

# Early Detection and Prevention of Musculoskeletal Disease in the Elderly

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# Activities of Daily Living ( ADL)

A series of basic activities performed by individuals on a daily basis necessary for independent living at home or in the community.



# Activities of Daily Living ( ADL)

- Personal hygiene – bathing/showering, grooming, nail care, and oral care
- Dressing - the ability to make appropriate clothing decisions and physically dress/undress oneself
- Eating - the ability to feed oneself, though not necessarily the capability to prepare food
- Maintaining continence - both the mental and physical capacity to use a restroom, including the ability to get on and off the toilet and cleaning oneself
- Transferring/Mobility- moving oneself from seated to standing, getting in and out of bed, and the ability to walk independently from one location to another



# Instrumental Activities of Daily Living (IADLs)

- Actions that are important to being able to live independently, but are not necessarily required activities on a daily basis.
- Functional ability for IADLs is generally lost prior to ADLs
- May depend on individual cultural needs



# Essential IADLs

- Basic communication skills - using a regular phone, mobile phone, (email or the Internet)
- Transportation - driving or the ability to use public transportation
- Meal preparation - meal planning, cooking, clean up, storage, and the ability to safely use kitchen equipment and utensils
- Shopping - the ability to make appropriate food and clothing purchase decisions
- Housework - doing laundry, washing dishes, dusting, vacuuming, and maintaining a hygienic place of residence



# Ctnd

- Managing medications - taking accurate dosages at the appropriate times, managing re-fills, and avoiding conflicts
- Managing personal finances - operating within a budget, writing cheques, paying bills, and avoiding scams



- **Effects of Musculoskeletal symptoms on ADLs**

- Restricted mobility may affect all ADL
- Difficult squatting, difficult standing from low sitting
- Poor hand grip – increases falls risk
- Poor finer movements of hands
- Dressing, self care, washing affected due to conditions like frozen shoulder



# Common musculoskeletal conditions affecting the ADLs in elderly

- Osteoarthritis
- Rheumatoid arthritis
- Soft tissue rheumatism – frozen shoulders, tendinopathies
- Degenerative disease of the spine
- Post - fall musculoskeletal conditions
- Fractures
- Balance / coordination issues





# Muskulo skeletal Symptom analysis

- Joint pains which are activity related and posture related are usually due to degenerative disease of wt bearing joints and spine
- Painful joints which have localized tenderness are likely due to tendinitis and other enthesitis
- Persistent joint pain with swelling and rest pain, early morning worsening. Commonly associated with fatigue and febrile feeling – due to inflammatory arthritis



# Symptoms to be cautious about ...

- Arthralgia with associated constitutional symptoms may be due to paraneoplastic syndrome
- Difficulty in getting up from seated positions may be due to inflammatory myopathies
- Pains with night time worsening may be due to bone pain of malignancies
- Painful or painless weakness of a joint with wasting of the surrounding muscles may be due to nerve involvement
- Worse pain or effusions in a person with chronic inflammatory arthritis may be due to septic arthritis



# Risk factors for Musculoskeletal problems

- Obesity
- Sedentary life style
- Wrong postures during work
- Osteoporosis
- Falls
- Multiple co morbidities



# Risk factor Identification

Self -assessment for risk factor identification

ADLs / IADLs	No Assistance needed	Assistance needed
Bathing		
Eating		
Grooming		
Dressing		
Oral Care		
Toileting		
Transferring/ Walking		
Climbing Stairs		



# Risk factor Identification - ctd

ADLs / IADLs	No Assistance needed	Assistance needed
Shopping		
Cooking		
Uses the Phone		
Housework		
Driving		
Laundry		
Managing Finances		



# Falls risk Assessment

## Timed Up and Go Test:

- To test the subject, give the following instructions:
  - Rise from the chair
  - Walk to the line on the floor (10 feet)
  - Turn · Return to the chair
  - Sit down again



- Use a standard armchair.
- Place the line ten feet from the chair.
- The score is the time taken in seconds to complete the task.
- The subject is encouraged to wear regular footwear and to use any customary walking aid.
- No physical assistance is given.
- Have the subject walk through the test once before being timed, to become familiar with the test.
- **Persons who take 10 seconds or less to complete this sequence of maneuvers are at low risk of falling. Persons who take >20 seconds to complete this sequence are at high risk of falling.**



# Prevention strategies

- Regular exercises
- Falls prevention strategies including modification of living environment
- Avoid wrong postures
- Education





# Regular exercises

- Walking
- Swimming
- Balance training exercises
- Strengthening exercises



# Prevention of falls

- Remove slippery carpets, use sticky rugs instead
- Remove loose or non- fitting shoes or slippers
- Avoid wire cords of electrical instruments across the floors of house hold
- Avoid pets obstructing their way



