



# Healthy Aging and Mobility

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# Goal and objectives

## Goal:

- To discuss general principles of mobility, its loss and retaining during aging process.

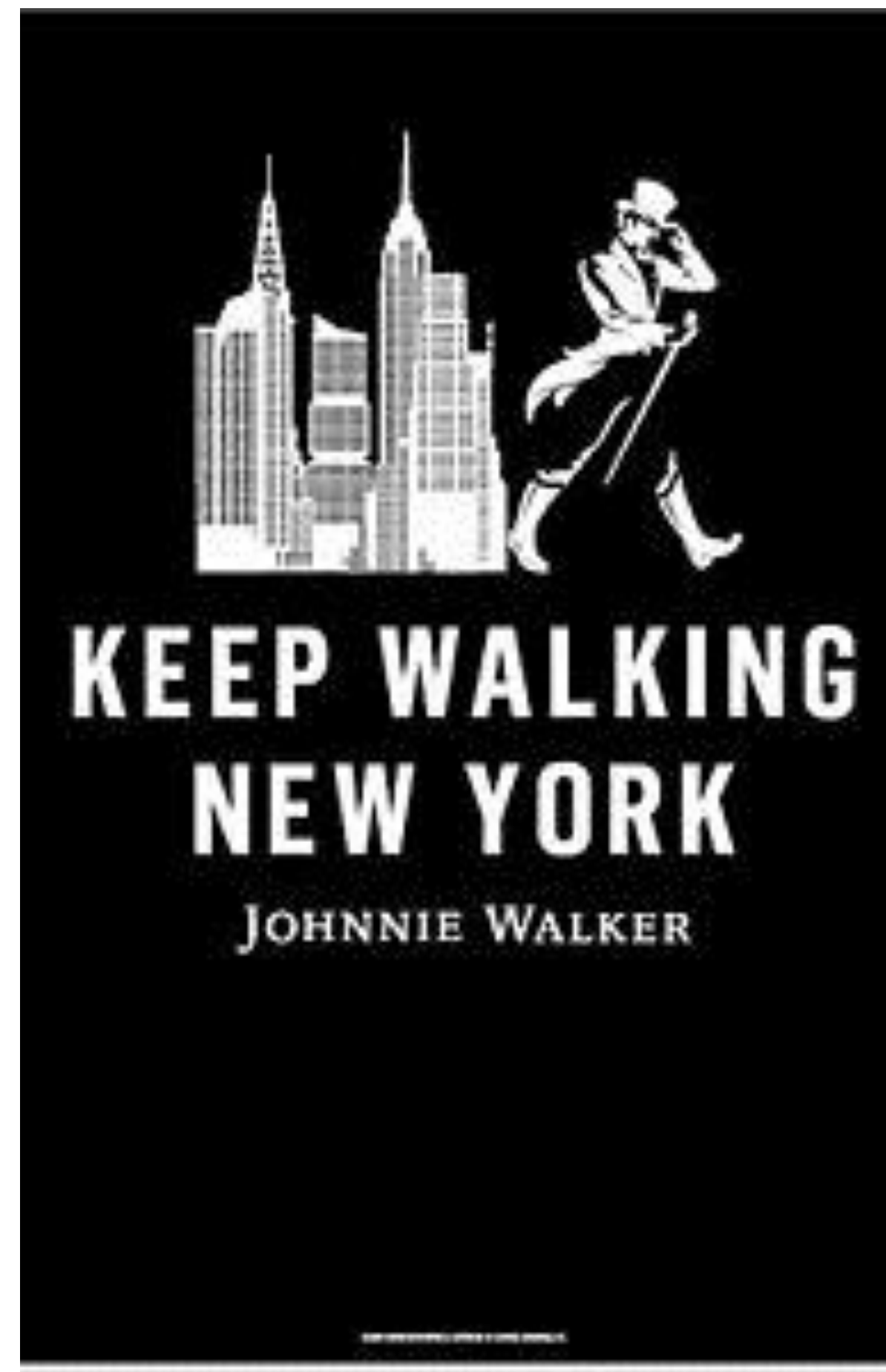
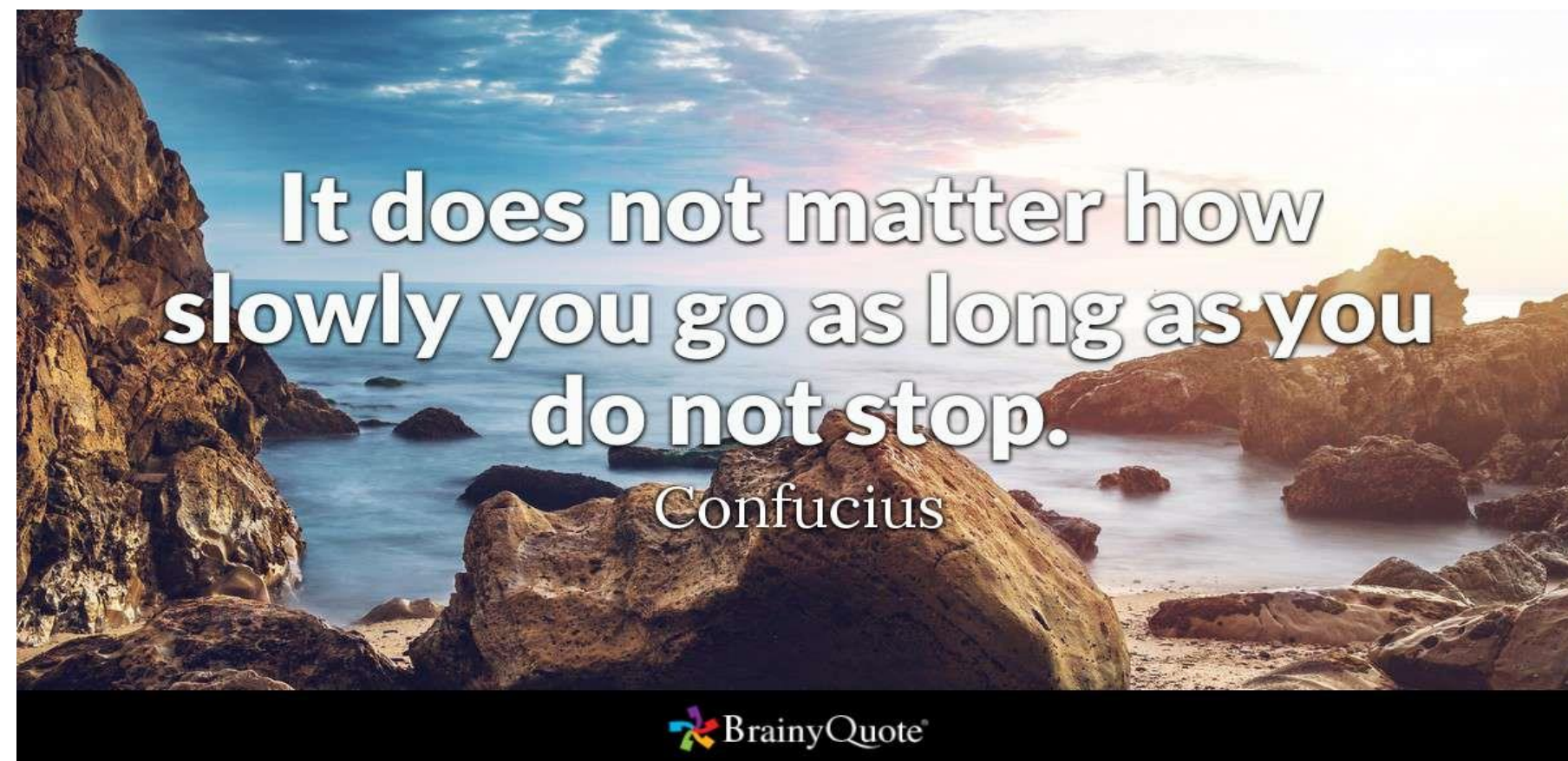
## Objectives:

