ALBERTA
BONE & JOINT
HEALTH INSTITUTE

Posture and Balance Exercises

Starter Activity

- Please, complete the “Test Your Balance!” activity on the first page of your **Workshop Guide**

- What is your current exercise routine to improve your balance?
  - record your routine in your **Workshop Guide**

Agenda

1. Exercise Guidelines
2. Posture Exercises
3. Static Balance Exercises
4. Dynamic Balance Exercises
5. SMART Goal Setting

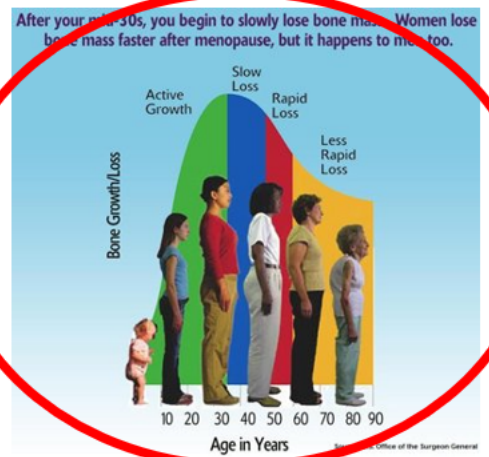
Learning Objectives

I will be able to…

- Assess my personal activity level in relation to the Canadian Exercise guidelines/Canadian Physical Activities Guidelines, and the Osteoporosis Canada guidelines
- Describe what good posture looks like
- Identify cues that help me maintain or improve my posture
- Demonstrate the ability to safely perform a daily routine of balance training exercises
- Create an activity plan by setting SMART goals for a personal exercise routine

How to navigate the slides

Bone Growth Cycle



- bones are living tissue and are constantly changing
- This process is called "modelling"

I will be able to briefly describe the bone growth cycle

6

slide title

slide image

key information

learning objective

Workshop Guide

As we progress through this workshop, please ensure to complete the appropriate sections of the **Workshop Guide** provided for you.

This will be your quick reference following this workshop to aid you on your bone health journey.

ALBERTA BONE & JOINT HEALTH INSTITUTE

Exercise Guidelines

Canadian Physical Activity Guidelines

To achieve **health benefits**, adults aged 18-64 should:

- accumulate at least 150 minutes of moderate-to-vigorous intensity aerobic physical activity per week, in bouts of 10 minutes or more
- perform muscle and bone strengthening activities using major muscle groups, at least 2 days per week

65 years and older:

- as above + physical activities to enhance balance and prevent falls

I will be able to assess my personal activity level in relation to both the Canadian Physical Activity Guidelines and the Osteoporosis Canada recommendations for bone health.

Exercise for Bone Health

Osteoporosis Canada recommends:

- at least 150 minutes of moderate-to-vigorous intensity aerobic physical activity per week, in bouts of 10 minutes or more - **weight-bearing** is better
- muscle and bone strengthening activities using major muscle groups, at least 2 days per week
- physical activities to enhance balance and prevent falls daily
- practice spine sparing strategies and good posture daily

I will be able to assess my personal activity level in relation to both the Canadian Physical Activity Guidelines and the Osteoporosis Canada recommendations for bone health.

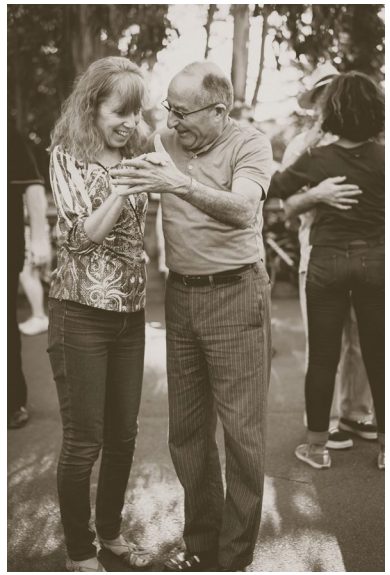
What is Balance Training?

Movements that challenge your ability to react when you become unstable.



Tai Chi

Dancing



Heel to toe stance



Stand on one foot



I will be able to demonstrate the ability to safely perform a daily routine of balance training exercises.

Why Should I Do Balance Exercises?

