

ENAFS Healthy Living Program



MODULE 5: Healthy Eating for Elders

LESSON 4 Moove to Lowfat or Fat Free Milk



UNIVERSITY OF
FLORIDA

IFAS EXTENSION

ENAFS Healthy Living Program
MODULE 5: Healthy Eating for Elders
Lesson 4: Mooove to Lowfat or Fat Free Milk

Lesson Authors:

Linda B. Bobroff, PhD, RD, LD/N, Professor and Extension Nutrition Specialist, Department of Family, Youth and Community Sciences, Institute of Food and Agricultural Sciences, University of Florida.

Lesson Reviewers:

Linda K. Bowman, MS, RD, LD/N, Extension Agent IV-FCS, Santa Rosa County Extension Service, Milton.

Nancy J. Gal, MAg, Extension Agent III, Marion County Extension Service, Ocala.

Jennifer Hillan, MSH, RD, LD/N, former ENAFS Nutrition Educator/Trainer, Department of Family, Youth and Community Sciences, Institute of Food and Agricultural Sciences, University of Florida.

Kathy Reeves, MS, RD, LD/N, Nutrition Consultant, Department of Health, WIC and Nutrition Services, Tallahassee

Isabel Valentín-Oquendo, MS, RD, LD/N, Curriculum Coordinator, Family Nutrition Program, Department of Family, Youth, and Community Sciences, Institute of Food and Agricultural Sciences, University of Florida.

This lesson was developed as part of the *Mooove to Lowfat or Fat Free Milk* campaign of the Florida Interagency Food and Nutrition Committee. The Committee includes the Florida Department of Children and Families; Florida Department of Education; Florida Department of Elder Affairs; Florida Department of Health; U.S. Food and Drug Administration-Florida District, Southeast Region; University of Florida IFAS Extension; and Suwannee River Area Health Education Center.

<p>ENAFS Healthy Living Program MODULE 5: Healthy Eating for Elders</p>

Lesson 4: Moove to Lowfat or Fat Free Milk

GOALS

The overall goal of this lesson is to encourage participants who consume whole or reduced fat (2%) milk to switch to lowfat (1%) or fat free milk.

CONCEPT

Milk is a major contributor of fat and saturated fat in the American diet. High intake of fat and saturated fat contributes to obesity, diabetes, cardiovascular disease, and some cancers, conditions that are common in this country. By mooving to lowfat or fat free milk, elders can continue to get the nutritional benefits of milk, including vitamin D, calcium, and protein, without the excess fat and saturated fat of whole or reduced fat milk.

LEARNING OBJECTIVES

After completing this lesson, participants will:

- ◆ Learn the health risks of diets high in fat and saturated fat.
- ◆ Learn the health benefits of switching from higher fat to lower fat milk.
- ◆ Realize that many people with lactose intolerance can tolerate small amounts of milk.
- ◆ Learn that lowfat milk tastes good.

BEHAVIORAL OBJECTIVES

After completing this lesson, participants who drink whole or 2% milk will switch to 1% or fat free milk. Participants who do not drink milk on a regular basis will be motivated to begin drinking 1% or fat free milk.

ACTIVITIES (Total estimated time 32-40 minutes)

- ◆ Icebreaker (2-5 minutes)
- ◆ Interactive Discussion (5-10 minutes)
- ◆ Activity “Test Your Taste Buds” (15 minutes)
- ◆ Activity “Milk Mixer” (5 minutes) – Can be given as homework if time is limited.
- ◆ Evaluation (5 minutes)

MATERIALS NEEDED

Icebreaker

You will need an overhead or LCD projector, plain wall space or projection screen, and the PowerPoint slide, overhead, or printed version (copied onto colored paper and pasted onto cardboard) of: *Winking Cow*

Interactive Discussion

To facilitate this discussion, you may want to use the enclosed PowerPoint slide set, or print them out on transparencies or paper (to make signs).

Discussion with PowerPoint slides or overheads:

LCD or overhead projector

Plain wall space or a projection screen (5'x 6' or more is recommended)

Slide masters (camera-readies enclosed):

Health Risks of High Fat Diets

Milk Packs a Nutritional Punch!

What about Lactose Intolerance?

