

IC O P E
INTEGRATED CARE FOR OLDER PEOPLE

LOCOMOTOR CAPACITY

Learning Objectives

By the end of this module, you will:

- Explain the care pathways to prevent, assess, and manage limited mobility in older people.
- Describe the methodologies for assessing the mobility of older people.
- List the interventions that can improve mobility in older people, both in primary care and in the community.
- Explain how to manage conditions associated with limited mobility and provide a supporting environment.

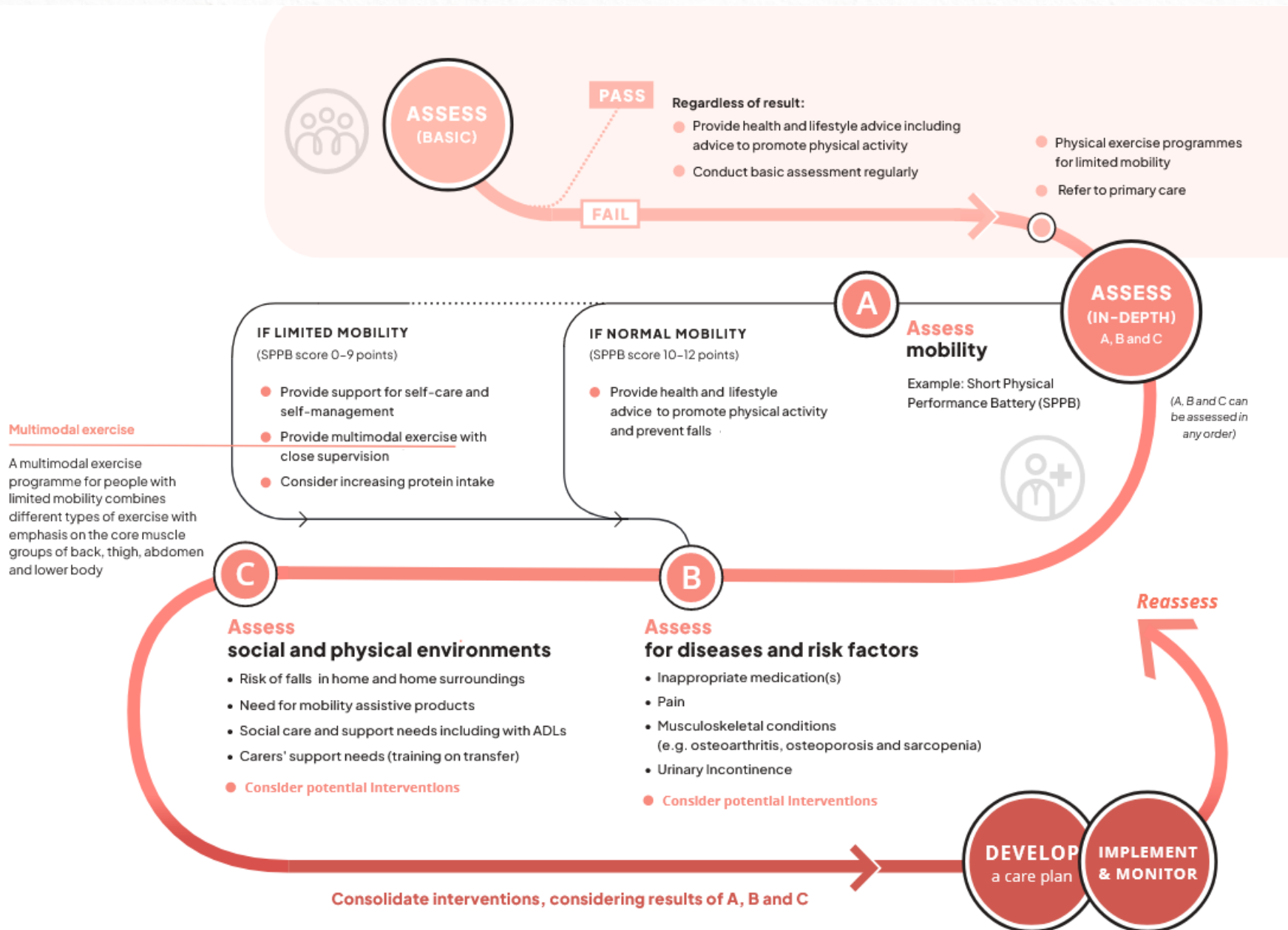


Locomotor Capacity and its Importance

- Mobility is the interaction of locomotor capacity and the person's living environment.
- It preserves autonomy and prevents care dependency.
- The term locomotor capacity refers to the bodily capacity to move from one place to another.

- Older people often accept loss of locomotor capacity and its associated pain as inevitable.
- However, effective strategies exist to improve and maintain mobility in older age.