Balance training will

- help prevent falls
- help you keep your balance while you do your day to day activities
- improve your stability when you step or reach
- allow you to practice reactions when your balance becomes upset

I will be able to demonstrate the ability to safely perform a daily routine of balance training exercises.

Activities that Require Good Balance

Reaching



Stepping



Uneven Ground



General Rules for Balance Training

- Always have a support nearby to help you
  - sturdy chair
  - countertop or table
  - wall
- Balance exercises should be challenging enough that you need to focus on your balance
  - You may need to start by holding on for support
  - Over time reduce how much you hold on
- Be careful not to fall
- Perform daily

I will be able to demonstrate the ability to safely perform a daily routine of balance training exercises.

Before You Start Exercising

For almost everyone the benefits of exercise far outweigh the risks!

- complete a Get Active Questionnaire before you start a new exercise program and...
- if you have any questions or concerns check with your doctor, a physiotherapist, a qualified exercise professional (Canadian Society for Exercise Physiology) or a BoneFit™ trained professional

Osteoporosis and Falls

If you have had a fall, a near fall or are afraid of falling:

- speak with a physiotherapist, a qualified exercise professional (Canadian Society for Exercise Physiology) or a BoneFit™ trained professional
- a tailored or supervised program is recommended

When Exercising

Remember to...

- wear comfortable, supportive footwear
- be aware that muscle soreness after exercise is normal
- use a firm, stable chair for support
- learn to perform the exercise with proper technique
- control the speed of your movement

I will be able to demonstrate the ability to safely perform a daily routine of balance training exercises.

ALBERTA BONE & JOINT HEALTH INSTITUTE

Posture Exercises

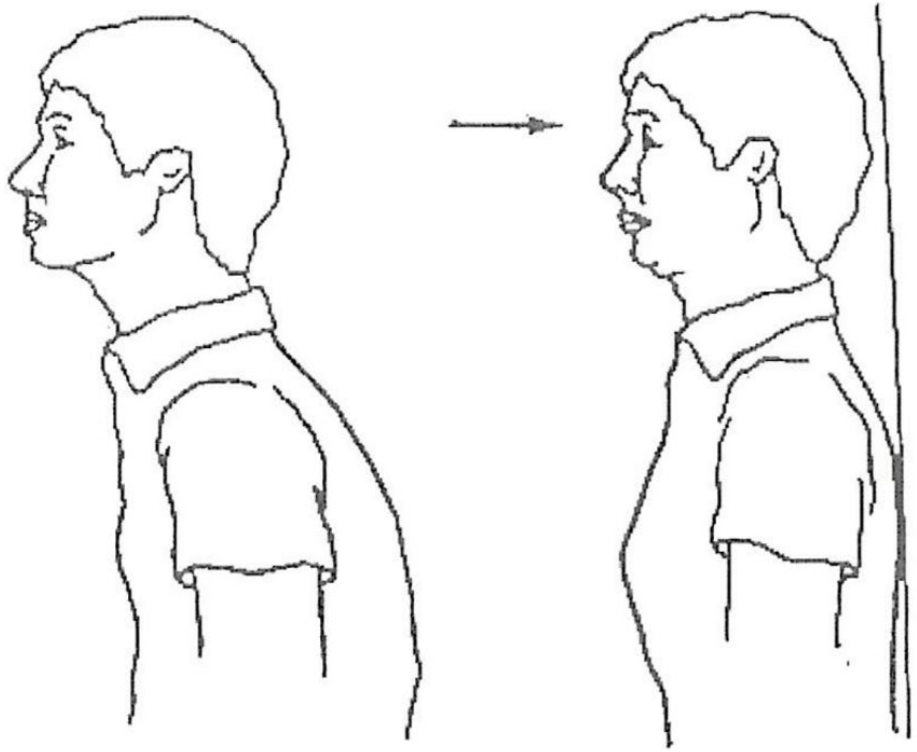
What does good posture look like?



- from the side - ear, shoulder, hip and foot are in alignment
- how?
  - imagine that you are 2 inches taller
  - imagine your collar bones are wings - spread your wings
  - find the top of your pelvis and your lower ribs - lengthen the space between them

I will be able to describe what good posture looks like.

