

## ***Preparing for the Better Balance, Better Bones, Better Bodies Lesson***

### **Objectives:**

#### **By the end of the lesson, participants will...**

- Understand the importance of a physically active lifestyle to optimal health
- Understand the importance of improving balance to protect their skeleton from fracture
- Learn strategies to reduce risk of falls and incorporate physical activity into their daily life
- Learn 3 basic balance exercises and 3 basic strength exercises
- Chart a plan of action for reducing risk of falls and falls related fractures

### **Materials Needed for Leaders:**

- Are you Ready to Exercise Questionnaire
- Physical Activity Guidelines (older adults and adults)
- Evaluation Materials

### **Materials Needed for Learners:**

- Lesson handout
  - Includes Are You Ready to Exercise Questionnaire, Home Safety Checklist, Physical Activity Guidelines for Older Adults
- Balance and strength exercise handouts
  - Includes a balance progression (3 exercises ranging from easier to harder) and a strength progression (3 exercises ranging from easier to harder)

Note: Additional instructions for leaders are within text boxes.

### **Before the Lesson:**

- Ask participants to wear comfortable clothes and supportive shoes. You may even suggest “exercise” clothes or clothes that one would wear for fitness walking.
- Practice the exercises included in the leader's guide and read over the exercise handouts for participants.

## Part I. Physical Activity and Optimal Health

There is a fountain of youth – an anti-aging miracle! Millions have discovered it - the secret to feeling better and living longer. It's called active living or a physically active lifestyle. Finding a program that works for you and sticking with it can pay big dividends.

***You might ask: what can a physically active lifestyle do for me?*** Being physically active and exercising regularly can improve mood and relieve depression, and prevent or delay bone loss, some types of cancer, heart disease, and diabetes. It can also reduce arthritis pain, anxiety and depression. It can help older people stay independent.

***What is the difference between physical activity and exercise?*** Exercise is physical activity that follows a planned format using repeated movements to improve or maintain fitness such as strength training, tai chi, or swimming. Exercise progress can be scored and counted. Physical activity is any voluntary body movement that burns calories. Examples include gardening, walking the dog, or taking the stairs instead of the elevator.

***Most everyone is doing SOME type of physical activity. Fewer folks are “exercising”.***

- Ask everyone to provide an example of something they currently do that would be characterized as physical activity (it doesn't have to be something they do daily).
  - Talk about ways to INCREASE physical activity. How can you make it something that you do daily?
- Ask those who are willing to share any EXERCISE that they may be doing. Recognize that it takes more effort to include EXERCISE as part of one's lifestyle.

### ***What kinds of exercise should you do?***

There are four main types of exercise and all adults [particularly older adults] need some of each to gain health benefits:

- **Endurance** activities - like walking, swimming, or riding a bike - which build "staying power" and improve the health of the heart and circulatory system
- **Strengthening** exercises which build muscle tissue and reduce age-related muscle and bone loss
- **Stretching** exercises to keep the body limber and flexible
- **Balance** exercises to reduce the chances of a fall

***Participants may ask “Which types of activities should I do?”***

- Some types of exercise focus on just one area or ability (simple balance task). Most types of exercise provide multiple benefits.
- Doing as much as you can is the best approach. Start with the area you are most comfortable and gradually build up to include all four main types of exercise.

**Participants may ask “How much should I do?”** You can provide these basic guidelines and refer participants the *physical activity guidelines handout*.

- **Endurance:** 150 minutes per week (e.g. 30 minutes on 5 days of the week)
- **Strengthening:** Add some strengthening exercises on at least 2 days per week
- **Stretching:** Stretch every day if you are able
- **Balance:** Do balance exercises at least 3 days per week to help lower fall risk

## **Bone Health and Fracture Risk**

### **What Can I Do to Improve My Bone Health?**

Most of us think about increasing calcium and vitamin D to promote bone strength. Others of us may think about taking medications such as Boniva, Actonel, and Fosomax. Still others will immediately think about hormone replacement therapies as optimal strategies to promoting bone health.

