

Fear of Falling: A Matter of Balance Fall Prevention Program

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Learning Objectives:

- By the end of this presentation the learner will be able to:
 - Recognize the core elements of the Matter of Balance Program to address Fear of Falling
 - Discuss the outcomes related to the research on this program
 - Access further resources for continued learning



Fear of Falling:

- Definition:

- *“A lasting concern about falling that can lead to an individual avoiding activities that he/she remains capable of performing.”*

- (Fear of Falling Training, 2002)

- May or may not be accompanied by falls

- Considered more broadly than having a phobia

- Concerns about falling may be an appropriate reaction to a realistic threat

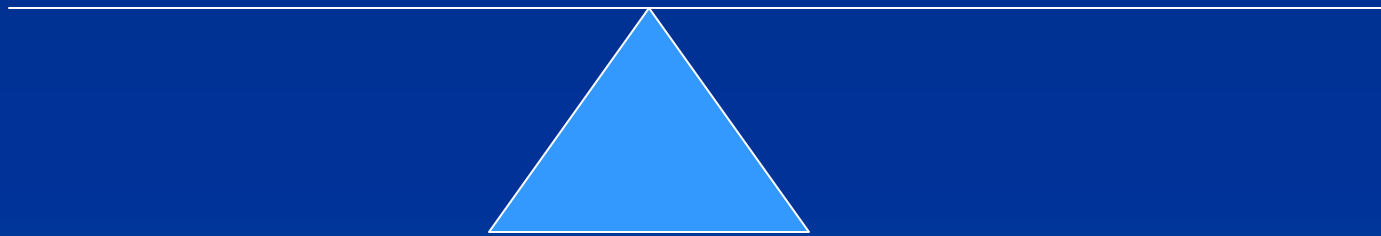


When Is It Not a Problem?

- Person is performing activities that are appropriate for level of abilities

Personal Abilities

Activity Performance

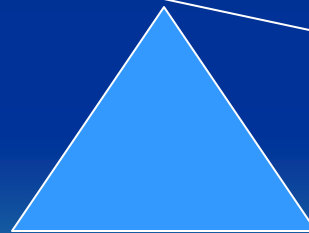


When Is It a Problem?

- When the person has excessive fear or is restricting activities that he/she should otherwise be able to perform

Personal Abilities

Activity Performance



Falls Among Older Adults:

- **How big is the problem?**
 - More than one third of adults 65 and older fall each year in the United States (Hornbrook et al. 1994; Hausdorff et al. 2001).
 - Among older adults, falls are the leading cause of injury deaths. They are also the most common cause of nonfatal injuries and hospital admissions for trauma (CDC 2005).
 - In 2005, 15,800 people 65 and older died from injuries related to unintentional falls; about 1.8 million people 65 and older were treated in emergency departments for nonfatal injuries from falls, and more than 433,000 of these patients were hospitalized (CDC 2005).
 - The rates of fall-related deaths among older adults rose significantly over the past decade (Stevens 2006).



Falls Among Older Adults:

- **What outcomes are linked to falls?**
 - Twenty percent to 30% of people who fall suffer moderate to severe injuries such as bruises, hip fractures, or head traumas. These injuries can make it hard to get around and limit independent living. They also can increase the risk of early death (Alexander et al. 1992; Sterling et al. 2001).
 - Falls are the most common cause of traumatic brain injuries, or TBI (Jager et al. 2000). In 2000, TBI accounted for 46% of fatal falls among older adults (Stevens et al. 2006).
 - Most fractures among older adults are caused by falls (Bell et al. 2000).
 - The most common fractures are of the spine, hip, forearm, leg, ankle, pelvis, upper arm, and hand (Scott 1990).
 - Many people who fall, even those who are not injured, develop a fear of falling. This fear may cause them to limit their activities, leading to reduced mobility and physical fitness, and increasing their actual risk of falling (Vellas et al. 1997).
 - In 2000, direct medical costs totaled \$0.2 billion (\$179 million) for fatal falls and \$19 billion for nonfatal fall injuries (Stevens et al. 2006).