- Review general principles of mobility during aging process
- Discuss general safety and falls precautions



# Mobility...

.....the ability to move or be moved freely and easily.





# Why does mobility in the elderly matter?

- Mobility has been shown to be a key determinant of health and quality of life among the elderly.
- Mobility in everyday living is an important element of the broader concept of health-related quality of life.
- Most measures of generic health-related quality of life (HRQOL) include questions about mobility.
- HRQOL of older adults is usually described in association with specific diseases, but several studies assessed the role of mobility in the elderly.
- All the studies found a positive impact of increased mobility on quality of life, whether mobility was measured as distance one was able to walk in a certain time or ability to walk a pre-set distance.
- Impaired mobility has been shown to predict subsequent broader disability involving independent daily living activities.

# Why does mobility in the elderly matter?

- Nearly 40 percent of people age 65 and older had at least one disability, according to a U.S. Census Bureau report that covered the period 2008 to 2012.
- Of those 15.7 million people, two-thirds of them say they had difficulty in walking or climbing stairs.
- Difficulty with independent living, such as visiting a doctor's office or shopping, was the second-most cited disability.

# The dangers of lost mobility

- With loss of mobility comes loss of independence, loss of social contacts and social isolation often leading to depression.
- Loss of mobility also leads to falls when walking is attempted and that further decreases mobility- creating a vicious cycle.
- Falls by the elderly come with a risk of fracture, mainly hip fracture, which has 20% risk of death from complications.
- More profound loss of mobility leads to incontinence, infections - urinary and skin - and constipation.
- Impaired mobility negatively affects cognition and mental flexibility, coping ability and resilience.

# How do I know my mobility is changing?

- Sometimes it is difficult to distinguish changes in mobility from “normal slowing down as one ages”.
- We might not be as sensitive to changes and others might not think changes are significant enough.
- Primary care doctors often do not assess mobility in elderly frequently enough and once the falls become more frequent, it might be too late.
- Don't despair.. There are testing options for you and your physician..

# Useful tests to assess mobility

## Get Up and Go test

- Person has to stand up from sitting in a chair, walk 10 feet, turn around, walk back to the chair, and sit down.

## Timed walk (certain distance).

- Person is asked to walk certain distance as fast as he/she can without running.
- Time is measured and walking steadiness is observed.



# Assess your mobility yourself

Ask yourself these two simple questions:

- For health or physical reasons, do I have difficulty climbing up 10 steps or walking one-quarter of a mile?
- Because of underlying health or physical reasons, have I changed the way I climb 10 steps or walk a quarter of a mile?

It's easy to do this in New York, where the subway has plenty of stairs and 5 blocks equal  $\frac{1}{4}$  of a mile if you are walking in the north-south direction.

Changes in walking endurance or ability to climb stairs or inability to do so from the beginning might indicate that one is on the road to loss of mobility and one should see a doctor, usually a PCP.

# Why do we lose mobility?

- There is now ample evidence that mobility is related to overall cardiovascular health and pre-existing physical fitness.
- Traditionally, we know that any additional chronic diseases, such as pulmonary disease (COPD), cardiac disease (CAD), joint disease (osteoarthritis) and metabolic disease (diabetes, obesity) will lead to decreased or lost mobility.
- There are other factors in the elderly that can equally effect mobility in a negative way.
- A research study looked at complex social, medical and psychological risk factors that can lead to or predict loss of mobility in people >65 years old.
- Results showed that gender was not associated with loss of mobility, but age was with changes seen in people over 70 years of age.
- While the objective presence of chronic diseases was not associated with loss of mobility, self-rated and self-reported health issues as well as major catastrophic life events and low functional reserve were predictive of loss of mobility.



# What can one do to retain mobility?

- Prevention is the key.. Bank for your future..
- **Balance is Key** – Mobility relies heavily upon balance. You can improve balance through simple exercises such as back leg raises or walking heel to toe. Balance ball is also fun.
- **Remain Active** – Regular exercise can help the body build strength and remain limber. Additionally, try making a concerted effort to (safely) complete menial tasks around the house before you seek assistance.
- **Eat a Healthy Diet** – As you age, energy levels can decrease. A healthy diet can provide the boost necessary to remain active throughout the day without accumulating unnecessary calories.
- **Maintain your Vision** – Good vision is crucial to mobility. Ensure your glasses or contacts remain up-to-date and incorporate foods in your diet that improve vision such as carrots or salmon.

# What can one do to retain mobility?

- **Utilize Walking Aids** – Using a walker or cane can play a key role in overcoming the impact of decreased mobility and ultimately reduces the risk of falls.
- **Shoes Make the Man (and Woman)** – The importance of investing in comfortable shoes that fit properly cannot be overstated. Cheap shoes with worn-out tread can impede mobility and become a hazard for the elderly.
- **Prevent Falls** – A strong focus should be placed on fall prevention as taking an unexpected tumble can often create complications in the elderly. Each of the suggestions listed above also serve to decrease your risk of falling.
- **Age is Just a Number** – Getting older does not automatically render you incapable of living your life as you desire. Do not allow your age to impact your mind and discourage you from remaining active and healthy.
- **Understand your Limits** – Although the importance of challenging yourself was previously stressed, it is equally imperative to recognize your boundaries. Do not be afraid to ask for assistance if you encounter a task you cannot handle.



