Assessing the Internal Risk Factors That Contribute to Falls

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Purpose of Workshop

- To provide knowledge needed to screen and assess the internal risk factors that contribute to fall risk among older adults.

FallProof

Fall Risk Screening And Assessment Within the Community Setting

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No More Falls! – A Senior Fall Prevention Project in California

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Practical Approach to Risk Factor Adjustment: Falls Prevention from the Ground UP!

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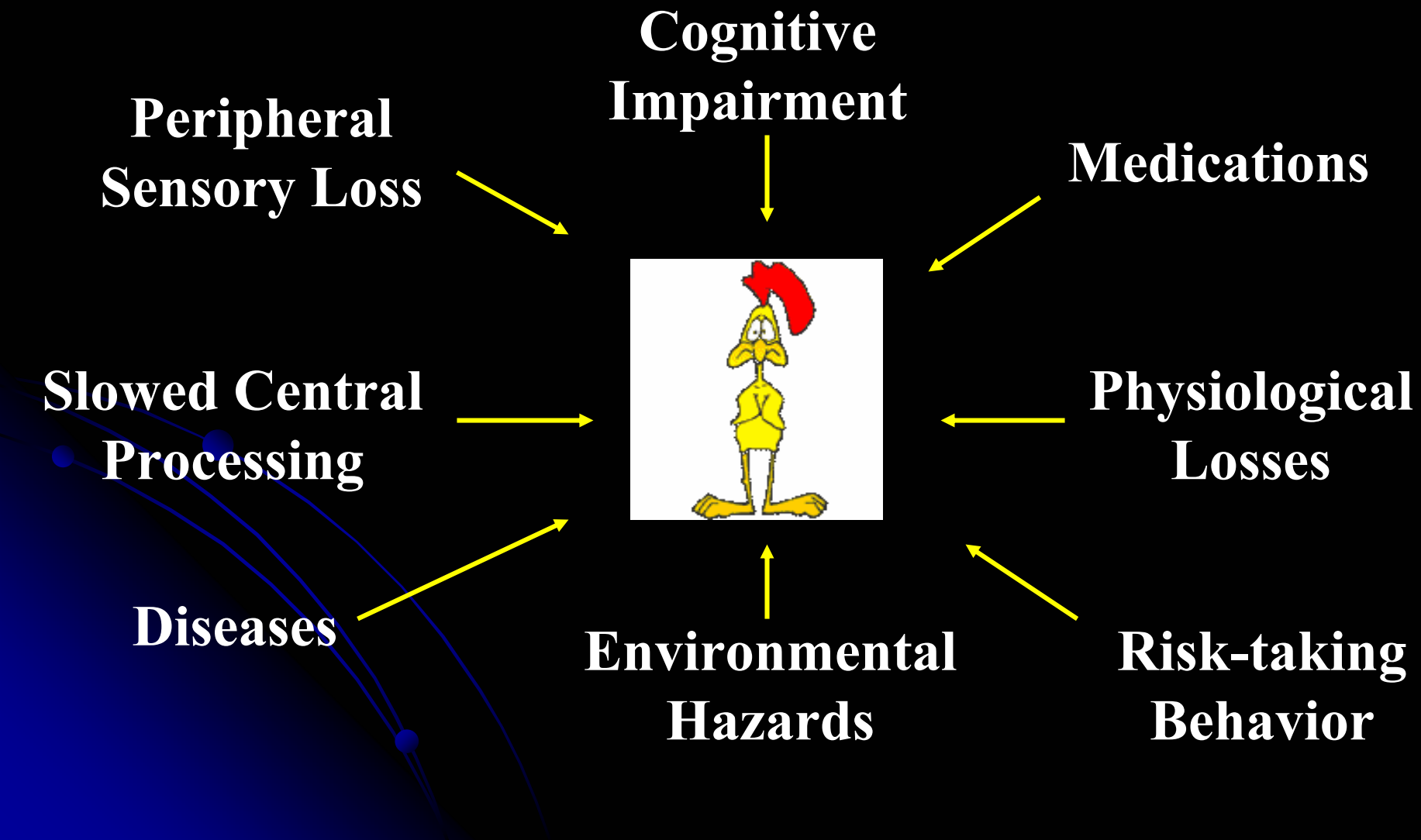
Background Information

Reducing Risks for Falls

- Mobility problems leading to falls "most of the time" are preventable, or at least modifiable through early detection and targeted interventions.

Causes of Mobility Problems & Falls are Multifactorial



AGS Recommended Guidelines

- The intensity of screening and assessment varies by the target population.
  - Medical History (internal risk factors)
  - Functional status (internal risk factors)
  - Environmental risks

Reference:

American Geriatrics Society, the American Academy of Orthopaedic Surgeons, and the British Geriatric Society (2001). Guidelines for the prevention of falls in older persons, *Journal of American Geriatrics Society*

AGS Recommended Guidelines

- All older persons who are under the care of a health professional or their caregivers should be asked at least once a year about falls.

- All older persons who report a single fall should be screened for gait or balance problems using a standardized functional test (e.g., the “Get Up and Go Test”).
- Persons who have difficulty or demonstrate unsteadiness performing this test or who report more than one fall require further assessment.