What we really should be asking is “**what constitutes good bone health?**” If we can answer that question, it is much easier to identify the best approach to keeping bones healthy. **One way to define good bone health is the absence of a bone fracture.** After all, each of the strategies described above are prescribed to reduce the risk of having a bone fracture. And guess what – having weak bones, or low bone mass, is not the biggest risk factor for fracture. The greatest risk factor for fracture is a fall.

## **Part II. Falls**

### **Did you know that over 95% of hip fractures and over 50% of vertebral fractures occur due to a fall?**

Falls are serious at any age, but especially for older people who are more likely to break a bone when they fall. This is because older adults are more likely to suffer from low bone mass, or to have a disease called osteoporosis. Osteoporosis is called the “silent disease” because bones become weak with no symptoms. You may not know that you have it until a strain, bump, or fall causes a bone to break.

Falls are especially dangerous for older people and people with osteoporosis. If you break a bone, you might need a long time to recover. Learning how to prevent falls can help you avoid broken bones and the problems they can cause.

Ask the group if anyone has ever broken a bone. Was a fall involved? Take a few minutes to ask the rest of the group if anyone has ever experienced a fall. If class members are willing to share what they remember about the circumstances of the fall, spend a few minutes talking together. This will be a great introduction to the next section.

This lesson takes the approach that the best way to protect your bones is to avoid a fall. We'll learn some simple strategies to avoid falls.

## Why Do People Fall?

Some of the reasons people fall are:

- Tripping or slipping due to loss of footing or traction
- Slow reflexes, which make it hard to keep your balance or move out of the way of a hazard
- Balance problems
- Reduced muscle strength
- Poor vision
- Illness
- Taking medicines
- Drinking alcohol

The good news about the fall risk factors in this list is that they can be changed. In other words there are things you can do to prevent trips and slips such as making sure surfaces in your home are clear and dry. You can improve coordination, balance, and strength with simple exercises. You can improve vision by getting regular eye exams and having prescription eyewear checked. There are steps you can take to manage medications and alcohol intake, and avoid falls when you are ill.

## How Can We Prevent Falling?

At any age, people can make changes to lower their risk of falling. The National Center for Injury Prevention and Control suggests doing the following four things to reduce fall risk:

### 1. Begin a regular exercise program

- We just talked about the importance of physical activity for health. Exercises that improve coordination and balance are the most helpful. We'll learn several balance and strength activities today to help you get started.

### 2. Make your home safer

- About half of all falls happen at home.

- Ask the group to take a few minutes to write down ideas they have for making their homes safer and reducing their risk of having a fall at home.
- Ask folks to share their ideas and write them on a flip chart or wipe board for all to see
- Add to the list until all the items below are included

**Here are some simple things you can do to make your home safer:**

- Keep rooms free of clutter, especially on floors
- Keep items you use often in cabinets you can reach easily without a step stool
- Wear low-heeled shoes with non-slip soles and good support
- Do not walk in socks, stockings, or slippers
- Be sure rugs have skid-proof backs or are tacked to the floor
- Be sure stairs are well lit and have rails on both sides
- Put grab bars on bathroom walls near tub, shower, and toilet
- Use a nonskid bath mat in the shower or tub
- Keep a flashlight next to your bed
- Add more lights in rooms
- Buy a cordless phone so that you don't have to rush to the phone when it rings, you don't have to worry about tripping on the cord, and so that you can call for help if you fall.

- Direct participants to the Home Safety Checklist.
- **Homework Assignment!** Instruct participants to use the checklist in their packet to help them find the places in their home that need a fall safety upgrade.

**3. Have your health care provider review your medicines**

Have your doctor or pharmacist take a look at ALL the medications you take. It is important to include medications that do not need a prescription like aspirin, Tylenol or cold medications. Some medications or combinations of medicines can make you light headed or dizzy which can lead to a fall.