# Physical Fitness, Activity, and Exercise

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Physical activity is any bodily movement that is produced by the contraction of skeletal muscles and that substantially increases energy expenditure.

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Exercise is planned, structured, and repetitive bodily movement done to improve or maintain one or more components of physical fitness, such as endurance, flexibility, or strength.

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Physical fitness is the ability to perform regular moderate to vigorous levels of physical activity without excessive fatigue.

# What is Physical Activity?



**Anything that gets  
you moving!**



# Aerobic Fitness

**Definition:** The body's ability to take in and use oxygen to produce energy. Aerobic activities make you breathe hard & they increase your heart rate.

Some of these activities include:

- Jogging
- Walking
- Cross-country skiing
- Bicycling



# Benefits of Physical Activity

- Helps people achieve and maintain a healthy weight
- Reduces feelings of stress, anxiety & depression
- Builds and maintains healthy bones, muscles & joints
- Boosts energy level
- Improves quality of sleep

## **Physical Activity Reduces the risk of**

- Dying from heart disease or stroke
- Developing high blood pressure, cholesterol & diabetes
- Developing obesity
- Developing osteoporosis – exercise builds strong bones & muscles





## NMSS Slide: Free from Falls

### Safety and Exercise: How do falls happen?

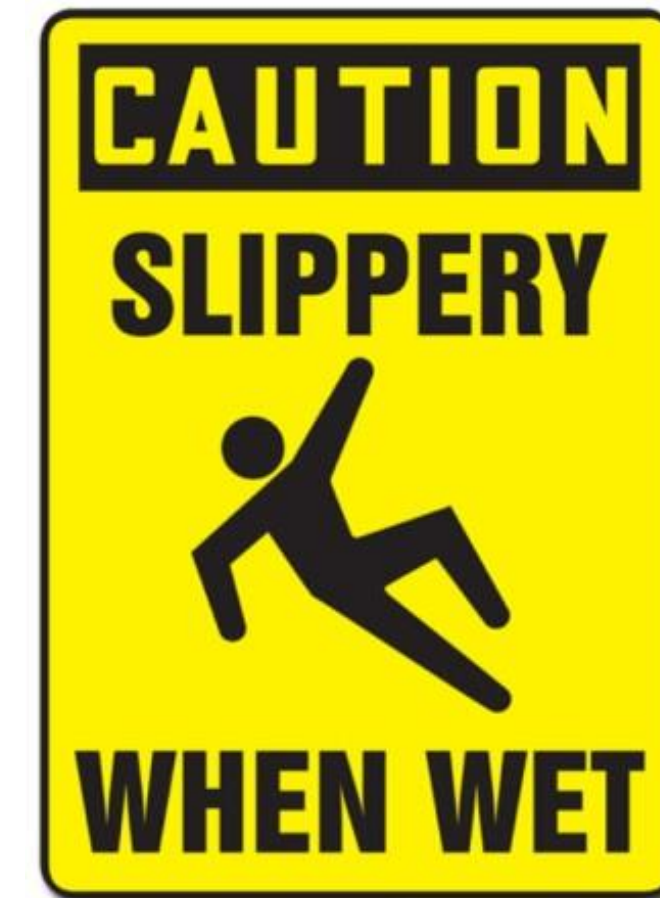
- 60% of falls happen on the same level resulting from slips and trips
- **Slips** → too little friction or traction between the footwear and walking surface
- **Trips** → when foot collides with an object causing you to lose balance and fall

# Common Causes of Slips

- Wet or slippery surfaces

## *Tips to prevent slips when wet:*

- Wear low-heeled shoes with rubber soles
- Take slower, smaller steps when slick
- Keep your feet underneath your body
- Use your feet as probes to detect possible hazards
- Be extra careful after stormy weather



# Common Causes of Slips

- Wet or slippery surfaces
- Ice & snow

### *Tips to prevent slips when icy:*

- Dress warmly; wear boots with non-skid soles
- Don't let your scarf or hat block your vision
- A heavy backpack can throw you off balance
- Move slowly and take smaller steps
- Use special care when entering and exiting vehicles and buildings