Background

- Benefits of screening and assessment
  - Identify and predict fall-risk
  - Target intervention strategies
  - Motivate clients (goal setting)
  - Provide meaningful feedback
  - Determine if referrals are necessary
  - Document benefits of program

Selection Criteria for Assessment Tools

- Meets scientific rigor (reliability and validity
- Has discrimination power (minimum floor and ceiling effects
- User friendly (training, administration, equipment, space, cost, time requirement)
- Able to detect meaningful change
- Performance norms &/or criterion standards

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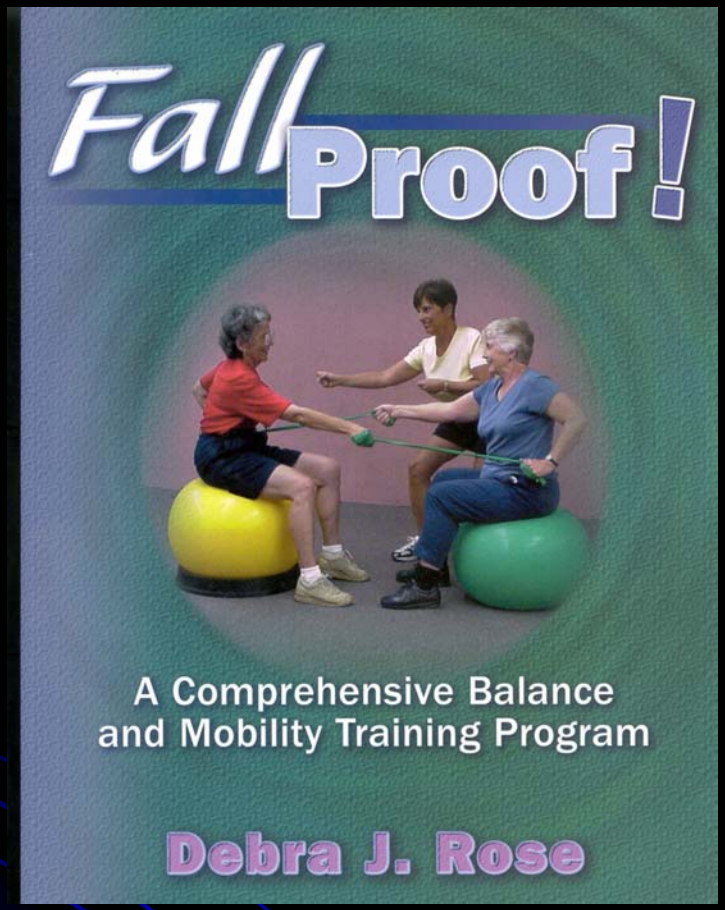
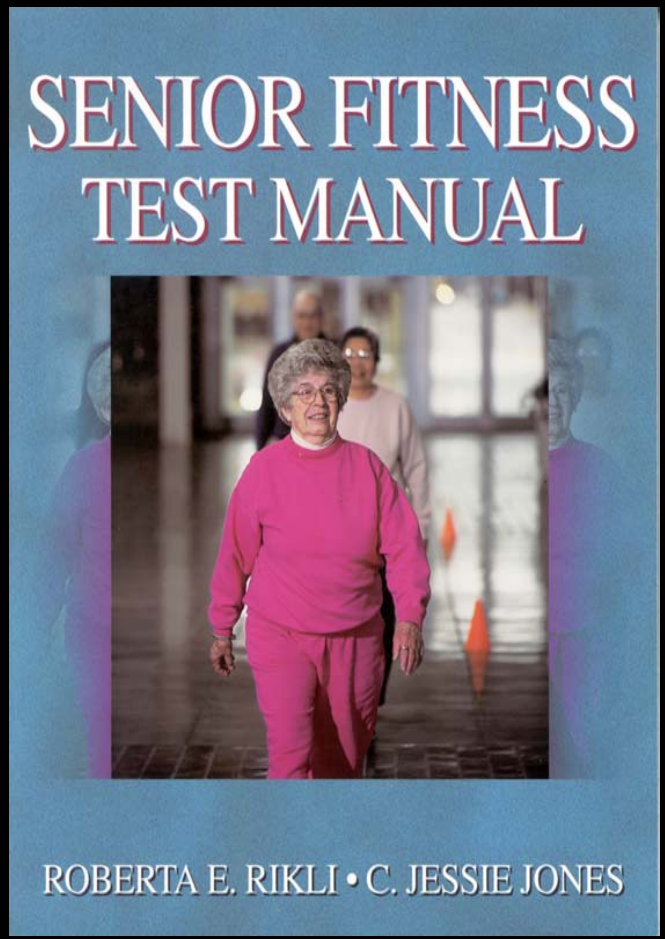
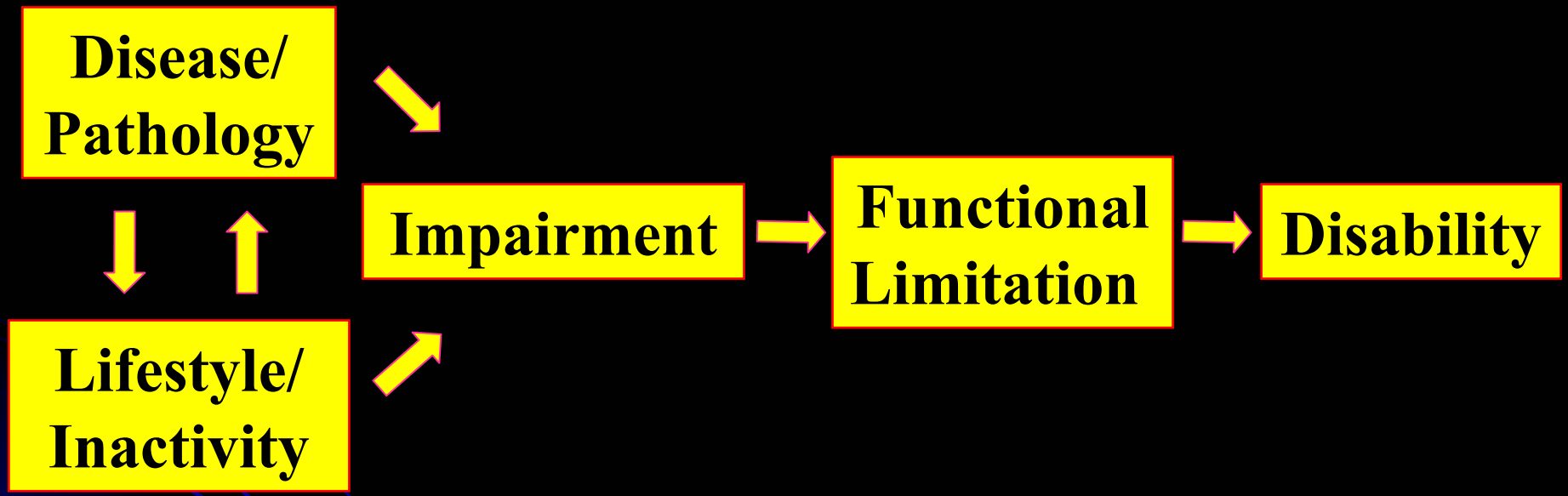

