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## Fall Prevention for Older Adults

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## Objectives

- Interpret fall risk evaluation data to **determine individual fall risk factors**
- **Evaluate evidence-based approaches** to reduce the risk and rate of falls and fear of falling
- **Analyze barriers** to change
- Demonstrate effective techniques for **talking with clients about behavioral change**

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What I hope to gain from today's session:

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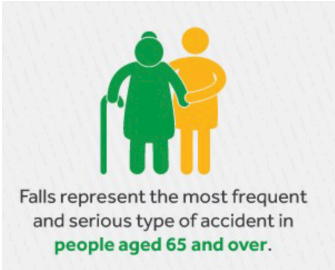
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Falls represent the most frequent and serious type of accident in **people aged 65 and over.**

Image Credit: Healthcare Care Equipment

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**FACTS ABOUT OLDER ADULT FALLS**

**Every 20 minutes**  
an older adult dies from a fall.

**1 in 4**  
Older Americans fall every year.

**2x**  
Older adults who have fallen have **twice** the chance of falling again.

**1 in 5**  
falls results in head injury or broken bones.

**\$744 million**  
Total amount spent for acute care hospital charges associated with older adult falls in 2014.

Image Credit: Boston Public Health Commission

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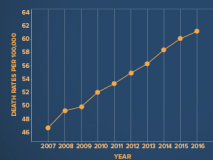
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**Fall Death Rates in the U.S.**  
**INCREASED 30%**  
FROM 2007 TO 2016 FOR OLDER ADULTS



Learn more at [www.cdc.gov/HomeandRecreationalSafety](http://www.cdc.gov/HomeandRecreationalSafety)

If rates continue to rise, we can anticipate  
**7 FALL DEATHS EVERY HOUR BY 2030**

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## Fall Risk Factors

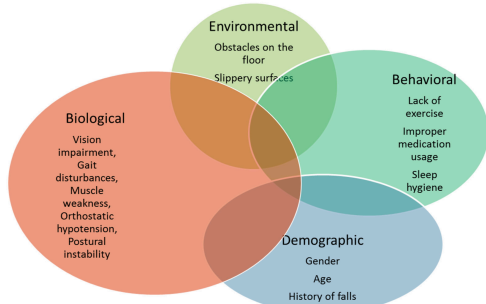
### INTRINSIC FACTORS

- Lower Body Weakness
- Difficulties with Walking and Balance
- Vitamin D Deficiency
- Vision Problems
- Illness or Injury (i.e. Foot Pain)


### EXTRINSIC FACTORS

- Medication
- Poor Footwear
- Home Hazards
- "Risky" Behaviors

Falls are usually due to a combination of factors.



FALL  
RISK  
SCREENING



Hospital  
Skilled Nursing  
Home Health  
Adult Day Care  
Community

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Basic risk screening tools – what do we need?

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4 Stage Balance Test

<https://www.cdc.gov/steady/index.html>

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## 30 second chair stand

<https://www.cdc.gov/steady/index.html>

Chair Stand Below Average Scores		
AGE	MEN	WOMEN
60-64	< 14	< 12
65-69	< 12	< 11
70-74	< 12	< 10
75-79	< 11	< 10
80-84	< 10	< 9
85-89	< 8	< 8
90-94	< 7	< 4

A below average score indicates a risk for falls.

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## Functional Reach Test

<https://www.sralab.org/rehabilitation-measures/functional-reach-test-modified-functional-reach-test>

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## Romberg - Vision

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### Dynamic Gait Index

1. March on flat surface
2. Change in gait speed
3. Gait with horizontal movement of head
4. Gait with vertical movement of head
5. March and turning (pivot)
6. Go over obstacle
7. Bypass obstacles
8. Up and down stairs

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### Falls Risk Assessment Tools (FRAT)

<https://doi.org/10.1016/j.gerinurse.2013.05.011>

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### Falls Efficacy Scale - International