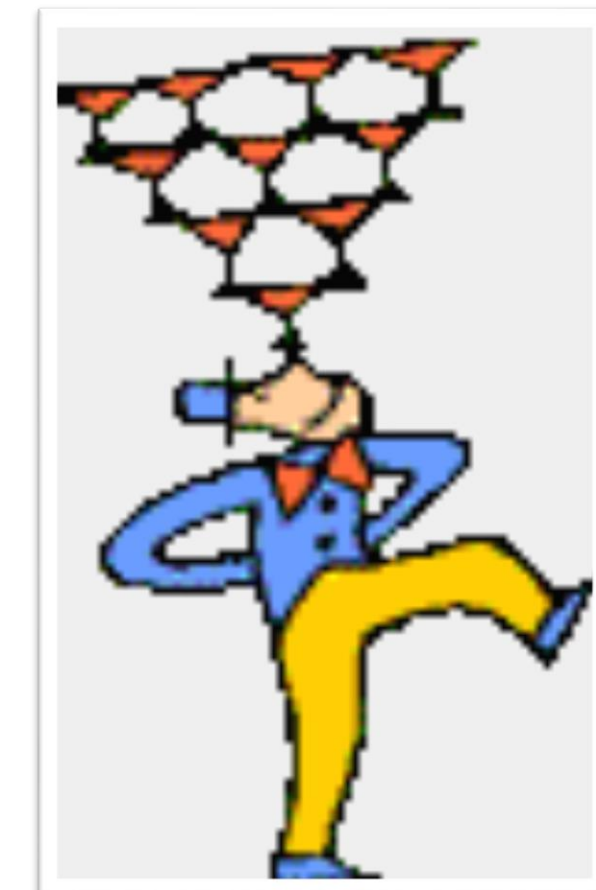
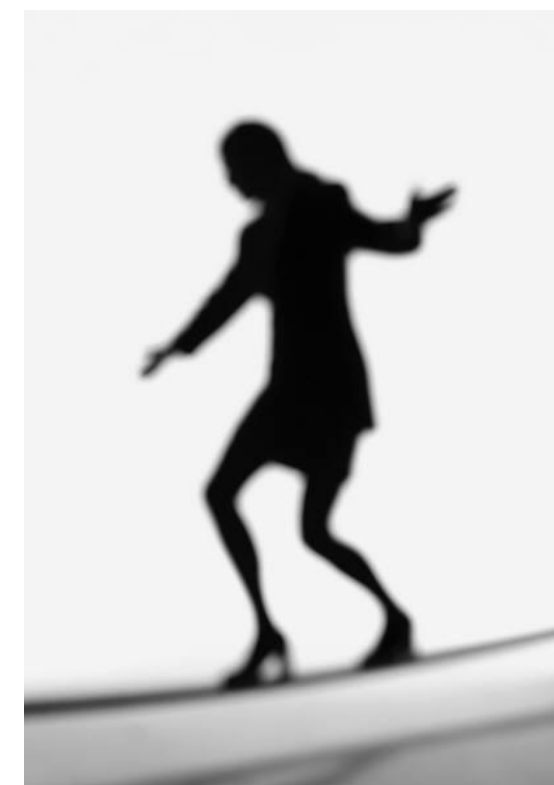
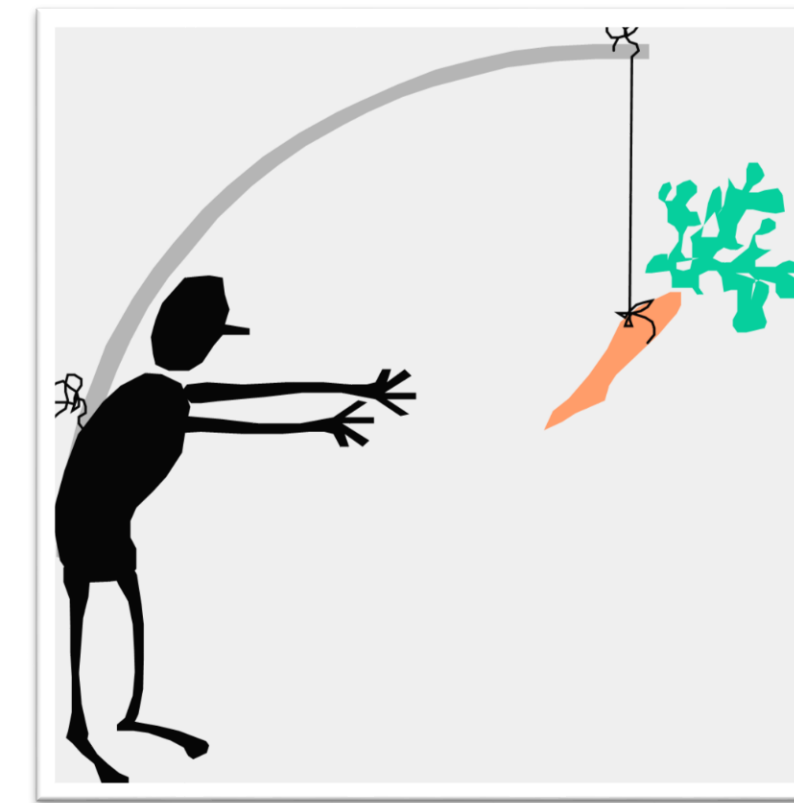