Care pathway to manage mobility limitation





Assess Locomotor Capacity

SHORT PHYSICAL PERFORMANCE BATTERY (SPPB)

Three timed tests, each scored out of four, for a total score from 0 (worst performance) to 12 (best performance). Describe each test and inquire if the person feels capable before proceeding with the assessment.

Final SPPB score = sum of scores obtained from the three tasks.

1. Balance test

Side-by-side stand:

Held for 10 sec	1 point
Not held for 10 sec	0 points
Not attempted	0 points

Semi-tandem stand

Held for 10 sec	1 point
Not held for 10 sec	0 points
Not attempted	0 points

Tandem stand

Held for 10 sec	2 points
Held for 3 to < 10 sec	1 point
Held for < 3 sec	0 points
Not attempted	0 points



2. Gait speed

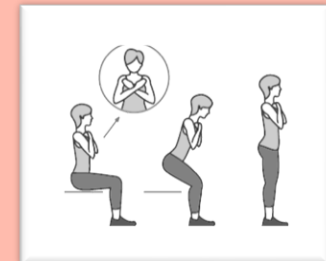
Time to walk 4 m



< 4.82 seconds	4 points
4.82–6.20 seconds	3 points
6.21–8.70 seconds	2 points
> 8.70 seconds	1 point
Unable to complete	0 points

3. Chair rise

Time to rise from a chair five times



< 11.19 seconds	4 points
11.2–13.69 seconds	3 points
13.7–16.69 seconds	2 points
16.7–59.90 seconds	1 point
> 60 seconds or unable to complete	0 points



Health and lifestyle advice

For all older people

- Older persons can benefit from physical activity, no matter their level of mobility.
- Too much sedentary behaviour is unhealthy.
- Physical activity should be adjusted to a person's ability. If you cannot meet these goals, be as active as you can.
- Start slowly and increase activity over time with options like walking, cycling, and gardening.
- Aim for at least 150 min of moderate or 75 minutes of vigorous activity each week, with sessions lasting at least 10 minutes.
- Include muscle-strengthening exercises on 2 days and balance activities on 3 days each week.
- A healthy diet is also important.

For older people with (potential) limited mobility, to prevent falls

- Certain activities can help prevent falls, including balance activities (e.g., yoga).
- Adapt the home environment.
- Practising good foot care and hygiene and wearing appropriate footwear.



Community-based health care

Physical exercise

- Organise exercise classes and informal activities for older people.
- Offer physical exercise options (e.g., brisk walking groups, Tai Chi classes in parks, and yoga at community centers).
- Foster social engagement and peer support to help maintain exercise routines.
- Include intergenerational activities to connect different age groups.
- Collaborate with local authorities and service providers to ensure dedicated exercise opportunities for older persons.
- Enhance the physical environment to create age-friendly cities and communities.



If in doubt about the safety of exercise, refer to an appropriate health care worker with knowledge





Interventions to improve mobility



Support for self-care and self-management

Multimodal exercise

Check health conditions that affect frequency and intensity

- Strength/Resistance training
- Aerobic/Cardiovascular training
- Balance training
- Flexibility training



Dietary advice, including increased protein intake and other nutritional interventions

- See the Vitality care pathway



Safety of exercise

If the person answers 'YES' to any of the following questions, a health professional should develop a tailored exercise programme.

- Have you experienced chest pain or palpitations in the past month?
- Have you had a heart attack within the last 6 months?
- Have you fainted or lost consciousness?
- Have you fallen in the past 12 months?
- Have you broken a bone in the last month?
- Do you get out of breath doing ordinary daily activities at home, such as getting dressed?
- When you walk, do you need to use objects to support yourself, such as holding onto furniture or leaning on another person?
- Do you have a joint or muscle disease that limits your ability to exercise?
- Has a health worker advised you to limit exercise?



Interventions for diseases and risk factors



Pain

Pain assessment and management (also considering physical exercise and psychological interventions).



Inappropriate medication(s)

Review medications and withdraw or prescribe alternatives.



Musculoskeletal conditions

Management of diseases and reduction of risk factors



Urinary incontinence

See Urinary Incontinence care pathway.



Interventions for social and physical environment



Risk of falls

Optimize physical environments at home and home surroundings



Need for assistive products

Provide mobility assistive products and advise on use and maintenance.



Social care and support needs

Provide personal care and support with activities of daily living.
Support access to health care and getting medications.



Carer's support needs

Provide training on positioning and transfer of an older person with mobility loss.

Summary

- Health workers can assess limited mobility using the Short Physical Performance Battery.
- Pain and identification of inappropriate medications should be considered as critical risk factors for mobility limitation.
- A tailored multimodal exercise program, along with nutritional interventions, effectively improves locomotor capacity.
- Assistive products can help older adults maintain mobility.
- Environmental modifications can enhance the functional ability of older people with limited mobility.
- Community organisations and older adults can promote physical activity and peer support.



References

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