

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 mobility impairment in older people.
- Describe the methodologies to assess mobility of older people.
- List the interventions to improve mobility of older people.
- Explain how to manage conditions associated with limited mobility.

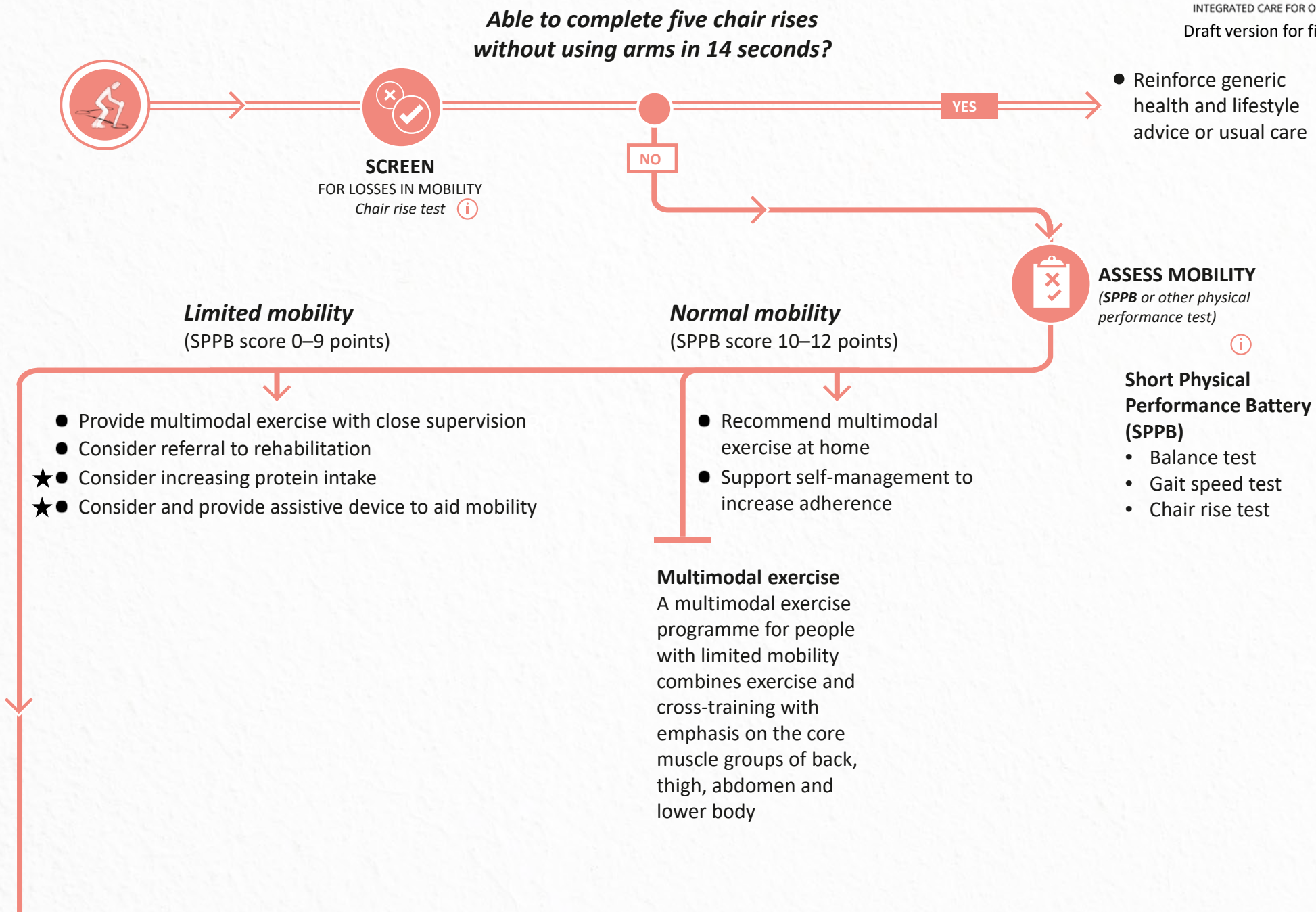


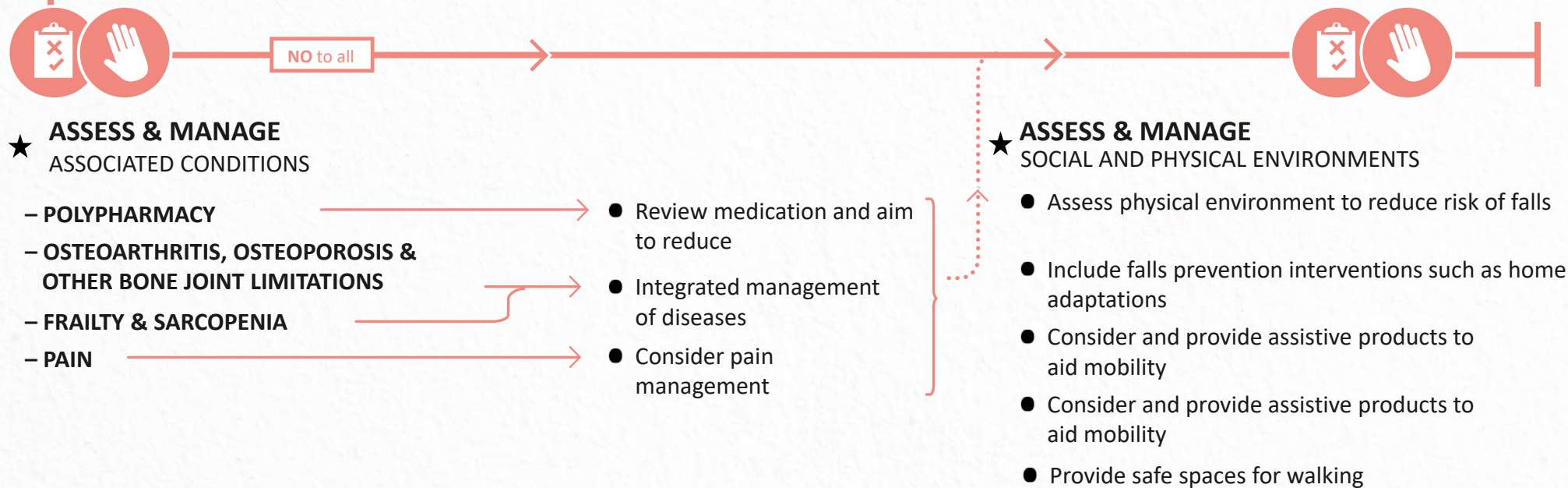
Locomotor Capacity and its Importance

- Mobility is vital for healthy ageing.
- It preserves autonomy and prevents reliance on care.
- 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 Pathways to Improve Mobility







Assess Locomotor Capacity

Locomotor capacity can be assessed by scoring a person's physical performance using the Short Physical Performance Battery (SPPB), which consists of three timed tests.

SHORT PHYSICAL PERFORMANCE BATTERY (SPPB)

- The SPPB is recommended due to its superior measurement properties and applicability
- SPPB is based on the administration of three timed tests, yielding a score from zero (worst performers) to 12 (best performers)
- Describe each test and inquire if the person feels capable before proceeding to the assessment
- Score the results of the three timed tests according to predefined criteria



Assess Locomotor Capacity by SPPB

- 1. Balance tests:** Stand for 10 seconds with feet in each of three positions (see box).
Sum the scores resulting from the three subtests.

- 2. Gait speed test:** Time to complete a 4-meter walk at the usual pace.

Scoring of the gait speed test:

< 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



A. Side-by-side stand

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

If not attempted, end balance tests.



B. Semi-tandem stand

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

If not attempted, end balance tests.



C. Tandem stand

Held for 10 seconds	2 points
Held for 3 to 9.99 seconds	1 point
Held for < 3 seconds	0 points
Not attempted	0 points



Assess Locomotor Capacity by SPPB

3. Chair rise test: Time to rise from a chair five times

Scoring of the chair rise test:

< 11.19 seconds	4 points
11.2 – 13.69 seconds	3 points
13.7 – 16.69 seconds	2 points
16.7 – 59.9 seconds	1 point
> 60 seconds or unable to complete	0 points



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



More details on the SPPB test:

<https://sppbguide.com/>

Assess and Manage Associated Conditions for Limited Mobility



Polypharmacy

- Eliminate unnecessary, ineffective medications as well as medications with a duplicative effect.
- If in doubt about whether a medication can be safely stopped, refer to an appropriate specialist.



Pain

- Assess pain: Rate the severity of pain related to mobility.
- Manage pain: Address multiple factors that may be associated with pain (physical, psychological well-being, nutrition and sleep).

Interventions to Improve Mobility



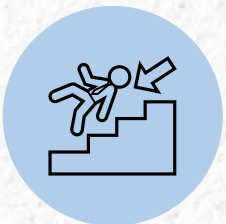
Multimodal exercise

- Check health conditions that affect frequency and intensity
- Resistance, aerobic, balance and flexibility training



Dietary advice, including increased protein intake and other nutritional interventions

- See care pathway for vitality



Reduce the risk of falls

- Assess physical environment
- Take a history of falls
- Assess gait, balance, mobility, and muscle and joint function and flexibility
- Assess fear of falling, vision, cognition, cardiovascular and neurological status, and urinary incontinence
- Review medications

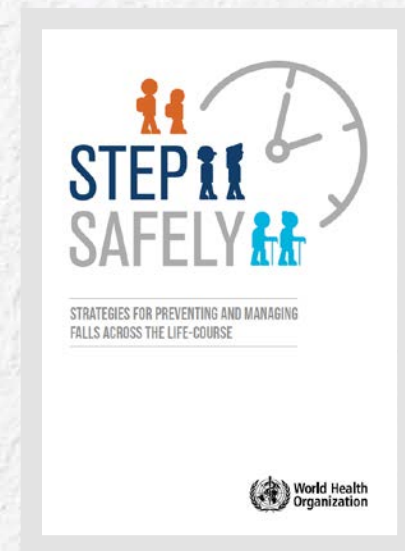
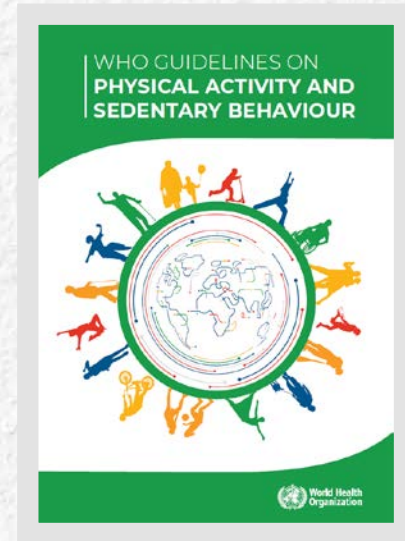


Consider the provision of assistive products



Support for self-management

- mAgeing, recommendation on physical activity



Summary

- Locomotor capacity can be assessed using the Short Physical Performance Battery, which includes three timed test:
 - Balance test
 - Gait speed test
 - Chair rise test
- Consider polypharmacy and pain as possible contributors to limited mobility.
- Specific interventions can be adopted to improve mobility of older people (e.g., multimodal exercise, dietary advice, fall risk reduction, provision of assistive products, self-management support).