Refer the group member to the new *Mastery of Aging Well* online learning modules.

- <http://outreach.oregonstate.edu/programs/agingwell/modules/>

One of the modules is a 30 minute seminar called **Medication Jeopardy**. This module outlines the risks of taking medications and helps you to determine whether you are at risk of an adverse event. This is also a good resource for leaders who may want to brush up on the topic before leading the lesson.

**4. Have your vision checked**

- Make sure to have annual eye exams and to have your eyeglasses checked regularly. You may be wearing the wrong glasses or have a condition such as cataracts or glaucoma that limits your vision.

**Information regarding about the four most important things you can do to avoid a fall were adapted from the Centers for Disease Control Website: <http://www.cdc.gov/ncipc/duip/spotlite/falltips.htm#1>**

### Part III. Physical Activity and Fracture Risk

Being physically active is very important to bone health. Weight bearing physical activity can slow bone loss in older adults and can reduce the risk of falls. Physical activity strengthens muscles, improves coordination and balance, and increases flexibility. Remember that weak muscles, poor balance and poor coordination all increase your fall risk.

How do you decide what type of activity is best to protect you against fracture? You should choose activities that suit your age and health conditions, activities that you find enjoyable, and activities that can be supported by your physical and social environments. If possible, engage in weight bearing activities that load the bones such as strength training or walking (if it is vigorous<sup>1</sup>). Exercises designed to strengthen muscles (and bone) and improve balance are particularly effective at reducing fracture risk<sup>2</sup>.

1. Not all walking is good for bones! To prevent bone loss, walk briskly and add hills when you can. Keep in mind that even slow walking is much better for bones than sitting. Walking may also help balance. To improve your balance practice walking on uneven surfaces, such as walking trails or grass.
2. Research shows that the stronger your muscles – the stronger your bones!

The good news is that there are several very simple exercises you can do in your home using household items that can improve strength and balance.

### Part IV. Practicing the Exercises

Allow 5-10 minutes to demonstrate the balance and strength exercises. Invite participants to try one or more balance and strength activity. It is important that participants come away from the lesson having practiced at least one balance and strength exercise so that they have the confidence to know that they CAN do these simple exercises on their own!

Included with the packet is a one-page handout with instructions about how to do 3 balance and 3 strength activities. It is recommended that leaders demonstrate at least 1 balance and 1 strength activity to their group. As comfort permits, leaders may choose to demonstrate all 6 exercises. Participants will receive the handout including all exercises.

### Part V. Assess Readiness and Develop an Action Plan

The last part includes a brief exercise readiness assessment and developing an action plan. This is a contract to commit to a specific behavior change. Ask participants to fill this out and use it as a guide to support any change they hope to make in their individual efforts to reduce fall risk.

**Administer the “Are You Ready to Exercise” questionnaire.**

### Developing an Action Plan

Instruct participants to commit to making a specific change in behavior that will help them to reduce their risk of falls by completing the 'Action Plan' (included in the participant handout). Encourage participants to document their intention to change a specific behavior by thinking about each question and the examples (provide examples or ask participants to provide examples) and then completing the phrase on their form.

**What** are you going to do?

For example, "I will modify my home...;" "I will participate in balance activities..."

**How much** of it will you do?

For example: "one room per week...;" "repeat every exercise once a day..."

**When** are you going to do it?

For example: "beginning this week and every week until...;" "every other day, every week for the next..."

Encourage participants to record their 'Action Plan' progress using the weekly chart provided in the participant handout. Regular progress should be re-evaluated after 4 weeks.

**Evaluation:** *Please take time to evaluate the program by reading the consent form and filling out the evaluation survey. Give participants 5 minutes or so to complete the evaluation. Collect the evaluations and return them to your local county Extension Office.*