Fall Proof!
A Comprehensive Balance and Mobility Training Program
Debra J. Rose

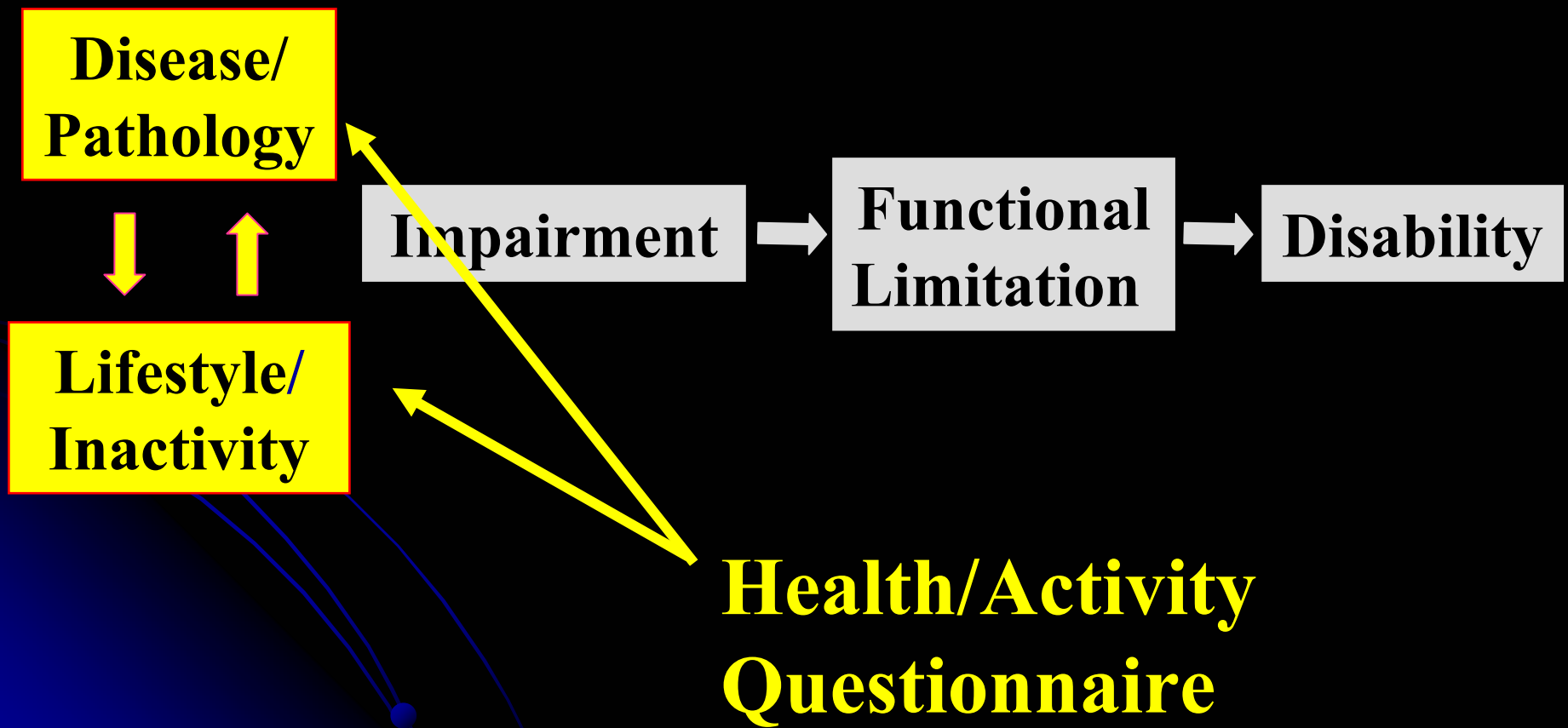

SENIOR FITNESS TEST MANUAL
ROBERTA E. RIKLI • C. JESSIE JONES

The Nagi Model

Revised, Rikli and Jones, 1997



Measuring Disease and Lifestyle



Center for Successful Aging Health/Activity Questionnaire

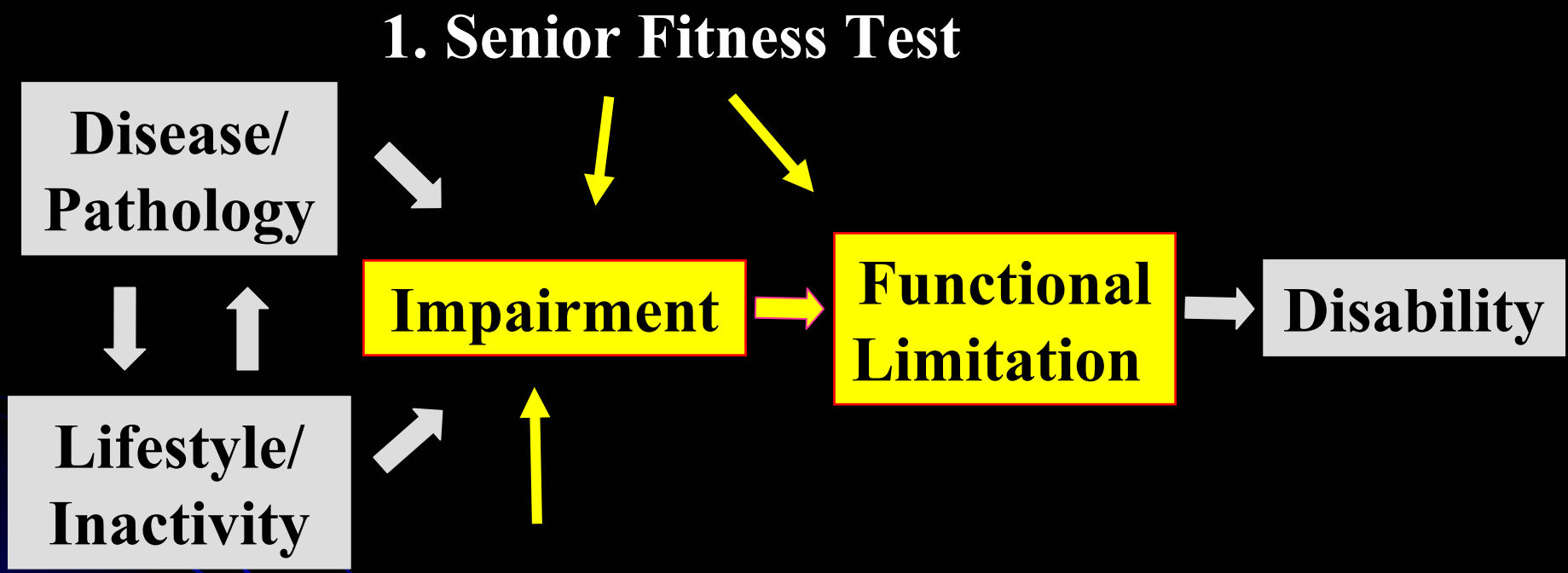
- Medical & fall history
- Typical physical activities
- Self report on Likert scale of
  - Pain in past 4 weeks
  - Depression in past 4 weeks
  - General health
  - Quality of life
  - General fear of falling
  - How often do you engage in social interactions where you leave your house

Fear-of-Falling

- **Balance Efficacy Scale**
  - ✓Assesses how confident the older adult feels when performing various ADLs that require balance.
  - ✓18 items
  - ✓Scale: 0-10-20-30-40-50-60-70-80-90-100

Rose, D. (2003). FallProof: A Comprehensive Balance and Mobility Program, Human Kinetics

