

## Getting to Know the Modified MyPyramid for Older Adults

A vibrant, colorful new version of the Food Guide Pyramid for Older Adults features graphics consistent with the general MyPyramid model, yet highlights the unique dietary needs for adults aged 70 and older. The Modified MyPyramid for Older Adults, developed by researchers at Tufts University in Boston, continues to emphasize the importance of nutrient- and fiber-rich foods within each group, but the updated version now provides additional guidance concerning alternate food forms and the importance of regular exercise and adequate fluid intake (1).

The Modified MyPyramid for Older Adults is not intended as a substitute for the US Department of Agriculture's MyPyramid, which is a multi-functional Web-based program that provides individualized dietary guidance based on sex, age, height, weight, and exercise habits. However, pedagogic issues related to Internet-savvy, Web access, and computer availability for older adults prompted researchers to develop a graphic version of MyPyramid for older adults.

In 2005-2006, Linda Roberts, MS, RD, and Melissa Ventura Marra, PhD, RD—two active members of the Consultant Dietitians in Health Care Facilities (CDHCF) dietetic practice group—were involved in a CDHCF-organized task force whose mission was to determine whether planned menus in nursing homes should follow the MyPyramid guidelines. Ventura-Marra completed a nutritional analysis of 10 menus provided by taskforce members from across the country and discovered that all of the menus fell short of providing nutrients at Recom-

mended Daily Allowance (RDA)/Adequate Intake levels for vitamins E and D, magnesium, potassium, and dietary fiber. The Modified MyPyramid for Older adults reinforces the findings of the task force, according to Roberts and Ventura-Marra, and they advise registered dietitians working in this setting to use nutritional supplementation as needed.

In the following interview, Roberts and Ventura-Marra offer their insights on the Modified MyPyramid for Older Adults and how food and nutrition professionals can best use this tool when counseling older adults.

### Why Do Older Adults Need a Food Pyramid of Their Own?

**Marra:** Eating nutrient-dense foods becomes especially important as we get older. We generally need fewer calories because we tend to become less active and our lean-muscle mass decreases with age. However, we still need the same amount of most vitamins and minerals. In fact, we need more calcium and vitamins D and B-6 after about age 50 (RDAs/Adequate Intakes are higher in the over 50 age groups). This means that as we get older, we need to get the same amount (or more) of nutrients from eating a smaller amount of food. This can be a challenge. A pyramid graphic to help educate older adults on the types of nutrient-dense foods to include in their diets would be helpful—even for the Internet-savvy.

**Roberts:** As we age, our bodies need less calories, but need more nutrients. Older adults may not be as computer-savvy as a younger individual. Providing an educational tool that is not Web-based makes access easier for them. In assisted-living and supported-living situations, individuals are alert and able to make food choices. The registered dietitian can engage the residents of these institutions with an educational activity us-

ing the modified pyramid. At meal service the residents can feel empowered when applying this knowledge in making food selections from the menu. They will likely enjoy making selections from a menu based on what they've learned from this guide.

### What Are the Key Differences between the Modified MyPyramid for Older Adults and the General MyPyramid Guide?

**Marra:** There isn't a big difference in the general message. Both pyramids highlight the importance of diet quality and physical activity for optimal health. The pyramids fill different needs. MyPyramid allows individuals to determine the amount of food within each food group they need to consume to maintain a healthy weight and meet nutrient requirements. The food patterns in MyPyramid are based on energy requirements; they do not specifically address the needs of older adults. This is where the Modified MyPyramid comes into play. It illustrates foods and beverages that are rich in nutrients commonly low in the diets of older adults, like calcium, vitamin D, vitamin E, potassium, and fiber.

**Roberts:** The Modified MyPyramid obviously is not interactive like the MyPyramid Web site. The Modified MyPyramid includes recommendations specific to older adults (for example, a row of water glasses that's meant to signify 'Don't forget to drink fluids, your body's thirst mechanism isn't what it used to be.'). Physical activity is also different for an older person. The Modified MyPyramid basically says 'Take it easy—but keep moving! Nonstrenuous movement is important too!' The Modified MyPyramid still emphasizes the importance of eating a variety of foods and while it says 'Fresh is good' it also says 'pre-packaged is healthy too.'

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### What Are Some Important Things Food and Nutrition Professionals Should Keep in Mind as They Are Presenting the Modified MyPyramid for Older Adults to Their Patients?

**Marra:** Because it doesn't focus on food quantity, the graphic can be used as an educational tool with all older adults, no matter their height, weight, sex, or physical activity level. The Modified MyPyramid graphic encompasses several messages to help older adults maintain healthy and active lifestyle. Educators should choose only a few per session and they should keep the messages simple, practical, and targeted to the person's needs and interests.