Chin Tuck

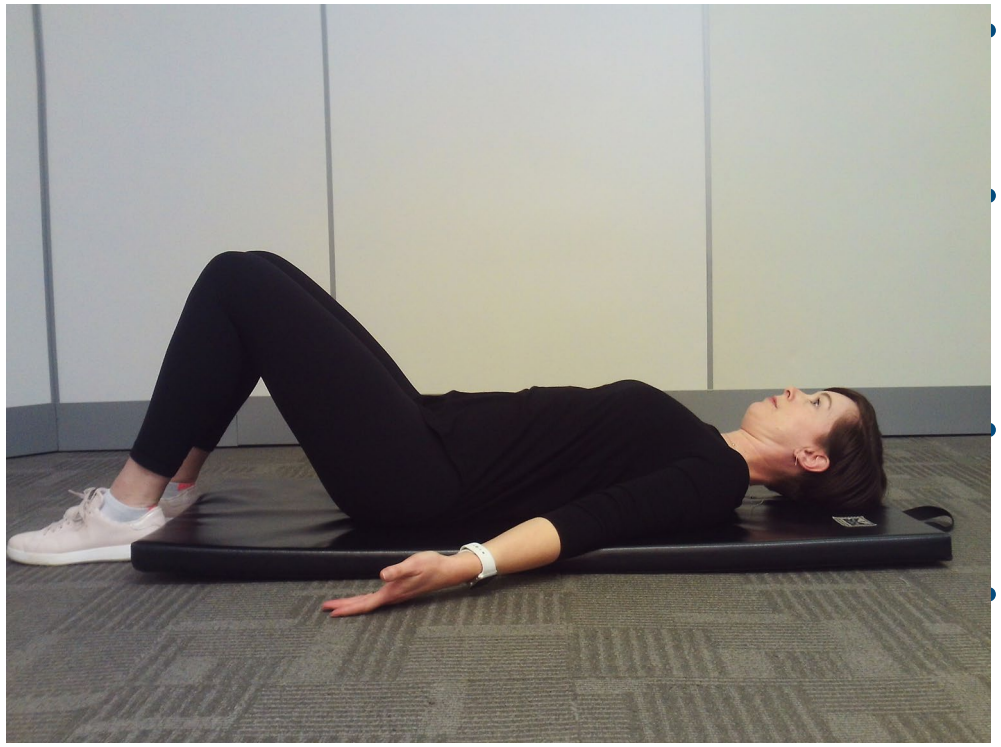


3 reps, hold for 5 seconds, daily

- This exercise can be done standing with your back against a wall or sitting using a head rest
- Tuck your chin slightly toward your chest
- Feel the back of your neck lengthening
- Keep your jaw and eyes level
- Hold for 5 seconds and then relax

I will be able to identify cues that help me maintain or improve my posture.

Improving Your Posture - unloading



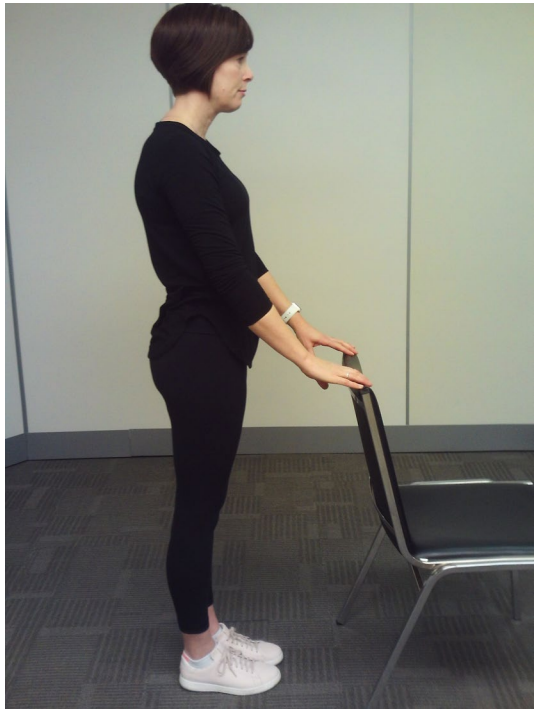
- lie on the floor without a pillow or towel under your head if you can comfortably
- if you need to tip your head back for it to reach the floor then place a folded towel or small pillow under your head
- lie with your arms, palms up, away from your body
- imagine your collar bones are wings - spread your wings without pulling your shoulders back
- 5-10 minutes/day

I will be able to identify cues that help me maintain or improve my posture.