Measuring Impairments

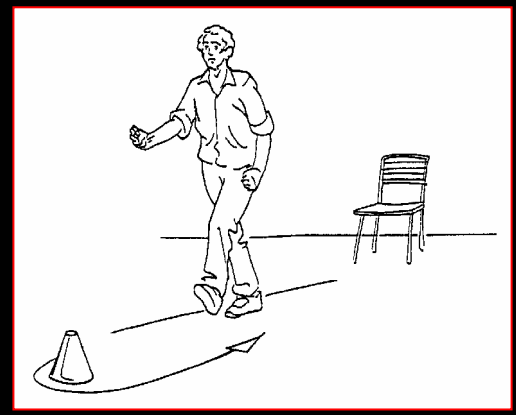


2. Modified Clinical Test of Sensory Interaction in Balance (M-CTSIB)

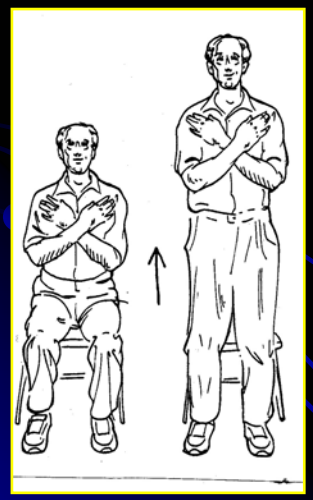
3. Multidirectional l Reach Test

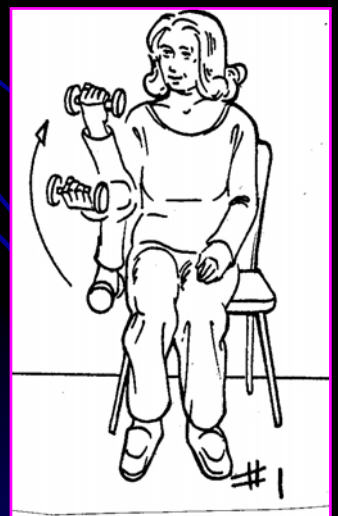
Physical Impairments
Senior Fitness Test

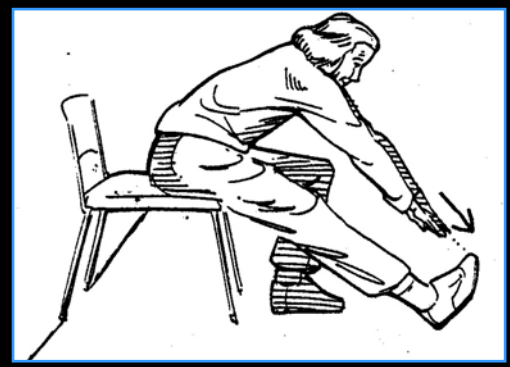
Developed by Rikli & Jones (2001).
Human Kinetics Publishers



And 6-min walk







Senior Fitness Test

- Meets scientific rigor (reliable and valid
- Can measure a wide-range of physical abilities
- Requires little equipment
- Quick and easy to use
- Can use volunteer helpers
- Can be use in a home setting
- USA national norms
- Criterion measures to predict
- mobility problems & fall risk

Senior Fitness Test Reliability/Validity Information

Rikli & Jones (2001), Senior Fitness Test Manual, Hum. Kinetics

Rikli & Jones (2000), Med. & Science Sport & Ex., Vol 32

Rikli & Jones (1999a), J. of Aging & Phys. Act., Vol. 7

Rikli & Jones (1999b), J. of Aging & Phys. Act., Vol. 7

James (1999), Master's Thesis, Calif., State U., Fullerton

Johnston (1999), Master's Thesis, Calif., State U., Fullerton

Jones et al. (1999), Res. Quart. for Exer. & Spt, Vol 70

Jones et al. (1998), Res. Quart. for Exer. & Spt, Vol 69

Rikli & Jones (1998), J. of Aging & Phys. Act., Vol. 6

Dugas (1996) Master's Thesis, Calif State U., Fullerton

Sensory-Motor Impairments
M-CTSIB

- Measures how well a person is able to use sensory inputs when one or more sensory systems are compromised

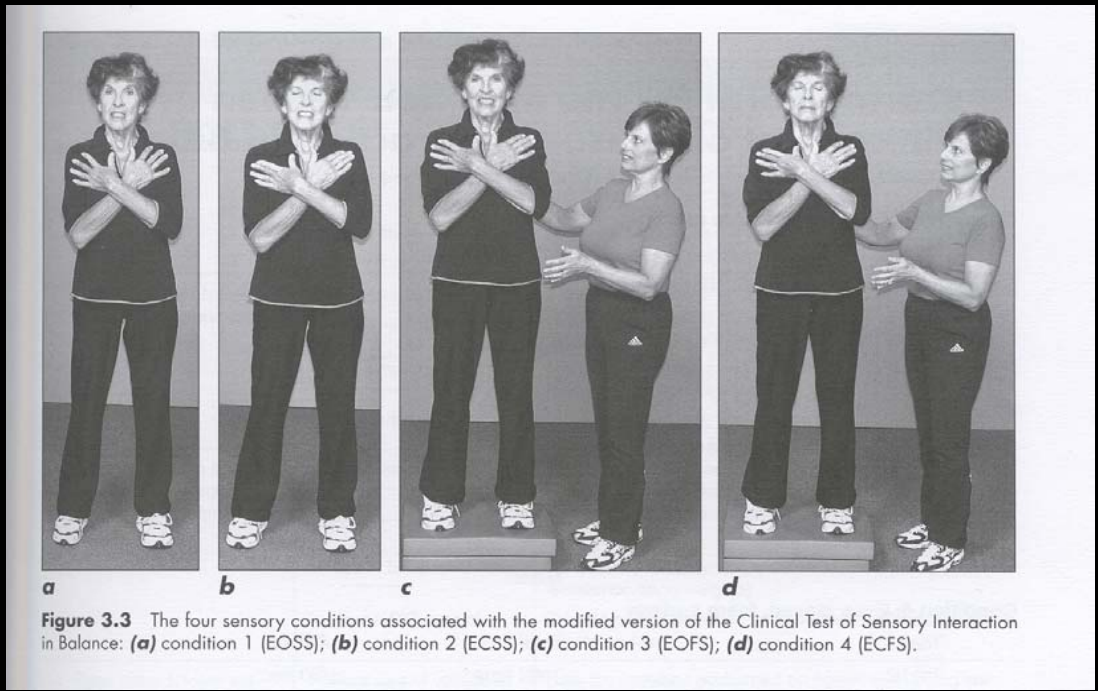


Figure 3.3 The four sensory conditions associated with the modified version of the Clinical Test of Sensory Interaction in Balance: ***(a)*** condition 1 (EOSS); ***(b)*** condition 2 (ECSS); ***(c)*** condition 3 (EOFS); ***(d)*** condition 4 (ECFS).