Mooving to Lowfat or Fat Free Milk

Discussion with Board and/or Signs:

Chalkboard, whiteboard, and/or flip chart with stand

Chalk or colored markers to write on the board

Signs – print out or copy masters onto colored paper and paste on pieces of cardboard or foam core: See above list

Interactive Activities

“Test Your Taste Buds”

See instructions in this lesson for materials needed.

“Milk Mixer”

Milk Mixer

Pencils

Lesson Evaluation

You will need copies of the evaluation form for this lesson. Please help us evaluate the ENAFS lessons by having as many groups as possible complete the evaluation form. See Activity 5 for instructions.

Handouts (camera-ready copies enclosed)

- ◆ *Milk Mixer*
- ◆ *Moove to Lowfat or Fat Free Milk*
- ◆ ENAFS *Evaluation* form

BACKGROUND INFORMATION

DIET AND CHRONIC DISEASE

Lifestyle, including diet, can affect risk for obesity, diabetes, cancer, heart disease, stroke, and osteoporosis. Although it's best to begin healthful eating habits at a young age, it's never too late to make positive lifestyle changes. This is the basic tenet of the ENAFS program, and it holds true for the topic of this lesson: Mooving to lowfat or fat free milk. By making this one simple change, older adults can decrease their risk for obesity, diabetes, and heart disease, all of which are related to fat consumption.¹

Overweight and Obesity

Overweight and obesity are growing health concerns in the U.S. Risk of death from cardiovascular disease and cancer increases with an increase in body mass index (Calle 1999). These diseases are often related to poor diet and lack of physical activity. In fact, unhealthy lifestyles are estimated to be associated with 300,000 to 580,000 deaths each year in the U.S. Other health effects of overweight and obesity include increased risk for gallbladder disease and sleep disturbances. Due to social pressures to be thin in this country, large people may experience low self-esteem and depression (Satcher 2001).

¹ If the lesson results in participants drinking more milk, it can also have an impact on their risk for osteoporosis.

Racial and ethnic minorities (particularly women) and members of low income families are more likely to be overweight or obese (Satcher 2001). This may be related to genetic predisposition and/or lifestyle.

Diabetes

The incidence of diabetes in the U.S. increased 49 percent between 1990 and 2000. About 800,000 new cases are diagnosed each year. The risk of diabetes increases with age (CDC 2001; NCHS 2001).

Cardiovascular Disease

Heart disease is the leading cause of death in men and women in this country. Each year, more than 950,000 persons die from cardiovascular disease, including heart disease and stroke. Risk of cardiovascular disease also increases as people age (NCHS 2001).

MILK CONSUMPTION PATTERNS

Milk product consumption is associated with better diet quality and adequate intake of needed nutrients (USDA 2005). Current recommendations are for all adults to consume three cups of milk or equivalents such as yogurt and cheese. USDA's MyPyramid food guidance system focuses on low-fat or fat free milk and milk products to meet the Dietary Guidelines 2005 recommendation to limit saturated fat intake to less

than 10 percent of total calories and cholesterol to less than 300 mg/day (USDA 2005). Current intake in the U.S. is about 1½ cups of milk or equivalents per day (USDA 2000).

Whole milk consumption has been decreasing in the U.S. In 2001, Americans consumed less than 8 gallons per person per year of whole milk, compared with 25 gallons in 1970. During the same period, the consumption of low-fat and fat-free milk increased, from 6 gallons to 15 gallons per capita (Putnam 2003). This is a healthy trend, but there still are many people who drink higher fat milk today.

WHY *MOOOVE* TO LOWFAT OR FAT FREE MILK?

Milk products are a major source of fat and saturated fat in the American diet. People who drink higher fat milk can lower their fat and saturated fat intake by making the switch to lower fat milk (Lee 1998). Lower fat diets can reduce blood cholesterol and the risk of cardiovascular disease and mortality. It can also reduce risk of obesity and diabetes, both of which are on the rise in the U.S.

WHAT ABOUT LACTOSE INTOLERANCE?

Some older adults avoid milk because of lactose intolerance. They are unable to digest the milk sugar lactose due to a deficiency of the enzyme lactase. However, some people who are lactose intolerant can comfortably drink small amounts of milk throughout the day

without discomfort, especially when consumed with other foods. Others cannot tolerate even small amounts of regular milk.

To improve milk digestion, elders should be encouraged to drink milk with food rather than on an empty stomach. Also, they can try small amounts (four fluid ounces) several times during the day. If they still cannot digest regular milk, they can try lactose-reduced milk (“lactase milk”). This type of milk is now readily available in grocery stores, and can be found in low-fat and fat-free varieties.

