


Train-the-trainer Workshop on Ortho-geriatric Disciplines –  
with Emphasis on Fall and Fracture Prevention

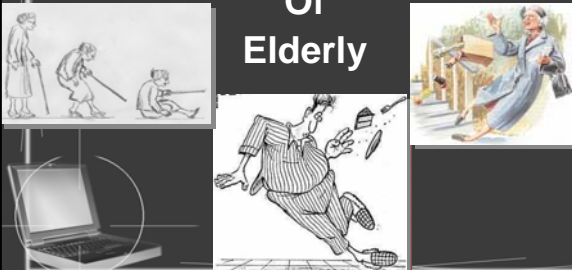

# Fall and Fracture Prevention: Footwear Assessment

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## As we know...

### High Fall Rate Of Elderly

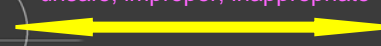




## Fall risk factors

- Intrinsic factors
  - Poor vision and sensation
  - Poor proprioception and reaction time
  - Pathological problems
  - Changes in musculoskeletal system
  - Poor balance
  - Gait impairment
- Extrinsic factors
  - Environmental hazards, e.g. lighting, housekeeping

**Aging**

Footwear:  
unsafe, improper, inappropriate

## Shoe wearing habit






**Unsafe  
Inappropriate for elderly**






## How to assess footwear?

- Age of footwear
- Type of footwear
- Fitting

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### Age of footwear

- Evaluate the wear patterns

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### Type of footwear

### How to select footwear?

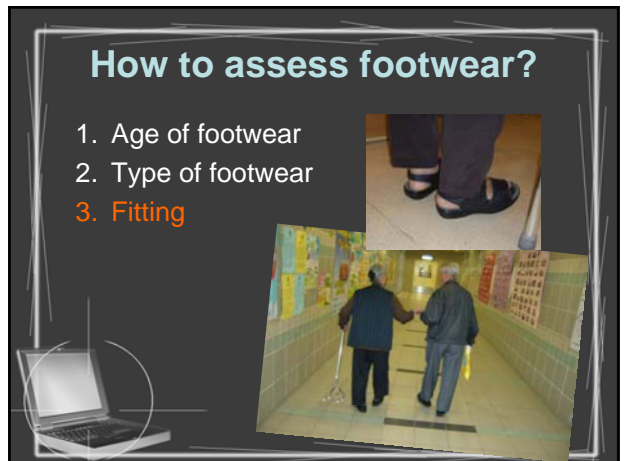
- Heel height
- Heel contour
- Heel-collar height
- Heel-counter stiffness
- Sole hardness
- Sole resistance and pattern
- Style and fixation

### Heel height and contour

- Height
  - 1/2" – 3/4"
- Contour
  - Flat
  - Board

### Heel collar height

- Heel collar height



## Fitting

- Two primary components
  - Shoe shape

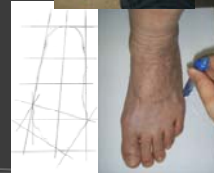


- Shoe size



## Fitting (2)

- Length
  - 1.5 cm
- Width
- Arch and instep



## Diabetic foot

- Footwear has been implicated as an extrinsic cause of foot ulcers in people with diabetes (Gayle E et al. 2002)
- Footwear must be smooth on the inside layer
- Do wear socks to fit and wear shoes



## Do elderly need to wear shoes at home?

- Slippers are preferred



## How to select slippers?

- Similar principles and features
  1. Heel height
  2. Heel contour
  3. Sole resistance and pattern
  4. Style and fixation
- Remember: Slippers are worn at home only



**Danger at home!!**

## Sole height and contour



### Slip resistance and pattern

Deeper and wider groove

### Fixation

Size of slipper cover ~ Fixation

### Fitting of slippers

Size – too large / small

Fall Prevention Team  
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The End  
 Thank you