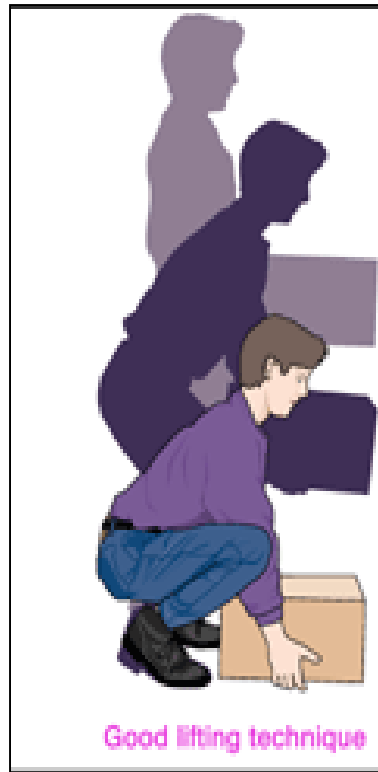
# Avoid overuse



# Correct postures



Getting up from bed



Correct lifting



Working standing



# Modification of living environment

Adaptations for the living environment .eg;

- Raising the height of their chair, bed and commode
- Use of bedside commodes during night
- Safety bars and hand rails in corridors, washroom and toilet
- Shower chair in wash room
- Walking aids whenever necessary
- Ramps and hand rails at staircases



# Raising the height

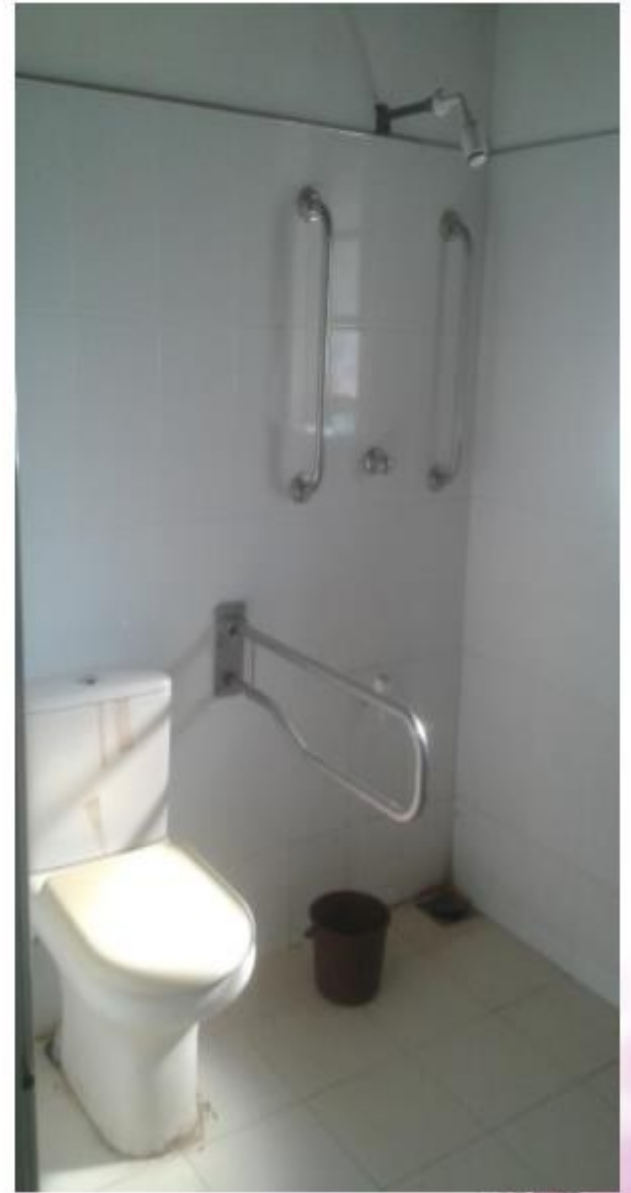




# Bedside commodes



# Safety Bars





# Wash Room safety



# Avoid falls



# Walking aids

walking stick



English cane



quad cane



ortho-cane

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

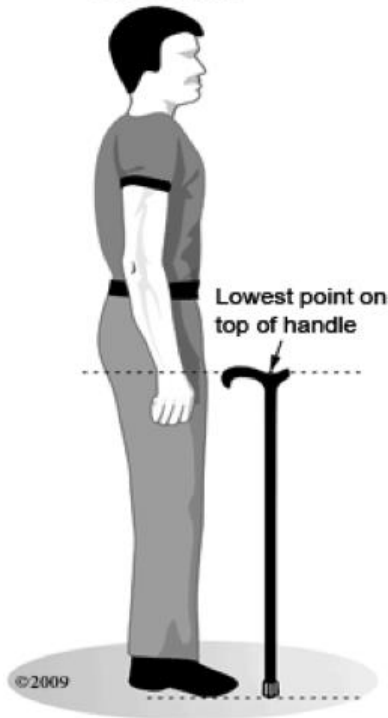






# Correct height of walking aids and hand rails

DIAGRAM A



Incorrect Size  
(Too Short)