ALBERTA BONE & JOINT HEALTH INSTITUTE

Static Balance Exercises

Balance Training - Static Stance



- stand upright, holding a chair for support if needed
- adjust so that 50% of your weight is on each foot
- then try:
  - shifting your weight between your heels and toes
  - shifting your weight from side to side
  - close your eyes
  - challenge your brain by counting backwards from 100 by 7s

I will be able to demonstrate the ability to safely perform a daily routine of balance training exercises.

Static Stance Progressions

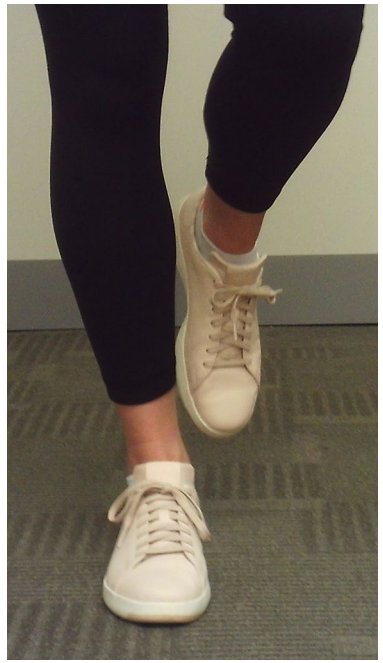
A



B



C



- stand upright, holding a chair for support if needed
  A. semi-tandem - toes of one foot beside the heel of the other foot
  B. tandem - toes of one foot directly behind the heel of the other foot
  C. single-leg

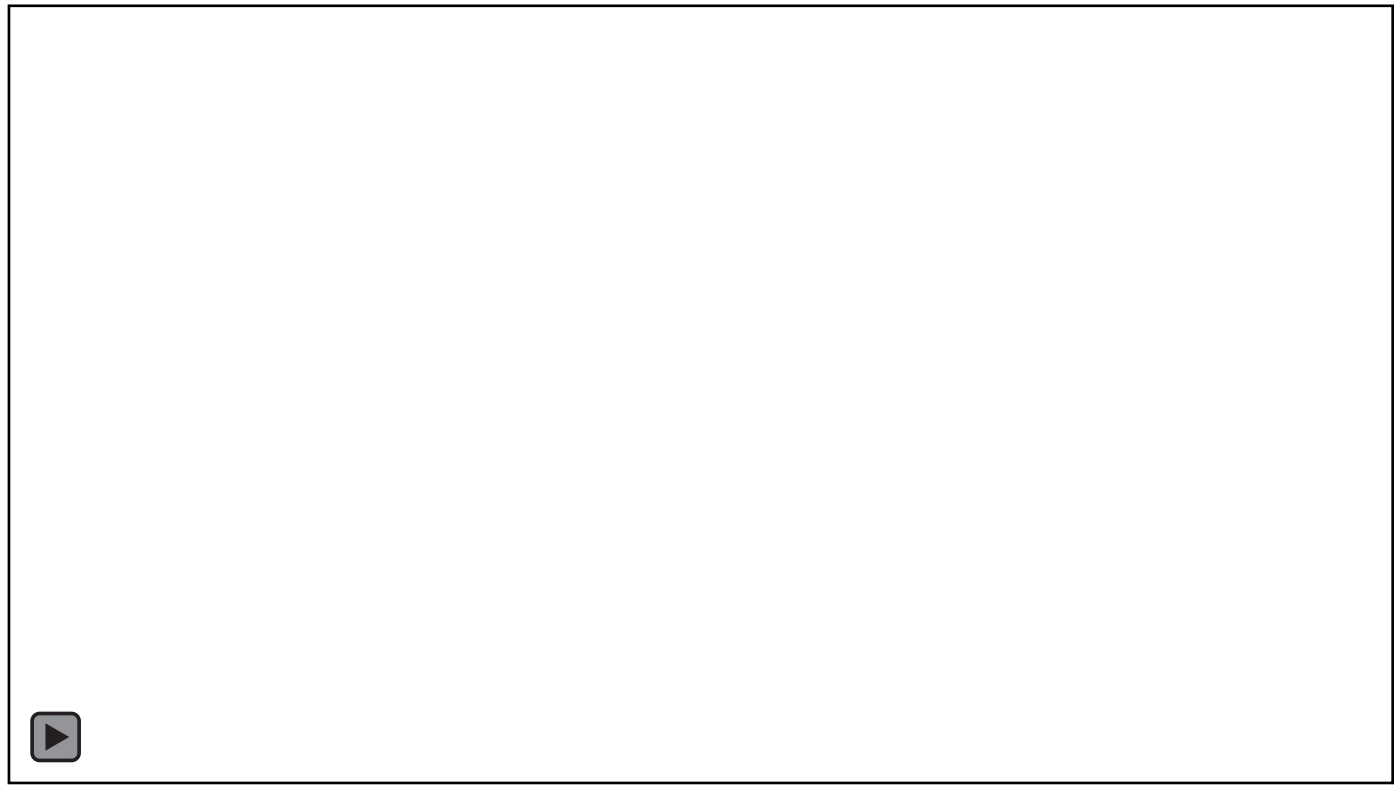
I will be able to demonstrate the ability to safely perform a daily routine of balance training exercises.