Motor Impairments
Multidirectional Reach Test

- Measures a person's region of stability in 4 directions and the type of postural strategy used to achieve maximal lean

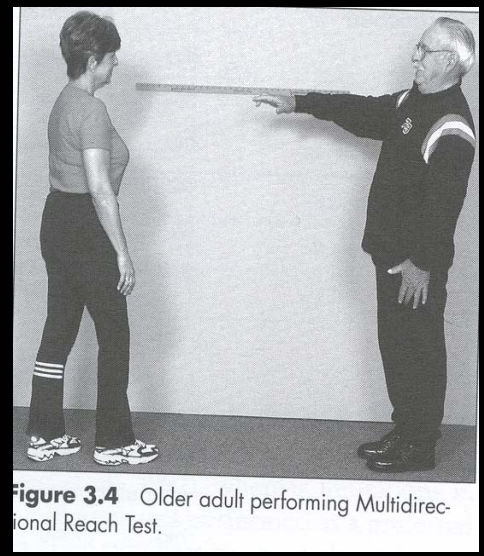
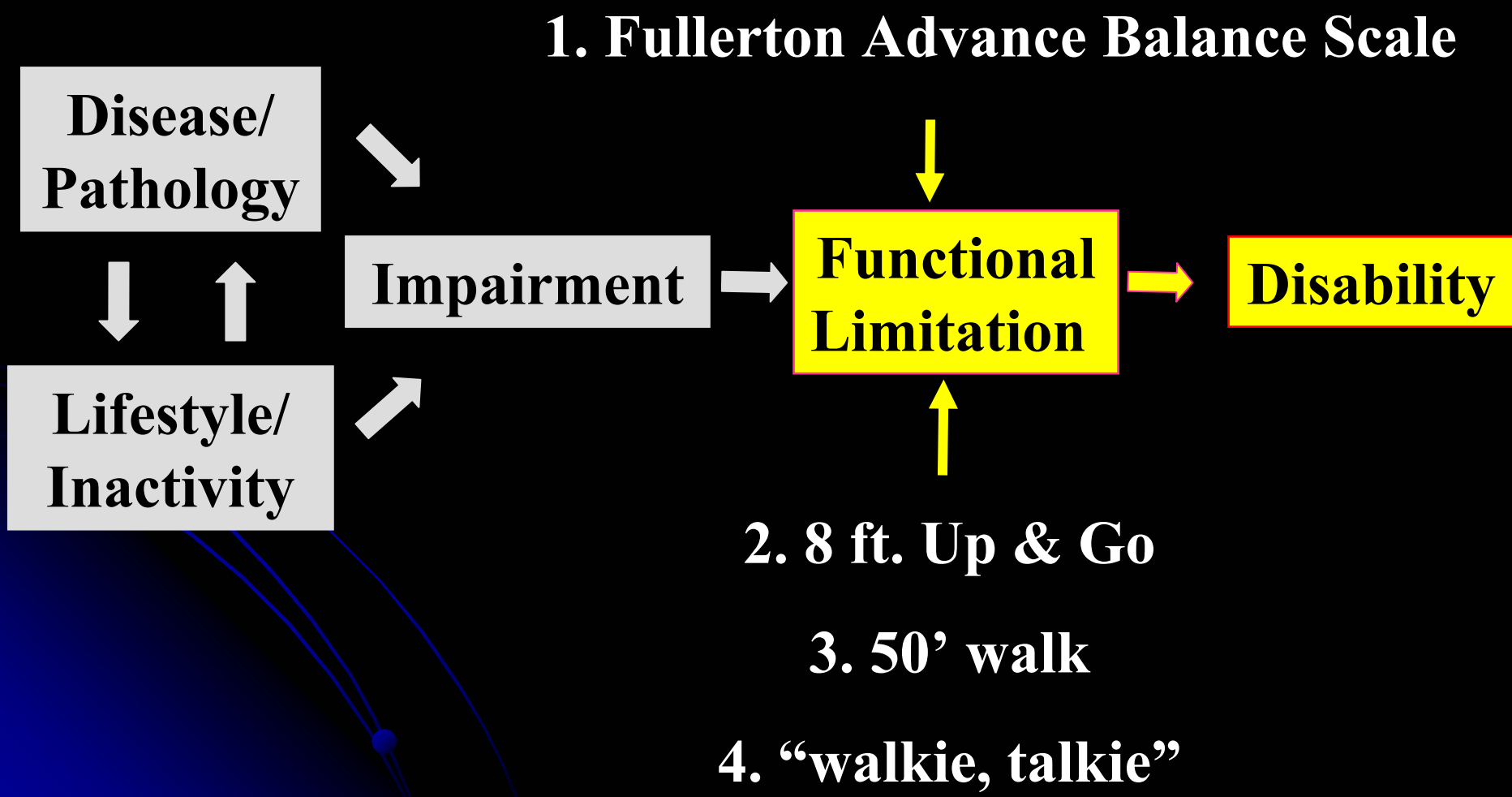


Figure 3.4 Older adult performing Multidirectional Reach Test.