# EXERCISE and REDUCING FALLS: Reviewing Your Activity Diary

- Identify your energy levels throughout the day
  - Identify trends when you experience drops in energy and endurance
  - Think back to times when you might have fallen. Are these times when you may have been fatigued?
- Consider how you might modify and reorganize your day to be more efficient and safe
  - Time active: Time rest: Time active
  - Objective way to develop energy development program

# Standing Exercises Improve Balance and Functional Movement Patterns

- Ability to control of movements is one of the foundations to success in ambulatory activities
- Standing, transfers, ADLs
- **Goal #1= STAY OFF THE GROUND**
- **Goal #2: Efficiency in movement**
  - Change in direction
  - Weight shifting
  - Limit momentum



# EXERCISE and REDUCING FALLS: Options for Mobility Equipment





## **EXERCISE and REDUCING FALLS: What device is right for you?**

- There are many devices that can optimize mobility and improve safety
- Seek advice from a physical therapist about the right equipment for you
- Using equipment incorrectly or using equipment that has not been sized and adjusted for you can be dangerous
- Getting the 'right' device is also important because many insurance companies have restrictions about coverage of mobility devices

# Recovering From a Fall

- **Reflect and Review:**  
**What would you do to prevent future falls?**
- Address orthopedic injuries
  - Allow time for rest and rehabilitation when possible
- Rebuild neuromuscular system
  - Balance training, Functional strengthening, Endurance training
- Rebuild confidence

# Staying Safe at Home

- Recognize unnecessary risks and eliminate
- Consider modifications for safety
  - Low cost/Low tech (e.g. grab bars)
- **Long term planning**
  - **Start today. Create your “Wishlist” for your home to be accessible.**
- Conquer clutter
  - Communicate concerns with family
  - Solicit assistance for monthly clean ups
- Stay proactive! Falls at home are preventable.



# Traveling safely in your community

- Irregular surfaces can challenge your footing
- Adjust your stride and pace to the surface and task
- Beware if taking “short cuts”
- Hold handrails when going up and down stairways.



# Creating Your Own Fitness Program

- Design a plan to improve or maintain cardiovascular fitness, flexibility, muscular strength, endurance, and body composition
- Identify your fitness goals
- Choose activities that you like
- Make it comprehensive, including warm up, stretching, strength development, aerobic activity, and cool down



# Write Your Personal Fitness Goal

•My goal is to \_\_\_\_\_  
(Write one favorite activity here) for at  
least \_\_\_\_\_ minutes  
\_\_\_\_\_(minutes / day)  
\_\_\_\_\_ times each week  
(Number of times)





# Final Tips For Being More Active

- Park the car farther away from your destination.
- Take the stairs instead of the elevator.
- Play with children or pets. Everybody wins.
- Take fitness breaks
- Perform gardening or home repair activities.
- Exercise while watching TV
- Keep a pair of comfortable walking or running shoes in your car and office.



# **Exercise Safely and Wisely**

- Drink extra water**
- Always warm-up & cool-down before and after your workout**
- Wear comfortable clothing**
- Pay attention to any discomfort you may feel during exercise**
- Follow your doctor's recommendations concerning medications you may be taking**

# Managing Fall Risk

- Complete elimination of falls is unrealistic... ....but many falls and injuries can be prevented by:
  - Increasing awareness of risks and hazards
  - Removing environmental hazards when possible
  - Practicing strategies to reduce risk
  - Maintaining a balance of 'healthy' fear and confidence
  - Maximizing fitness, balance and mobility
  - Using assistive devices when needed
  - Knowing what to do if you fall