		<i>Not at all concerned 1</i>	<i>Somewhat concerned 2</i>	<i>Fairly concerned 3</i>	<i>Very concerned 4</i>
1	Cleaning the house (e.g. sweep, vacuum or dust)	1	2	3	4
2	Getting dressed or undressed	1	2	3	4
3	Preparing simple meals	1	2	3	4
4	Taking a bath or shower	1	2	3	4

<https://www.ncbi.nlm.nih.gov/pubmed/20061508>

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## More comprehensive assessments

### Berg Balance Scale

<https://www.sralab.org/rehabilitation-measures/berg-balance-scale>

### Mini-BESTest

<https://www.sralab.org/rehabilitation-measures/mini-balance-evaluation-systems-test>

Combine many of the components of other tests

Why don't older adults want to talk about falls?

## Barriers to Change

Beliefs (doctors, medications, exercise)

"I've never fallen" "It won't happen to me"

Self-efficacy

Poor quality provider-patient relationship

Poor communication

Time

Lack of access (driving, distance)/Environment

Illness dimensions

Lack of continuity, accountability

Socio-economic: health literacy, cost, social support

Physical supports

## Personal Influences

Ethnicity, Heritage	Health
Cultural norms	Personal financial circumstances
Gender	Energy
Age	Emotional health
Education	Cognition
Health literacy	[Motivation]
Self-efficacy	

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**Multi-factorial  
Causes**

**Multi-faceted  
Interventions**

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**Using Daily Routines to Promote Medication Adherence in Older Adults**

Martha J. Sandberg, Tracy Van Oss

**Abstract**

**PURPOSE:** To understand the medication routines used by older adults taking four or more medications daily.

**METHOD:** One hundred forty-nine community-dwelling older adults were interviewed about the individual routines, storage locations, equipment, and assistance that enabled their adherence to a medication regimen. A subsample of 48 older adults was observed completing one medication routine in their home environments.

**FINDINGS:** Medication habits were embedded in mealtime, waking up, and sleep routines for 81% of the sample. Participants developed unique, individualized behaviors for colour medications that were chosen/created.

### Intervention Strategies

- Rehab for medical conditions
- Medication management
- Low vision strategies
- Sleep
- Safety education – patient and family
- Balance and strength activities

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## Vision - Compensatory Strategies

- Decreased visual acuity
- Decreased contrast sensitivity
- Impaired depth perception
- Multi-focal lenses
- Glaucoma medications

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## Exercise

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## Evidence-based fall prevention programs

National Council on Aging:

<https://www.ncoa.org/healthy-aging/falls-prevention/falls-prevention-programs-for-older-adults-2/>

Examples: A Matter of Balance, Stepping On, Enhance Fitness, Tai Chi: Moving for Better Balance, OTAGO, CAPABLE

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## Client-centered Teamwork

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## Medical disease management models:

**Protocol driven** models

**Participant-directed** models

Szanton et al. (2014). CAPABLE trial <http://dx.doi.org/10.1016/j.jcct.2014.03.005>

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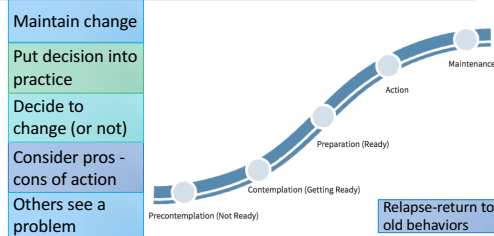
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## Trans-theoretical Model of Behavior Change (Prochaska, 1986)




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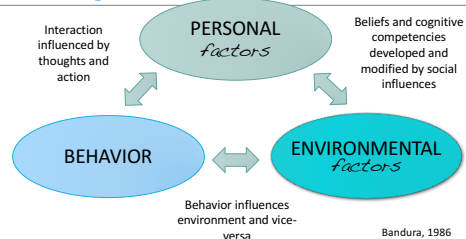
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## Social Cognitive Theory