CULTURAL DIFFERENCES

Older Asians may have a cultural bias against drinking milk. It may be seen as a food fit only for babies. When working with people with this belief, we need to respect their point of view. Also, many Asians are lactose intolerant (Kittler 2000).

We can point out the nutritional benefits of milk for older people who choose to drink it. Asian elders may eat other rich sources of calcium, such as tofu and fish bones, that others may not include in their diets.

Lactose intolerance is also common among African Americans, estimated at 60 to 90% of the population (Kittler 2000). This issue is likely to be a major topic of conversation in groups that include African Americans. Different studies show varying degrees of acceptance of milk and milk products among African Americans (Kittler 2000). You can make the suggestions

mentioned previously to see if they will try small amounts of milk or milk with added lactase.

SUMMARY

High fat milks (whole and 2%) contribute significantly to fat and saturated fat consumption in the U.S. Changing milk consumption patterns to

lower fat choices can reduce fat and saturated fat intake while maintaining consumption of critical nutrients like protein, vitamin D, and calcium.

People with lactose intolerance may be able to tolerate small amounts of milk or milk with added lactase. Persons with a cultural bias against milk may not be willing to drink it at all.

ACTIVITY 1: INTRODUCTION/ICEBREAKER

Show the slide:
Winking Cow

Q: This cow looks like she has a secret. Why do you think she is winking like this?

A: She knows that the milk she provides is great food for mature adults. She also knows something else about milk...

Remember: After each question, give clients time to respond before providing answers!

Q: Can you guess what that might be?

A. There are different types of milk and some are better choices for you than others. Let's see what these choices are and how milk can fit into your eating style.

ACTIVITY 2: INTERACTIVE DISCUSSION: Moove to Lowfat or Fat Free Milk

Show the slide:
Health Risks of High Fat Diets

You may have heard that the way we eat influences our risk for many chronic diseases.

Reminder: Give participants time to respond. You may want to write some of their answers on a flipchart or blank overhead.

Q: What types of eating habits increase our risk for these conditions or diseases?

A: The main dietary habit that affects our risk for being overweight, or having diabetes, heart disease, stroke, or cancer is eating too much fat! For heart disease and stroke, eating too many foods high in saturated fat is also a risk factor.

FAST FACTS

About 3000,000 deaths a year are associated with obesity.

Q: Who can tell me one of the major sources of fat and saturated fat in the American diet?

A: Milk and milk products contribute lots of fat and saturated fat to the diet. But milk is also a great source of nutrients that are especially important to older people.

Q: Who can tell me one of the nutrients that milk provides that is important for our health?

Show the slide:
Milk Packs a Nutritional Punch!

*A: Great! Milk gives us **calcium**, which we need for healthy bones and teeth.*

*It also gives us **protein**, an important nutrient that helps keep our immune system and muscles healthy.*

EXTRA, EXTRA

Vitamin D and Elders

For most people, the major source of vitamin D is exposure to the sun's rays. But, as we get older, our skin is less able to make vitamin D from sunlight.

It's important for older people to get vitamin D in their diets to meet their Adequate Intake (AI) of 15 micrograms (600 IU) daily.

Fortified milk has **vitamin D**, a nutrient that many older people do not get enough of, either through their diets or from exposure to sunlight.

Q: How many of you are lactose intolerant? What exactly does that mean?

Show the slide:
What About Lactose Intolerance?

A: Lactose intolerance is a condition (NOT an allergy) in which a person lacks the enzyme (lactase) needed to break down the sugar in milk (lactose).

Note: Give participants a chance to talk about their experiences with lactose intolerance.

Because the lactose doesn't get digested, it stays in the gut (intestines) and produces gas and stomach cramps. Sound familiar to anyone?

The good news is that many people with lactose intolerance CAN drink small amounts of milk with no ill effects. If you haven't tried this in a while, perhaps you should, just to see if you can drink ¼ cup to ½ cup of milk at a time. That would give you a nutritional boost. It also helps to drink milk with food rather than on an empty stomach.

Explain that lactose-reduced milk has less of the milk sugar lactose. Many people with lactose intolerance can drink this milk with no ill effects. It's also available in lowfat and fat free forms!

Q: Have any of you ever tried lactose-reduced milk?

