



Nutrition and Bone Health

Lesson 5: Fall Prevention and Medication

Getting Ready

1. Review lesson plan before each session.
2. Practice activities.
3. Copy handouts and post-test questions:
 - a. Osteoporosis Fall Prevention and Medication
 - b. Osteoporosis Fall Prevention and Medication Post-test
 - c. Lesson on Exercise (must download separately as an individual lesson from NOAHnet Osteoporosis lesson plans)
4. Gather supplies needed for lesson and activities.
5. Gather example items to illustrate the suggestions to help prevent falls (e.g., pictures of rooms with furniture arranged safely and/or without clutter; non-skid mat/rug; non-skid shoes/slippers; pictures of bathrooms with grab bars; or bright light bulb – 75 to 100W, etc.).

Supplies Needed

1. Handouts.
2. Items to illustrate fall prevention strategies (see above).

Beginning the Lesson

1. Introduce yourself by name and the organization you represent.
2. Summarize the lesson by reading the objectives.
3. Let the group know the lesson will be informal and they can ask questions anytime.

Objectives – The participants will:

1. Identify at least two ways to help prevent falls.
2. Understand that certain medicines may cause them to fall.
3. Learn that certain medicines are bad for bones.
4. Learn that certain medicines can help improve their bone health.



Script

Introduction

Before we begin today's lesson let's review what we have learned to have healthy bones. We've discussed how important calcium and vitamin D are for building strong bones early in life and for slowing the rate of bone loss later in life. We have also learned more about the "silent disease," osteoporosis. Does anyone remember why it is called the "silent disease"? (*Because bone loss occurs without symptoms*). We have talked about how to choose and take calcium and vitamin D supplements if necessary. We can summarize all this with four things to remember to do to help protect our bones. Can any of you name these? They are:

1. Talk to your doctor. Have any of you talked to your doctor about your medications, family history of osteoporosis, having a bone mineral density test, exercise, smoking or alcohol?
2. Take calcium and vitamin D. Remember, you need enough calcium and vitamin D each day for healthy bones (1,200 mg calcium and 1000 IU vitamin D).
3. Take action. This reminds us to stay active. We can stay active by doing exercises such as walking, dancing, gardening and lifting weights. We'll practice some exercises today, too.
4. Take care. This means preventing falls, and avoiding tripping or slipping. We are going to talk about this today.

Fall prevention is especially important for men and women with osteoporosis. Falls can increase your risk of fracturing a bone like your hip, wrist or spine. About 9 out of 10 fractures in older adults are caused by falls. Your risk of falling is increased by poor vision, some medicines, balance problems, weak muscles, tripping or slipping, and arthritis.

What can you do to decrease your risk of falling?

I am going to give you a list of things you can do to help decrease your risk of falling. Try to choose at least two of these items to do in your own home.

1. Practice balance exercises daily. We have been doing these in the past lessons. We will practice them again today. Getting regular exercise will also help improve balance and muscle strength.
2. Have regular physical exams (including vision and hearing).
3. Arrange furniture so it does not get in your way.
4. Keep rooms free from clutter and do not place throw rugs on your floors.
5. Cover slippery floors with nonskid area rugs or carpet that is firmly anchored to the floor.
6. Keep kitchen utensils within easy reach.
7. Use a long-handled grasping device to reach far-away items.



8. Avoid walking in socks, stockings or slippers.
9. Provide enough lighting throughout your home.
10. Put grab bars in the shower area and next to toilets.
11. Put a shower seat and portable, hand-held shower in the bathtub.
12. Use a rubber bath mat in the tub and shower area.
13. Use a cane or walker for more stability.
14. Wear rubber-soled shoes.
15. Install sturdy handrails on staircases inside and outside.
16. Use the handrails when taking the stairs.
17. Put lights at the top and bottom of staircases.
18. Mark the first and last steps with bright colored tape.

(Adapted from Eating Well, Living Well with Osteoporosis and the National Osteoporosis Foundation)

Did you know the way you land when you fall might increase fracture risk? Did you know that catching yourself so that you land on your hands or grabbing onto an object as you fall can help prevent a hip fracture?

Medications

Let us talk about how medicine affects your risk of falls and your bone health. Some medicines can make you feel dizzy. Medicines that may increase the risk of falling include:

1. Blood pressure medicine
2. Heart medicine
3. Diuretics or water pills
4. Muscle relaxers, tranquilizers or strong pain medicines

Find out from your doctor and/or pharmacist whether any of the medicines you take can cause you to feel drowsy or lose balance. If this is the case, find out if there are any substitute medicines you can take. Also find out if you are taking the right amounts of your medicines.

Some types of medicines cause you to lose bone faster while other medicines can help slow bone loss.