Bandura, 1986

## Social Cognitive Theory

### SELF-EFFICACY

Beliefs about one's control over health habits

#### Crucial to motivation

More apt to initiate, exert effort in, and persist at activities for which they have high self efficacy

#### Past successes

#### Social factors can boost SE

Encouraging words  
Successful peer models

## WEAK Falls Self-Efficacy

- Falling is part of aging
- [Endurance, strength and balance] decrease with age
- Older adults can maintain, but not GAIN
- Dizziness is part of aging
- I'm too old to exercise
- It's too late for me
- I've never been coordinated

image credit/

## STRONG Falls Self-Efficacy

- People can improve endurance, strength and balance at any age
- I can make changes to be healthier and stronger
- You're never too old to learn

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## Active Listening

Reflective listening

Eye contact

No distractions

Body gestures – smile, lean in, body posture

Give feedback – summarize, reflect, offer an opinion (with permission), nod

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LISTEN TO  
UNDERSTAND

AVOID  
INTERRUPTIONS

WITHHOLD  
JUDGMENT

ASK DEEPER  
QUESTIONS

OBSERVE  
NON-VERBAL  
CUES

PRACTICE  
SILENCE

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## Motivational Interviewing Tips

**Create relationship:** "I appreciate your coming today" "How did you learn about our program?"

**Agenda:** "How did you learn about our program?" "What do you want to learn?" "I can talk with you about home safety first. How does that sound to you?"

Open ended questions, affirmation, reflective listening, summarize

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## Motivational Interviewing Tips

### Consider pros - cons of action

**Change Talk** – favors positive change - More is better  
**Sustain Talk** – favors status quo

### Decide to change (or not)

**Desire** to change  
"I want, I wish"  
**Ability** to change  
"I think I could"  
**Reasons** to change  
"If...then"  
**Need to change** "I have to"

### Put decision into practice

**Commitment** – intention, decision  
**Activation** – preparing  
**Taking steps**

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## Managing the Change Process

### DEFENSIVENESS/DISCORD

Defensive – "yes, but..."  
Arguing – challenging, discounting, hostility  
Interrupting – talking over  
Ignoring – change subject, inattentive

### OT/CLIENT INTERACTION

It takes two to create defensiveness/discord  
Signals dissonance in relationship  
Predictive of no change

Change talk by clients influenced by accepting, affirming, non-judgmental relationship

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## Influencing Self-Efficacy/Change Beliefs

**Physiological states** – high anxiety and fear have negative impact; increased feelings of safety increase self-efficacy

**Mastery experiences** – successful performance in challenging situation

**Social modeling** – demonstrate complex goal broken into smaller steps; peer modeling; narratives

**Verbal persuasion** – positive reinforcement

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## Coaching, not Telling

**Ask permission** to give feedback - "Could I tell you what I've observed?"

**Use a "positive sandwich"**

- variation – give constructive fb, then ask person what they think of your feedback

**Be specific with feedback** "I'd like you to consider a night light here"

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## Coaching, not Telling

• **Avoid negative close-ended questions:** "Do you want to fall and break a hip?"

- Exception: **factual questions**, "Have you had an eye exam in the last year?"
- Exception: **benign questions**, "Are you feeling better since we last met?"

• **Avoid confronting, disagreeing, shaming, arguing:** "How long has this light bulb been out?" "There's a lot of clutter in here."

• **Avoid dismissing feelings or issue:** Not acknowledging

• **Avoid directing, ordering, commanding:** "You should remove the rug"

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Background As the population ages, it is increasingly important to test new models of care that improve life quality and decrease health costs. This paper presents the rationale and design for a randomized clinical trial of a novel interdisciplinary program to reduce disability ...  
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Meeting the health care financing imperative through focusing on function: The CAPABLE studies

SL Szanton, LN Gillin - Public Policy & Aging Report, 2016 - academic.oup.com  
The dramatic demographic shift brings societal opportunities in the form of generative social capital of older adults (Fried, 2016). We know that prevention works into the oldest ages and that the aging of a population can be affordable and even provide a demographic dividend ...  
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