Falls Among Older Adults:

Who is at risk?

- Men are more likely to die from a fall. After adjusting for age, the fall fatality rate in 2004 was 49% higher for men than for women (CDC 2005).
- Women are 67% more likely than men to have a nonfatal fall injury (CDC 2005).
- Rates of fall-related fractures among older adults are more than twice as high for women as for men (Stevens et al. 2005).
- In 2003, about 72% of older adults admitted to the hospital for hip fractures were women (CDC 2005).
- The risk of being seriously injured in a fall increases with age. In 2001, the rates of fall injuries for adults 85 and older were four to five times that of adults 65 to 74 (Stevens et al. 2005)
- Nearly 85% of deaths from falls in 2004 were among people 75 and older (CDC 2005).

Falls Among Older Adults:

- Nearly 85% of deaths from falls in 2004 were among people 75 and older (CDC 2005).
- People 75 and older who fall are four to five times more likely to be admitted to a long-term care facility for a year or longer (Donald et al. 1999).
- There is little difference in fatal fall rates between whites and blacks, ages 65 to 74 (CDC 2006).
- After age 75, white men have the highest fatality rates, followed by white women, black men, and black women (CDC 2005).
- White women have significantly higher rates of fall-related hip fractures than black women (Stevens 2005).
- Among older adults, non-Hispanics have higher fatal fall rates than Hispanics (Stevens et al. 2002).



Falls Among Older Adults:

- **How can older adults prevent falls?**
 - Older adults can take several steps to protect their independence & reduce their risk of falling:
 - Exercise regularly; exercise programs like Tai Chi that increase strength & improve balance are esp. good.
 - Ask their doctor or pharmacist to review their medicines—both prescription and over-the counter—to reduce side effects and interactions.
 - Have eyes checked by an eye doctor at least 1X/year.
 - Improve the lighting in their home.
 - Reduce hazards in their home that can lead to falls.



Prevalence of Fear of Falling:

- 30-55% of community-dwelling elders
- 46% of nursing home residents
- 50% of seniors with R.A.
- 47% of seniors with chronic dizziness
- Fear may be more prevalent among those who are at greater risk for falling due to:
 - Physical impairments
 - Specific diseases or chronic conditions
 - Other health-related conditions



Fear of Falling & Activity Level:

- Fear of falling
- Restricts activity
- Physical capacities reduced
- Restricts more activities
- More impaired physical capabilities



Activity Restriction:

- 19-56% of seniors restrict activity
- Characteristics of those who restrict activity:
 - Two or more chronic conditions
 - History of injurious fall
 - Impaired physical performance
 - Depression
 - Know someone who had a serious fall (vicarious fall experience)
 - Less able to rely on others in a crisis
 - Tendency not to talk to friends about this



Impact of Quality of Life:

- Reduced social interaction
- Preoccupied thoughts
- Extreme anxiety



Sequelae of Fear of Falling:

- Increased risk for falls
- Declines in ability to perform ADLs
- Lower SF-36 scores indicating less physical function and bodily pain
- Non-fallers who said they were afraid of falling had an increased risk of admission to a nursing home
- Reduced Activity Participation
- Less quality of life



Matter of Balance Program:

- Developed by Boston University Roybal Center for the Enhancement of Late-Life Functioning
- Evidence-based research program development
- It has been proven to reduce the fear of falling and increase activity levels (Tennstedt et al. 1998).
- Follow up studies have been able to replicate the success of the program (Peterson et al, 2008).
 - Allan Jette, PhD
 - Sharon Tennstedt, PhD
 - Jonathan Howland, PhD
 - Margie Lachman, PhD
 - Elizabeth Peterson, MPH, OTR/L
 - Linda Kaster, MA



Aims of Program:

- Reduce fear of falling
- Enhancing activity levels
- Break the cycle of disablement
- Improve functioning
- Gain self-confidence and sense of control regarding fall risk
- Primary goal of preventing sarcopenia
- Secondary goal of early detection of those who are experiencing de-conditioning due to activity restriction associated with fear of falling

Survey of Activities and Fear of Falling in the Elderly (SAFE):

- Initial questions: Do you currently:
 - 1. Go to the store?
 - 2. Prepare simple meals?
 - 3. Take a tub bath?
 - 4. Get out of bed?
 - 5. Take a walk for exercise?
 - 6. Go out when it is slippery?
 - 7. Visit a friend or relative?
 - 8. Reach for something over your head?
 - 9. Go to a place with crowds?
 - 10. Walk several blocks outside?
 - 11. Bend down to get something?
- (Lachman, Howland, Tennstedt, Jette, Assman, & Peterson, 1998)



Survey of Activities and Fear of Falling in the Elderly (SAFE):

- Follow-up questions:
 - “When you _____, how worried are you that you might fall?”
 - “Do you not _____ because you are _____ that you might fall?”
 - “Are there other reasons why you do not _____?”
 - “What are the reasons that you do not _____?”
 - “Compared to 5 years ago, would you say that you are _____?”



Falls Efficacy Scale:

- On a scale from 1 to 10, with *1 being very confident and 10 being not confident at all*, how confident are you that you do the following activities without falling?
 - Take a bath or shower
 - Reach into cabinets or closets
 - Walk around the house
 - Prepare meals not requiring carrying heavy or hot objects
 - Get in and out of bed
 - Answer the door or telephone
 - Get in and out of a chair
 - Getting dressed and undressed
 - Personal grooming (i.e. washing your face)
 - Getting on and off of the toilet
 - Total Score (*A total score of greater than 70 indicates that the person has a fear of falling*)
 - Source: Tinetti, M., Richman, D., Powell, L. (1990). Falls Efficacy as a Measure of Fear of Falling. *Journal of Gerontology*. 45;239

A Matter of Balance Class

- During the 9 two-hour classes, participants learn:
 - To view falls and fear of falling as controllable
 - To set realistic goals for increasing activity
 - To change their environment to reduce fall risk factors
 - To promote exercise to increase strength and balance



Intervention:

- 9 session program
- Videotapes – *Fear of Falling: A Matter of Balance* and *Exercise: It's Never Too Late*
- Group Exploration of Issues & Discussion
- Group & Individual Problem-Solving
- Assertiveness Training
- Environmental Concerns
- Behavioral Contracting



Focus of Intervention:

- Changing attitudes
 - Individualized program and goal-setting
 - Identify concerns and generate alternative solutions
 - Motivation and positive role models
- Cognitive restructuring
 - Education about adaptive and maladaptive views about falling
 - Promotion of adaptive concerns
 - Self-instructional training



Cognitive Restructuring:

- Method of turning negative thoughts into positive thoughts
- Need to define barriers, obstacles when engaging in a new behavior
- Identify strategies for overcoming the barriers
- Plan realistic/feasible experiences so you can experience success
 - (Bandura and Lachman, 1997)



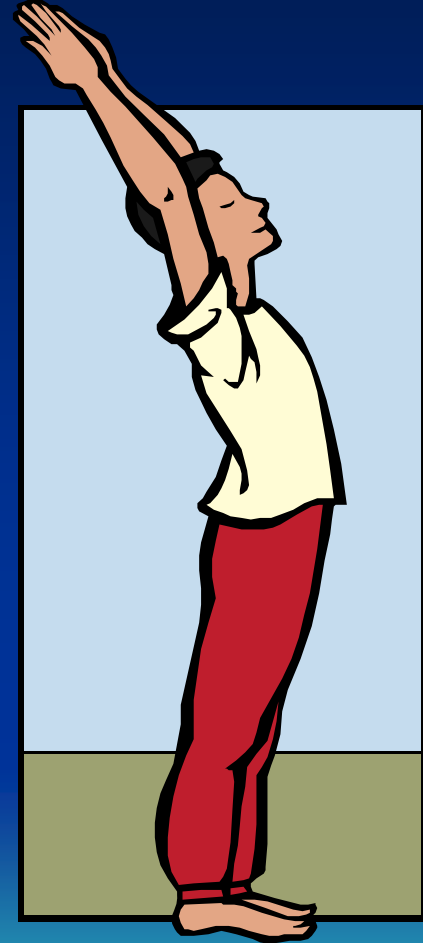
Motivational & Affective Factors:

- Rewards for participants for goal achievement (i.e., magnets)
- Modeling of positive consequences by group members
- Reduced anxiety
- Increased self-efficacy
- Social support, encouragement, and persuasion



Self-Efficacy Traits:

- Definition:
 - “an individual’s judgment about being able to perform a certain behavior”
- Self-efficacy is activity specific



Self-Efficacy (cont.):

- People with High Self-Efficacy:
 - Have more perseverance
 - Set more challenging goals
 - Continue in the face of adversity
 - Attribute their success to ability



Self-Efficacy (cont.):

- People with Low Self-Efficacy:
 - Shy away from difficult tasks
 - Give up easily when faced with difficulty
 - Distracted by negative self-doubts
 - Attribute success to ease of task, not ability



Building Self-Efficacy:

- Five Strategies:
 - Cognitive Restructuring
 - Address Motivational and Affective Factors
 - Practice, Practice, Practice
 - Setting Realistic, Individualized goals
 - Contracts



Nine Session Outline:

- 1. Introduction to the Program
- 2. Exploring Thoughts and Concerns About Falling
- 3. Exercise and Fall Prevention
- 4. Assertiveness and Fall Prevention
- 5. Managing Concerns About Falling
- 6. Recognizing Fall-ty Habits
- 7. Recognizing Fall Hazards in the Home and Community
- 8. Practicing No Fall-ty Habits
- 9. Prevention: Putting It All Together



How to Order Program Manual:

- Order "A Matter of Balance" facilitator's 140 page manual & 17 minute videotape from Terra Nova Films
 - Price of manual and videotape are \$159.00
 - Price of manual separately is \$59.00
 - Price of videotape is \$119.95
- **Distributed through:**
TERRA NOVA FILMS
Phone: 800-779-8491
Fax: 773-881-3368
Website: www.terranoval.org
Email: tnf@terranoval.org



Participants Feedback:



"I Started with a cane and in the beginning with the cane, I was walking just so wobbly, but after two weeks, I was really walking really nicely with the cane like I had been doing it all my life."

-From the Fear of Falling video



"That morning walk, I think it's the most important part of my day. That walk motivates my day for me...and it pays off."

-From the Fear of Falling video

Administration on Aging Grant:

- **2003** AoA launched a 3 year public/private partnership to increase older people's access to programs that have proven to be effective in reducing risk of disease, disability & injury.
- **Grant Goals:**
 - Test whether a volunteer lay leader model is successful when compared with original research
 - Maintain fidelity to the original MOB curriculum
 - Share our approach with others in Maine & around U.S.

(Grant #90AM2780)



A Matter of Balance Volunteer Lay Leader Model:

- **Model Program Adaptations:**
 - Classes taught by volunteer lay leaders, called coaches, instead of healthcare professionals
 - Participant workbook developed and coach manual modified
 - Exercises modified
 - Healthcare connection via guest therapist
- **Maintaining Fidelity:**
 - Two day coach training based on original MOB leader manual
 - Master Trainer observes coaches during training and while leading a MOB/VLL class
 - Use of a mentor model -new volunteer is paired with an experienced coach