- Developed by Newton, 1997
- Expanded version of the Functional Reach Test (Duncan, Weiner, Chandler & Studenski, 1990)

Measuring Functional Limitations



Functional Limitations Fullerton Advanced Balance (FAB) Scale

- Scale is comprised of 10 items designed to measure multiple dimensions of balance.
- Recommended for use with higher functioning community-dwelling older adults only.
- Test requires little equipment
- Developed by Rose and Lucchese (2003).

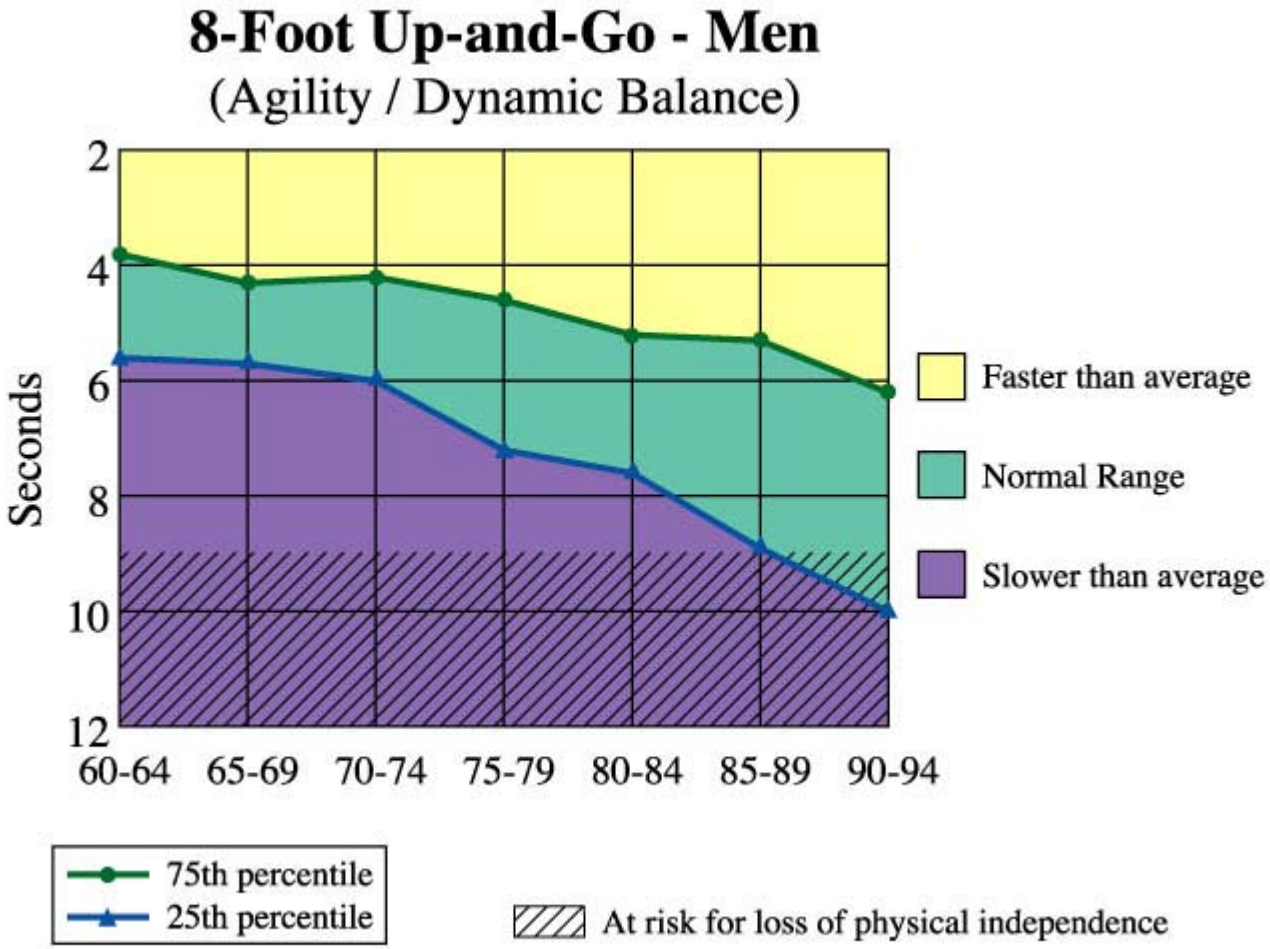
Functional Limitation Measure

- For lower functioning older adults use the Berg Balance Scale (Berg, 1992)
- 14 test-items with a zero to four ordinal scale. (maximum 56 points)