**Roberts:** The Modified MyPyramid provides food and nutrition professionals with an excellent visual aid that they can use when educating older adults. It cues the professional into talking about all aspects of healthy aging from exercise, fluid intake, to the inclusion of fresh and pre-packaged foods into the diet of older adults. The new pyramid points out that packaged versions of fruits and vegetables, frozen vegetables, and canned or dried fruit are good alternatives to fresh varieties. Canned fruits can be easier for them to chew, as it can be more difficult to chew the fresh fibers of fruits. And the ability to reuse the food, to reseal unused portions in plastic bags with seals on them, is a plus for older adults. The presentation of the material is only limited by the imagination of the dietitian.

### What Is the Significance of the Flag at the Top of the Modified MyPyramid Guide?

**Marra:** The flag at the top of the pyramid cautions that some older adults need fortified foods and/or dietary supplements to meet their requirements of calcium, vitamin D, and vitamin B-12. Calcium and vitamin D are important in helping to maintain (or increase) bone mineral density and reduce fracture risk in this population. The current Adequate Intake for both nutrients are higher for adults over age 50 than those below, and higher still for vitamin D for those over age 70. Very few consume the recommended 1,200 mg of calcium and 600-1,000 IU of vitamin D from conventional food sources. We can't rely on vitamin D synthesis from the sun in older adults because of de-

creased sun exposure (not going out in the sun or use of sunscreen) and because, with age, the skin becomes less efficient at making the vitamin and the kidneys less efficient at activating it. For these reasons, many need fortified foods and supplements to help meet recommended levels.

For vitamin B-12, the situation is a little different. Most older adults get enough of the nutrient from the foods they eat. The problem is some aren't able to absorb this form well. Conditions that reduce vitamin B-12 absorption from food sources become more prevalent with age. The *Dietary Guidelines for Americans 2005* and the Dietary Reference Intakes recommend older adults get most of their B-12 from the more absorbable form found in fortified foods and supplements. Ideally, only those who malabsorb the food-bound nutrient would need to supplement, but in reality, people don't know in advance they are not absorbing the nutrient. Because the consequences of an undetected and untreated deficiency can be serious and potentially irreversible, we should be proactive. Once overt clinical symptoms manifest our goals change from maintaining optimal health to treating a deficiency disease, the latter of which requires amounts greater than RDA levels.

The good news is that many older adults already comply with the recommendation by taking a multivitamin or eating fortified breakfast cereals or soymilk. Keep in mind that the % Daily Value on labels are still based on 1968 RDAs so a product containing only 40% of the Daily Value provides 100% of today's RDA.

### Near the Base of the Modified MyPyramid Is a Row of Glasses. What Does this Signify?

**Roberts:** The Modified MyPyramid article (1) describes the importance of kidney function in older adults—which is very true. For this population, dehydration can lead to a decreased cognitive status (confusion) and can also result in more falls. It is also important to note that adequate hydration is a very important part of a healthy bowel. I believe that when people age their thirst mechanism is depressed. They are less active, and they may be taking various medications that may depress that thirst

mechanism causing them to drink less. This row of glasses at the base of the graphic would certainly remind users of this pyramid of the importance of consuming fluids.

The foundation of the Modified MyPyramid is comprised of graphics showing physical activities—rather than food-related items—that many older adults can easily perform, such as swimming, walking, and yard work. This is a notable addition to the MyPyramid guide for older adults, according to the researchers at Tufts University, because regular physical activity has been shown to reduce the risk of chronic disease and to lower body weight (1).

"I really like this because it emphasizes the fact that older adults do not necessarily have to be out there doing vigorous activities, like running a marathon! The graphic shows people standing in a pool playing catch or people washing dishes—it shows that just getting up and moving around is important for older adults," says Roberts.

Published nearly a decade after the original Food Guide Pyramid for Older Adults was released in 1999, the Modified MyPyramid for Older Adults presents a graphic-based, user-friendly tool that can be featured as hard copy hand-outs or included in newsletters and other publications targeted at seniors and is most effective when used in combination with the US Department of Agriculture's general MyPyramid food guide.

The Modified MyPyramid for Older Adults can be downloaded by visiting: <http://nutrition.tufts.edu/docs/pdf/releases/ModifiedMyPyramid.pdf>

### Reference

1. Lichtenstein AH, Rasmussen H, Yu WW, Epstein SR, Russell RM. Modified MyPyramid for Older Adults. *J Nutr.* 2008;138:78-82.