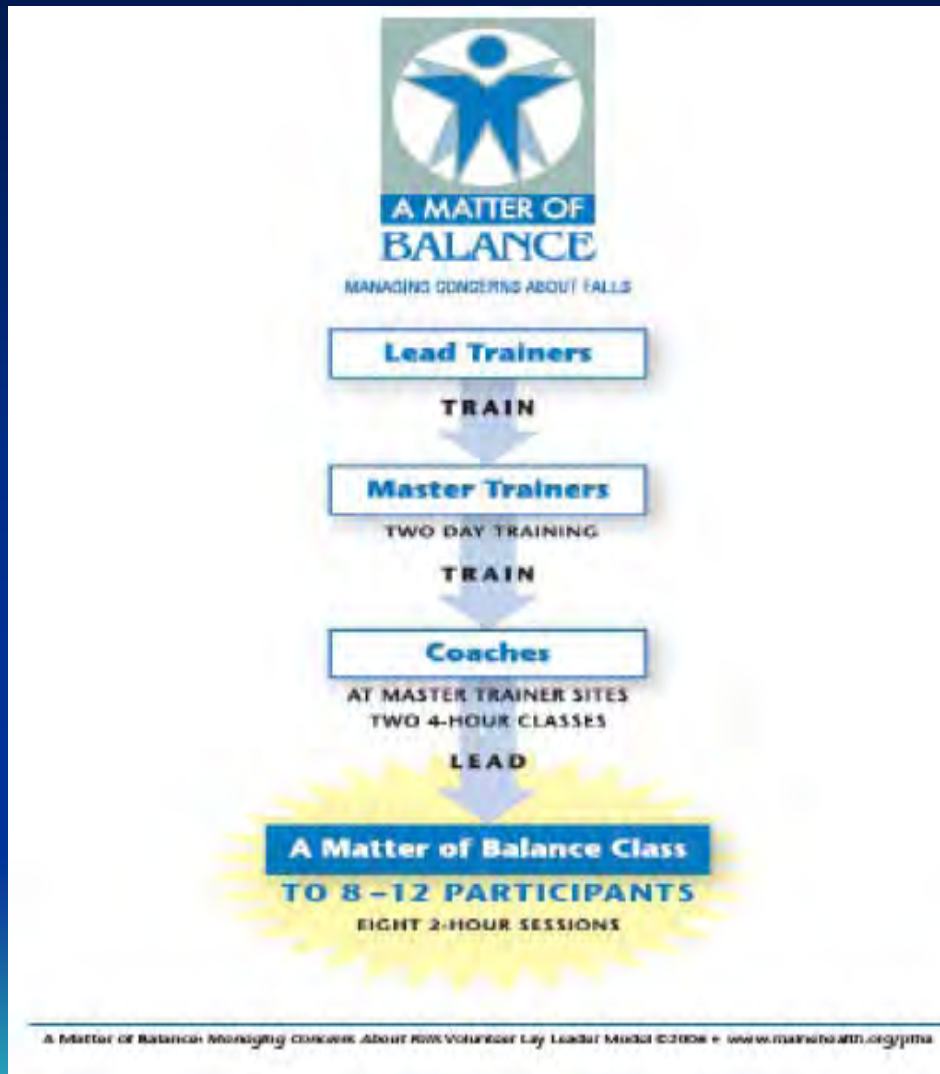


Results of Study:

- **Class Evaluation Results:**
 - 97 % -more comfortable talking about fear of falling
 - 97 % -feel comfortable increasing activity
 - 99 % -plan to continue exercising
 - 98 %-would recommend A Matter of Balance
- *“I am already noticing a difference in my physical being. I am sure I am a little more mobile than I had been and plan to continue these exercises. Hopefully I’ll be jumping over the moon soon.”*
- *“I seem to be more aware of every situation for my safety. I now `stop, look and listen’to my surroundings.”*



Dissemination Results:



2008 Data of Volunteer Lay Leader Model:

- 23 States
- 170 Master Trainer sites
- 364 Master Trainers

For more Information:

- Boston University, Roybal Center Consortium
 - <http://www.bu.edu.hdr>
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