Q: Why do you think we're suggesting that you Moove to Lowfat or Fat Free Milk?

Show the slide:
Mooving to Lowfat or Fat Free Milk

A: Lowfat (1%) and fat free milks have all the good nutrition of whole and reduced fat (2%) milk, just with less fat! And most of us would benefit from eating less fat.

Remember all of the conditions and diseases that are increased when we eat a high fat diet? Well, we can decrease our risk by choosing to eat a well-balanced and lowfat diet. It's a great thing to teach our children and grandchildren, too!

Q: Does anyone have any questions before we go on to our first activity?

*OK, now we're going to moove on to **Test Your Taste Buds.***

ACTIVITY 3

“Test Your Taste Buds”

This taste test helps elders decrease one of the barriers to selecting lower fat milks – the belief that lowfat milk does not taste good. Taste tests often find that people cannot tell the difference between different types of milk, especially when they cannot see the milk samples. This taste test compares lowfat (1%) milk with reduced fat (2%) milk.

It will be helpful to have one or more volunteers work with you on this activity.

YOU WILL NEED:

- ⇒ *Test Your Taste Buds – Data Sheet*
- ⇒ Cups, 3 oz, preferably opaque
- ⇒ Muffin tins to hold cups with milk (optional)
- ⇒ Marker to label cups “A” and “B”
- ⇒ Pens or pencils
- ⇒ Cooler (or access to refrigerator)
- ⇒ Milk: reduced fat (2%) and lowfat (1%), 1 ounce of each type per person (about ½ gallon of each type of milk for 50 people).
Note: Cover the labels on the milk cartons so participants can’t see the type of milk. Mark the cartons “A” and “B” and keep track of which is 1% and which is 2%!
- ⇒ Paper towels for clean up
- ⇒ Garbage can with liner for trash

INSTRUCTIONS

1. Prepare the supplies as described above, being sure to keep the milk very cold.
2. Have each participant taste the two milks in random order. They should say whether or not they like each one, NOT compare them. For each participant and each type of milk, mark on the *Test Your Taste Buds – Data Sheet* whether they liked (“L”) or disliked (“D”) the milk. Also mark down any relevant comments from the participants about the taste of the milk.
3. At the end of all the taste tests, while you do activity 4, a volunteer can add up the Likes and Dislikes from the data sheet for you to report to the group later. Discuss how the two milks compared and if they thought they could drink either one. Remind them that lowfat milk has all the great nutrition of reduced fat milk, but without as much fat and saturated fat.

ACTIVITY 4

“Milk Mixer”

This word scramble will reinforce the concepts presented in the lesson. Participants will be reminded that milk is a nutritionally important food, and that lowfat or fat free milks are better choices.

YOU WILL NEED:

- ⇒ *Milk Mixer*
- ⇒ Pencils

INSTRUCTIONS

1. Distribute handout and pencils.
2. Allow time for participants to complete the word scramble. If desired, participants can work in pairs or small groups.
3. When participants are finished, discuss the answers.
4. Discuss any questions the group may have.

Note: If time is a concern, give *Milk Mixer* to participants as homework and ask them to bring the completed activity back to the next lesson.

ACTIVITY 5

Evaluation

Hand out the one-page evaluation form. The University of Florida Institutional Review Board approved the following statement as appropriate to read to the elders to be sure they understand that their responses will not be identified with them personally. It is a way of protecting their rights:

“Thank you for being a part of this ENAFS lesson. We hope that you enjoyed yourself! Please help us do a better job of serving you by completing this short evaluation. You can see that there is no place for you to write your name on this form; that’s because we want to guarantee that your opinions will be kept private. We will use this information solely to learn how valuable our program is to all of you, and to help improve it based on your comments. You do not have to answer any question you do not wish to answer and you can stop at any time. It should take about five minutes to fill out the evaluation form. We are not providing any compensation for filling out the form. [Or: Everyone who fills out the form will receive (small prize) .]

If you have any questions about this evaluation, you can ask me after class or call me later at . Any questions or concerns you have about your rights as a participant can be directed to the University of Florida Institutional Review Board; I have their address and telephone number here if you’d like to contact them.”

➔ Encourage involvement by giving out a reward. Check with local hospitals, pharmacists, or department stores for prizes. Even small prizes like refrigerator magnets, pens, or writing tablets are appreciated. Just make sure any message included is appropriate for our message...healthy eating and living for elders.

