

# Frail Proofing

Physical assessment and interventions

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AGENCY FOR  
**CLINICAL  
INNOVATION**

- Physical assessments used in frailty research
  - i. Grip strength
  - ii. Gait speed
  - iii. Timed up and go (TUG)
  - iv. Timed five sit-to-stand
  - v. Balance
- Short physical performance battery includes 3 of the above (sit-to-stand, balance and gait speed)
- **Balance** and **lower limb strength** are the focus today

## Principles:

- i. Target the identified deficit
- ii. Appropriate training level
- iii. Exercise progression- needs to be progressively challenging
- iv. Safety considerations
- v. Information/education provided to person and carer

## Four test balance scale



1. I will show you the 1<sup>st</sup>/2<sup>nd</sup>/3<sup>rd</sup>/4<sup>th</sup> movement
2. I want you to try to stand with \_\_\_\_\_ for about 10s
3. You may use your arms, bend your knees or move your body to maintain your balance, but try not to move your feet. Try to hold this position until I tell you to stop

Have the person stand next to a supporting surface

Allow the person to hold the supporting surface to prevent loss of balance

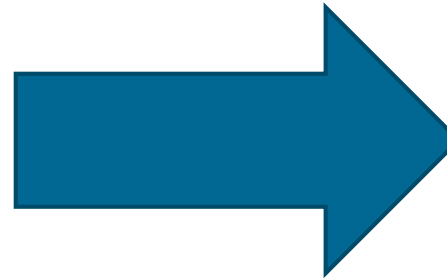
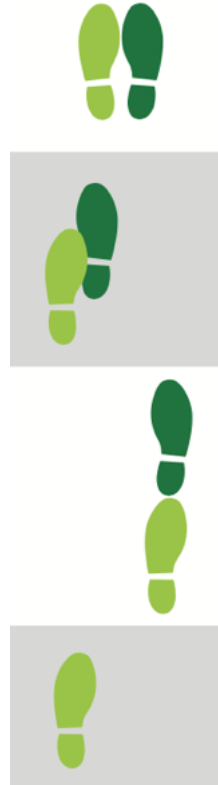
When the person is in the testing position, and lets go, you say “begin” and start timing

## Must be challenging

- Safety
- between chairs
  - in a corner

decreasing  
base of  
support

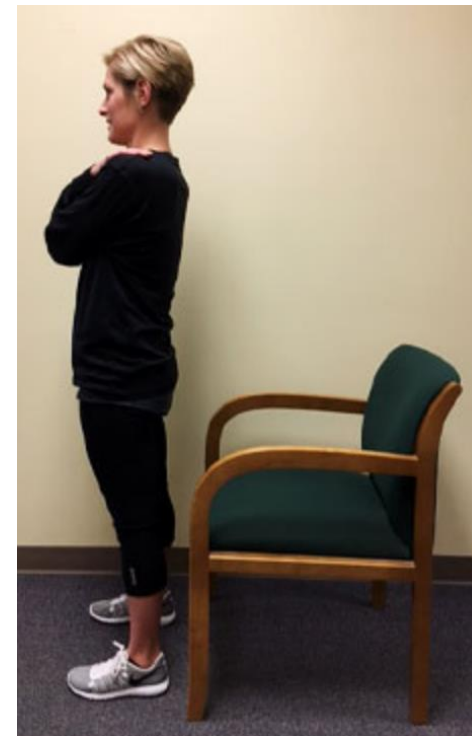
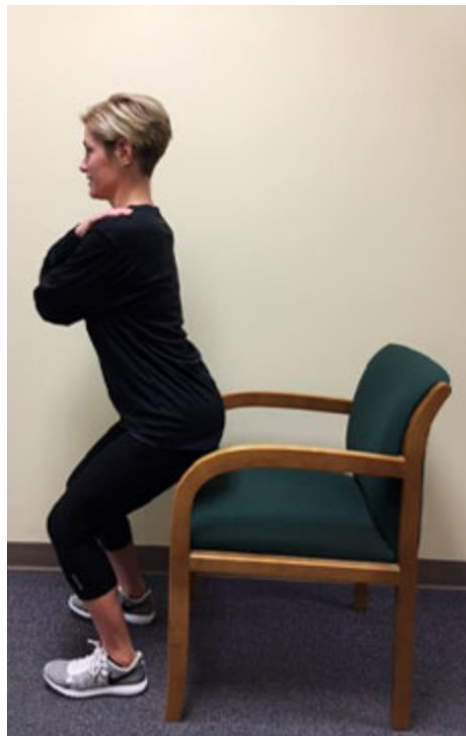
- with carer/  
family



- Increase time
- Eyes closed
- Add unstable surface (e.g. pillow/cushion)
- Move trunk outside base of support (e.g. reach for an object)
- Add cognitive task

# Assessment - Strength

## Timed sit-to-stand x 5 (from 46cm) – “1,2 3, go!”



# Intervention - Strength

## Squats



[www.physiotherapyexercises.com](http://www.physiotherapyexercises.com)

## Staggered sit-to-stand



[www.physiotherapyexercises.com](http://www.physiotherapyexercises.com)

## One leg stands



Singapore Sports Medical Centre

## Exercise interventions appropriate to assessment findings and patient choice:

1. Individualised
2. Sustained effort and over time (e.g. balance 3 hours/week)
3. Incorporated into daily routines – integrated and lifelong
4. Role of support/care providers to sustain approach
5. Multidisciplinary support if in hospital/residential setting



# For further information and resources

University of Sydney HOMeCARE Study:

<https://www.strongmindshomecare.org/>

Clinical Excellence Commission Safe Mobilisation:

<http://www.cec.health.nsw.gov.au/patient-safety-programs/adult-patient-safety/falls-prevention/lbvc/safe-mobilisation>

[http://www.cec.health.nsw.gov.au/\\_data/assets/pdf\\_file/0008/258542/falls-prevention-home-exercises.pdf](http://www.cec.health.nsw.gov.au/_data/assets/pdf_file/0008/258542/falls-prevention-home-exercises.pdf)

NSW Fall Prevention Network: Healthy Active Ageing:

<https://fallsnetwork.neura.edu.au/resources/information-resources/healthy-ageing/>

<https://www.activeandhealthy.nsw.gov.au/staying-active/exercise-at-home/>