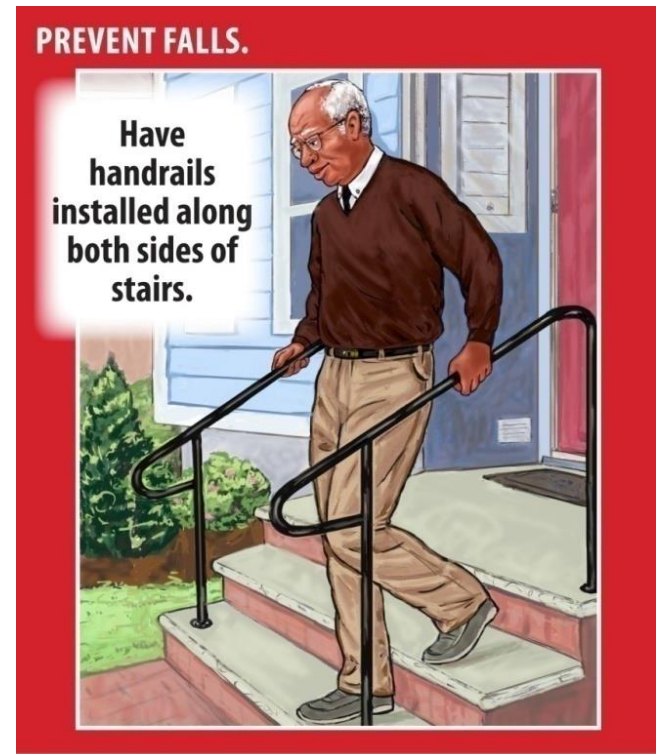
CORRECT SIZE!



Incorrect Size  
(Too Tall)



# Ramps / Steps with hand rails



Adaptations are recommended for cutlery and other commonly used tools and functional splints if hand functions are affected.



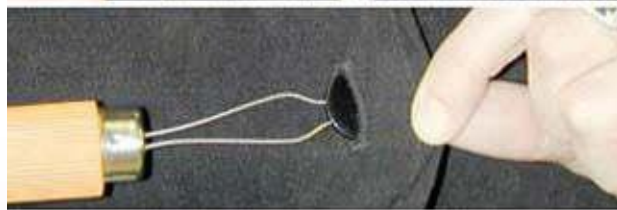


**Incorrect**



**Correct**

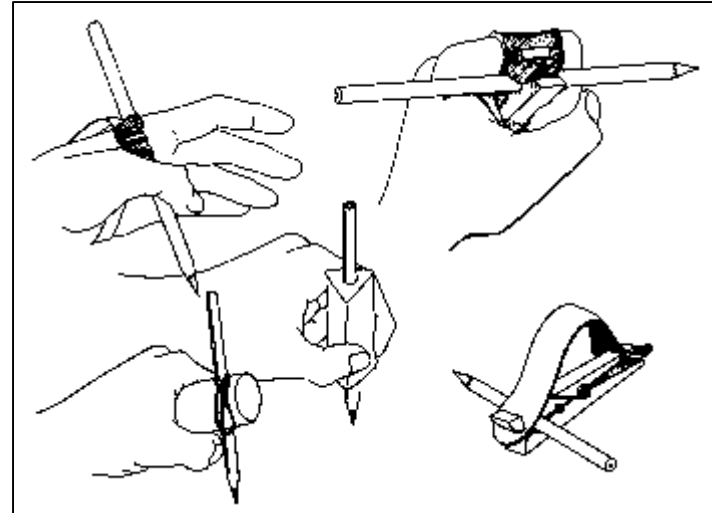
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# Education

Elderly persons and their family members need to be aware about

- the importance of maintaining mobility and independence in ADLs
- the disadvantages of being sedentary ( muscle weakness, loss of balance and coordination, being at high risk of musculoskeletal pains, high falls risk, constipation etc)
- complications of immobility ( DVTs, chest infections, osteoporosis, constipation, indigestion, bedsores, muscle wasting etc )
- the availability of services ( physiotherapy, occupational therapy )



# Thank You