Thanks for helping us evaluate the ENAFS lessons and the overall program. Please summarize the results of this evaluation for your own use, and send a copy to Dr. Linda Bobroff, University of Florida, PO Box 110310, Gainesville, FL 32611-0310. Please include your name, county, a telephone number, and email address if available. Thanks!

REFERENCES

Calle EE, Thun MJ, Petrelli JM, Rodriguez C, and Heath CW. Body-mass index and mortality in a prospective cohort of U.S. adults. *N Engl J Med* 1999;341:1097-1105.

Centers for Disease Control and Prevention (CDC). Press Release, September 11, 2001. Available at: www.cdc.gov/od/oc/media/pressrel/r0010911.htm. Accessed on September 14, 2001.

Hooper L, Summerbell CD, Higgins JPT, Thompson RL, Capps NE, Smith GD, Riemersma RA and Ebrahim S. Dietary fat intake and prevention of cardiovascular disease: systematic review. *Br Med J* 2001;322:757-763.

Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride*. Washington, DC: National Academy Press, 1997.

Lee HLC, Gerrior SA and Smith JA. Energy, macronutrient, and food intakes in relation to energy compensation in consumers who drink different types of milk. *Am J Clin Nutr* 1998;67: 616-23.

National Center for Health Statistics (NCHS). *Healthy People 2000 Final Review*. Hyattsville MD: Public Health Service, 2001. Library of Congress Catalog Card Number 76-641496. Available at: www.cdc.gov/hchs/data/hp2k01.pdf. Accessed on December 31, 2001.

Putnam J. *Trends in U.S. Per Capita Consumption of Dairy Products, 1909 to 2001*. Available at: www.ers.usda.gov/AmberWaves/scripts/print.asp?page=/June03/DataFeature/ Accessed on July 7, 2005.

Satcher D. *Overweight and obesity threaten U.S. Health Gains*. U.S. Department of Health and Human Services Press Release, December 13, 2001. Available at: www.hhs.gov/news. Accessed on December 14, 2001.

Tuomilehto J, Lindström J, Eriksson JG, Valle TT, Hämäläinen H, Ilanne-Parikka P, Keinänen-Kiukaanniemi S, Laakso M, Louheranta A, Rastas M, Salminen V and Uusitupa M. Prevention of type 2 diabetes mellitus by changes in lifestyle among subjects with impaired glucose tolerance. *N Engl J Med*. 2001; 344: 1343-50.

U.S. Department of Agriculture (USDA) and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, Sixth Edition*. Home and Garden Bulletin No. 232. Washington DC: 2005. For sale by the U.S. Government Printing Office, Superintendent of Documents, Internet: <http://bookstore.gpo.gov>, Phone: toll free (866) 512-1800, DC area: (202) 512-1800, Mail: Stop SSOP, Washington, DC 20402-0001, ISBN 0-16-072398-1.

U.S. Department of Health and Human Services (USDHHS). *Healthy People 2010* (Conference Edition, in Two Volumes). Washington DC: January 2000. For sale by the U.S. Government Printing Office, Superintendent of Documents, Washington DC 20402-9382, Stock Number 017-001-00543-6, ISBN 0-16-050260-8. Visit: www.health.gov/healthypeople or call 800-367-4725.

ATTACHMENTS

Consumer Handout Masters

- ◆ *Milk Mixer*
- ◆ *Mooove to Lowfat or Fat Free Milk*
- ◆ *ENAFS Evaluation Form*

Slides

- ◆ *Winking Cow*
- ◆ *Health Risks of High Fat Diets*
- ◆ *Milk Packs a Nutritional Punch!*
- ◆ *What About Lactose Intolerance?*
- ◆ *Moooving to Lowfat or Fat Free Milk*

Masters for Educators

- ◆ *Test Your Taste Buds – Data Sheet*
- ◆ *ENAFS Reporting Form*



The Chicago Partnership for Health Promotion is funded by the USDA Food Stamp Program to encourage Chicago families to make healthier food choices, learn to prepare and consume healthier foods every day and be more physically active. The University of Illinois at Chicago Neighborhoods Initiative is the Land Grant Administrative Hub for CPHP. The USDA, UIC and CPHP are equal opportunity providers and employers. For more information about partnership or CPHP programs in your community, contact CPHP at 312-355-3659. www.cphp.uic.edu