ALBERTA BONE & JOINT HEALTH INSTITUTE

Dynamic Balance Exercises

Dynamic Balance Exercises

- walk on toes
- walk on heels
- walk heel-to-toe
- figure 8s
- walk backwards
- 3-dimensional movement - dancing, Tai Chi



I will be able to demonstrate the ability to safely perform a daily routine of balance training exercises.

Progressions for Balance Training

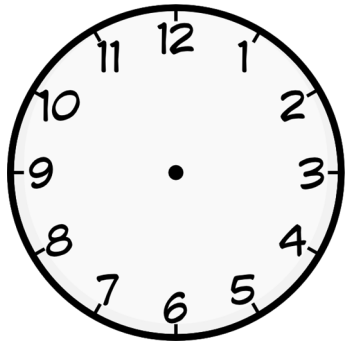
There is no end to how you can challenge your balance. Here are some ideas:

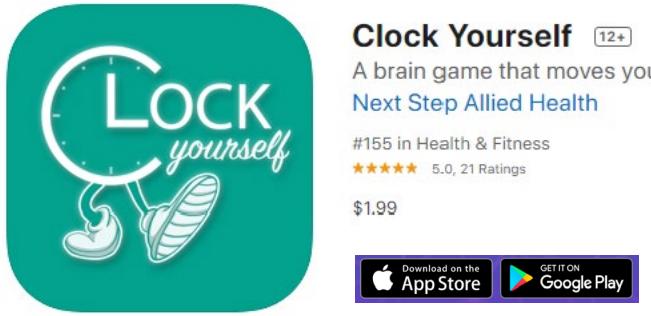
- move from more support to less support - holding a chair to not a holding chair
- from a wide base of support to a narrow base - 2 feet to 1 foot
- from a stable to an unstable surface - floor to foam/mat/pillow
- reduce feedback - close eyes
- multi-task - hold/carry a glass of water
- challenge your brain - count backwards by 7s from 100

I will be able to demonstrate the ability to safely perform a daily routine of balance training exercises.