8 Ft. Up & Go
Item from Senior Fitness Test

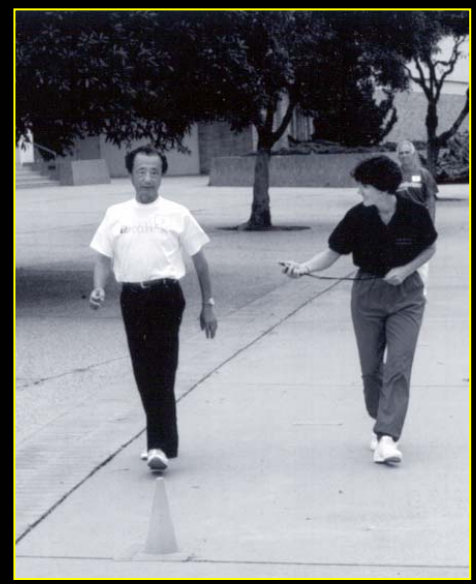
- Older adults who required greater than 8.5 seconds to complete the UG were classified as fallers.

- Overall prediction rate of classification was 82%.


8-Foot Up-and-Go - Men
(Agility / Dynamic Balance)
Seconds
2
4
6
8
10
12
60-64
65-69
70-74
75-79
80-84
85-89
90-94
Faster than average
Normal Range
Slower than average
75th percentile
25th percentile
At risk for loss of physical independence

50-Foot Walk Test

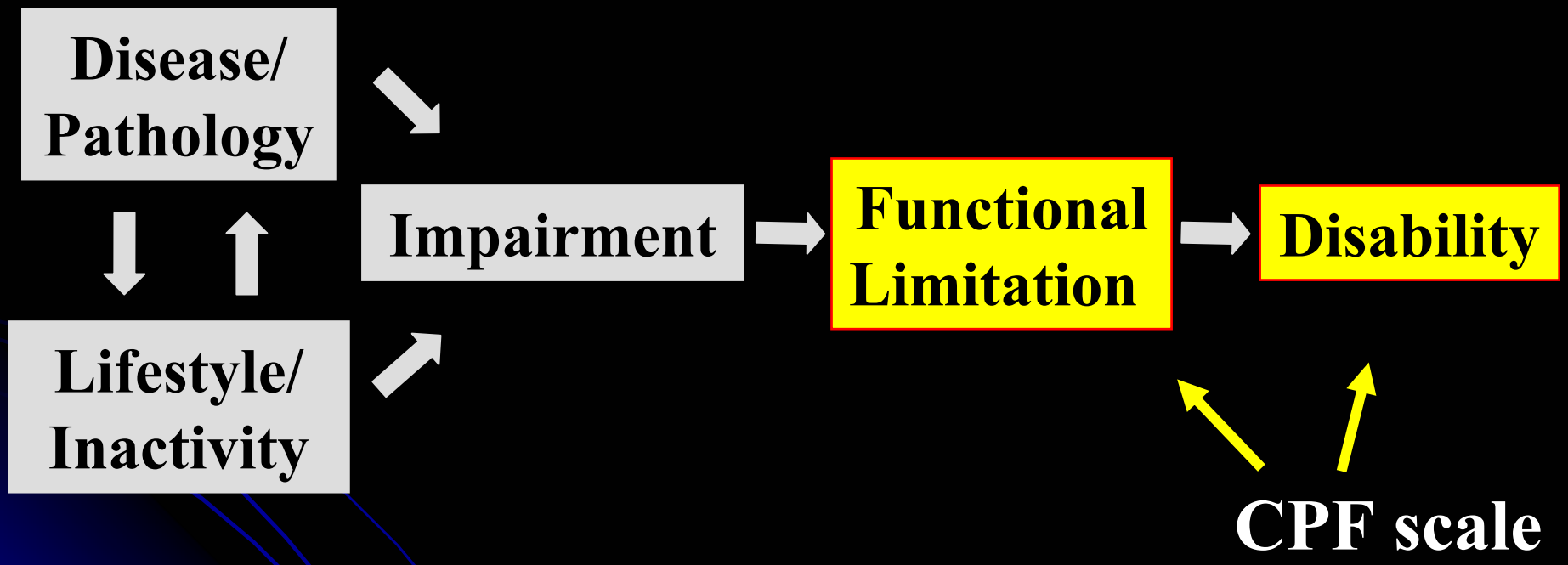
- Used to identify functional limitations in gait.
- Specifically measures overall gait speed and ability to alter gait speed to meet changing task demands.
- Performed at a “preferred” and fast speed.
- 10ft 30 ft 10ft



Walkie-Talkie Test

- Measure a person's ability to divide attention between two tasks
  - Walking and talking
- Ask client a question while walking to the 50 ft. walk test.

Measuring Disability



Disability- Composite Physical Function Scale

Please indicate your ability to do each of the following:

	Can do	Can do with difficulty or help	Cannot do
Take care of personal needs	2	1	0
Bathe yourself	2	1	0
Climb a flight of stairs	2	1	0
Walk outside 1-2 blocks	2	1	0
Do light household activities	2	1	0
Do own shopping	2	1	0
Walk 1/2 mile	2	1	0
Walk 1 mile	2	1	0
Lift and carry 10 pounds	2	1	0
Lift and carry 25 pounds	2	1	0
Do most heavy household chores	2	1	0
Do strenuous activities	2	1	0

24-22 points, high function; 16-21 pts. Moderate risk; <16 High risk

Assessment is the First Step to Fall Prevention