Medicines that cause you to lose bone faster include a class of drugs called glucocorticoids, also called steroids (or corticosteroids; like prednisone, cortisone, dexamethasone, cortisol). These cause your body to lose calcium and lead to an increase in fracture risk with long-time use. Steroid medicines are used to treat conditions like arthritis, inflammatory bowel disease, asthma, allergies and other respiratory or inflammatory diseases.



Other types of medicines can be harmful to your bones when used in high doses and/or over a long period of time. These include antacids with aluminum, thyroid hormones, heparin (IV blood thinner), laxatives and some diuretics (water pills). Some of these medicines interfere with calcium absorption.

Find out from your doctor if any of the medicines you take can cause you to lose bone faster. Discuss with your doctor how you can help slow bone loss and perhaps decrease your medicine dose. *(Persons who follow all their doctor's directions for managing their disease can often stay well with lower doses of some medicines – desirable when taking medicine that may harm bones.)*

There are also medications that can slow bone loss. For these drugs to work properly, you must also consume adequate calcium and vitamin D from your diet or from supplements. Talk to your doctor to see if you might benefit from medicines such as these:

1. **Estrogen Replacement Therapy** or **Hormone Replacement Therapy** can help improve bone health by helping your body use calcium and reduce bone loss. Once estrogen replacement is started, it must be continued to prevent the return of bone loss. If estrogen or hormone therapy is stopped, bone loss will be similar to that seen in early menopause. Estrogen or hormone replacement therapy is not for everyone and anyone considering it should talk to her doctor about risks and benefits.
2. **Calcitonin** is a prescription drug usually available as a nasal spray (e.g., Miacalcin[®]). It can help prevent bone loss. For calcitonin to work, you must also take 1,000 mg of calcium per day and use the nasal spray exactly as directed.
3. **Fosamax[®]** and **Actonel[®]** are prescription drugs that help stop bone loss and can actually increase bone density. **Boniva[®]** is also in this category and is taken only once a month. Talk with your doctor about any of these medications if you are concerned about bone loss.

Let's Take Action by practicing balance exercises. *(Refer to the handout "Lesson on Exercise")*



References

Fall Prevention- Patient Information. National Osteoporosis Foundation. 2005. Available online at http://www.nof.org/patientinfo/fall_prevention.htm.

Medications to Prevent and Treat osteoporosis. National Osteoporosis Foundation. 2005. Available online at <http://www.nof.org/patientinfo/medications.htm>.

Preventing Falls & Related Fractures. National Institutes of Health Osteoporosis & Related Bone Diseases National Resource Center Osteoporosis Fact Sheets. 7 November 2005 <http://www.osteoporosis.org/inetdocs/r613pi.pdf> .

Preventing Falls Among Seniors. National Center for Injury Prevention and Control. The Centers for Disease Control and Prevention. 7 November 2005. <http://www.cdc.gov/ncipc/duip/spotlite/falls.htm>.

The Fall Prevention Project. Temple University. 7 November 2005 <http://www.temple.edu/older_adult>.

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The Food Stamp Program provides nutrition assistance to people with low income. It can help buy nutritious foods for a better diet. To find out more, contact your local food stamp office, food bank, or senior center.

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Nutrition and Bone Health Fall Prevention and Medication

What can increase your risk of falls?

- Poor vision
- Some medicines
- Balance problems
- Weak muscles
- Arthritis
- Tripping or slipping



Medications that may increase your risk of falling:

- Blood pressure medicines
- Heart medicines
- Diuretics (water pills)
- Muscle relaxers or tranquilizers
- Strong pain medicines

Medications that may improve your bone health:

- Hormone or estrogen replacement therapy
- Calcitonin (Miacalcin[®])
- Fosamax[®], Actonel[®], or Boniva[®]





Bone Health - Fall Prevention and Medication

My personal plan to decrease falls

Please pick at least one of the following actions listed below to help decrease your risk of falls.

- Practice balance exercises daily. Getting regular exercise will also help improve balance and muscle strength.
- Have regular physical exams (including vision and hearing).
- Arrange furniture so it does not get in your way.
- Keep rooms and floors free from clutter.
- Use non-skid rugs and anchor carpet firmly to the floor.
- Keep kitchen utensils within easy reach.
- Use a long-handled grasping device to reach far-a-way items.
- Avoid walking in socks, stockings or slippers.
- Provide enough lighting throughout your home.
- Put grab bars in the shower area and next to toilets.
- Put a shower seat and portable, hand-held shower in the bathtub.
- Use a rubber bath mat in the tub and shower areas.
- Use a cane or walker for more stability.
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Nutrition and Bone Health
Lesson 5: Fall Prevention and Medication Post-test

Date:	Name:
County:	Age:

Please circle your answers

1. I plan to talk to my doctor about medicines that might improve my bone health.

No Yes

2. I will make at least one change to reduce my risk of falling.

No Yes

3. I am eating more calcium-rich foods now.

No Yes

4. I learned something new from this lesson.

No Yes