Reaction Time Training

Train yourself to think more quickly on your feet and react quickly





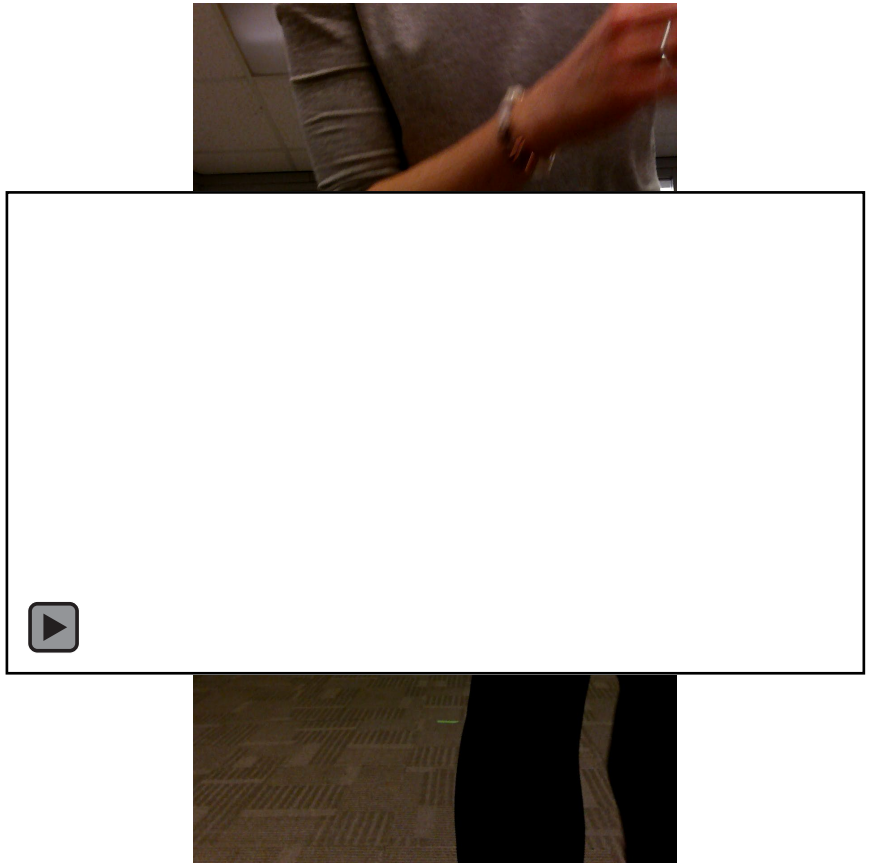
Clock Stepping Exercise

- Imagine a clock on the floor and you are standing in the middle of it
- Take a step in the direction of each number of the clock.
- you can move:
  - clockwise
  - counterclockwise
  - mix up the numbers

I will be able to demonstrate the ability to safely perform a daily routine of balance training exercises.

Reaction Time Training

Train yourself to think more quickly on your feet and react quickly



Clock Stepping Exercise

- Imagine a clock on the floor and you are standing in the middle of it
- Take a step in the direction of each number of the clock.
- you can move:
  - clockwise
  - counterclockwise
  - mix up the numbers

ALBERTA BONE & JOINT HEALTH INSTITUTE

SMART Goal Setting

Planning and Goal Setting

In your **Exercise and You - Workshop Guide**, consider the following:

This week…

- decide how you want to continue with safe movement and bone health exercise
- identify how you will take action to benefit from the information you have learned
- identify goals that will help you stay motivated

I will be able to create an activity plan by setting SMART goals for a personal exercise routine.

How do I set goals?

Setting **SMART** goals helps you make clear, successful changes

Specific	How will I do it? What, how much, when, how often?
Measurable	How will I measure it? What will it look like to achieve my goal?
Achievable	Can I do it? Can I keep doing it? Start small and build momentum.
Realistic	Is it within reach? Does my goal fit into your everyday life?
Time-oriented	When will I meet my goal?

I will be able to create an activity plan by setting SMART goals for a personal exercise routine.

Hints to Stay Motivated

- schedule exercise into your week
- use the words “I will”, not “ I will try…”
- choose a goal that is meaningful to you
- big goals need to be broken down into smaller steps
  - but always keep your big goals in mind
- reach out for support - recruit a “cheer team”

I will be able to create an activity plan by setting SMART goals for a personal exercise routine.

Cool-down Activity

- Review your current exercise routine for improving balance from the Starter Activity. In your **Workshop Guide**, consider
  - what changes do you need to make to your daily routine?
  - how can you make these changes?
  - which areas should you focus on first?

- Create a SMART goal for improving your exercise routine that you can work towards over the next week

I will be able to create an activity plan by setting SMART goals for a personal exercise routine.

Additional Resources

Osteoporosis Canada

- osteoporosis.ca

Dr. David Hanley Osteoporosis Centre

- osteoporosiscalgary.com

National Osteoporosis Foundation

- nof.org

Bibliography

Mielke, H. (2015). *Bone Strong Dynamic Balance Exercises*. Primary Care Network, Lloydminster.

Mielke, H. (2015). *Bone Strong Static Balance Exercises*. Primary Care Network, Lloydminster.

Alberta Health Services. (2013). *Osteoporosis/Bone Health Education Program*. (pp. 51).