIC program implementation.

- Recommend that IOM review available focus group and survey data on the diverse populations that WIC serves nationally. Focus group studies (April, 2002 and June, 2000) conducted on California WIC participants of different ethnicities indicated that:

Regardless of ethnic origin, fresh fruits and vegetables were requested by all participants to be included in the WIC food package.

Asian women indicated that they did not like cheese and often threw it away.

Dried beans were listed as a least favorite food among non-Latina groups. Many participants said that they did not know how to prepare the beans.

10. Should WIC State agencies be afforded more or less flexibility in designing WIC food packages? Please explain.

Increased flexibility in the food package design is a high priority for State WIC agencies. Due to regional variations in food preferences, ethnic diversity, and availability of fruits and vegetables, states need flexibility to accommodate their population's needs. USDA could define the standard/basic food package for each category and identify a list of acceptable substitutes for each food category to meet participant needs.

State WIC agencies are currently challenged to meet the needs of their diverse populations, since they must make any proposed changes to the food package based on strict regulations that require an item-for-item equivalency in both nutritional value and in cost.

Comments – Questions and Responses

To date, USDA has approved very few proposals for food substitution based on their interpretation of the current regulations. Two proposals were approved: Alaska's proposal to give canned salmon in place of dried eggs and Hawaii's proposal to give canned salmon in place of canned tuna. California's proposal to substitute a specific quantity of fresh oranges and vegetables (broccoli, carrots, potatoes, or tomatoes) for one 64-oz container of juice in children's food packages was denied even though it met the requirements of current regulations.

11. The WIC program's overall goal is to achieve the greatest improvement in health and development outcomes for WIC participants, achieved partly by providing food that targets nutrients determined to be lacking or consumed in excess in the diets of the WIC population. In addition to targeting these food nutrients, food selection criteria should address necessary operational concerns for the foods--for example, cost effectiveness; appeal to recipients; convenient and economical package sizes; complexity/ burden for the WIC administrative structure to manage; etc. It would be helpful if commenters would identify/recommend WIC food selection criteria, describe how the criteria interact, indicate their relative weighting or importance, and provide supporting rationale.

- First and foremost, the WIC food package must address the **nutritional issues** of the target population. The foods selected and the quantities offered need to consider the participant medical and nutritional needs and must address the nutrient deficits of the target population in order to meet the goals of the WIC program. Other nutritional factors that must be considered are: fat, sugar, and salt content; additives; nutrient content and density; and versatility. They also need to be compatible with and support current dietary recommendations and WIC's nutrition education messages.
- Second, changes must be based on **evidence of safety and efficacy**. States should have authority to evaluate new products for safety and efficacy prior to authorizing them on their food lists. (example: added lipids in formulas) Furthermore, we recommend USDA not approve new products until adequate studies proving safety and efficacy are available.
- Third, the foods offered must be **culturally acceptable and appealing** to the participants in order to assure consumption.
- Fourth, **cost** must be considered in developing food packages that meet the above two criteria to make sure that food packages are realistic within budget constraints.

Other criteria listed below in decreasing order of importance:

- Availability
- Packaging size and type
- Ease of education (participant and grocer)