

**Multimedia Appendix 1 captures the broad scope of the tests and the critical areas of assessment: physical flexibility, joint mobility, coordination, hand dexterity, and cognitive function.**

Measurement indicators	Tests	Body parts	Description
Physical flexibility	Sit and reach test (cm)	Back and hamstring muscles	The participant sits on the floor with their legs extended straight and heels fixed. They are asked to reach forward with both hands to touch their toes. The remaining distance between the fingertips and the toes is recorded.
	Shoulder flexibility test (cm)	Shoulder joint upper muscles	The participant stands upright. One hand is placed behind the upper back, while the other is extended from the lower back upwards, attempting to clasp the fingers of both hands. The distance between the two hands is measured.
	Trunk rotation and trunk flexibility test	Lower back and trunk	The participant stands with their feet together and arms extended forward. They are instructed to rotate their torso to the left and then to the right around the axis of the waist. The angle formed by the two arms during left and right rotations is measured.
Joint range of motion	Shoulder range of motion test	Shoulder joint	The participant stands upright, and the maximum range of motion of the shoulder joint is measured in the following directions: flexion, extension, abduction, and adduction.
	Elbow range of motion test	Elbow joint	The participant stands upright, and the flexion angle of the elbow joint is measured.
Motor coordination	Figure of eight walk test (s)	Arms, hands, legs, feet, body	The participant walks around two markers placed on the floor in a figure-of-eight pattern, with a total walking distance of 10 meters. The time taken to complete the walk is recorded.
	Standing balance test (s)	Legs, feet, and body	The participant stands with their feet together and eyes closed to maintain balance. The duration for which the participant can maintain balance is recorded.

Hand dexterity	Box and block test	Fingers and palms	The number of blocks the participants transferred in 60 seconds from one compartment to the other compartment of the wooden box.
Cognitive function	Cognitive abilities screening instrument	Brain cognition	The scale is commonly used to assess mild cognitive impairment and early-stage dementia, comprising nine sections that evaluate domains such as attention, memory, orientation, language, abstract thinking, and calculation. The assessment typically takes 20 minutes to complete. Scores range from 0 to 100, with higher scores indicating better cognitive function.
	Chinese version of the mental state examination scale	Brain mini-cognition state	The scale is widely used in clinical and research settings to evaluate cognitive status through a brief question-and-answer format. It covers dimensions such as orientation, memory, attention, language skills, and visuospatial abilities. The scoring range is 0 to 30, with higher scores indicating superior cognitive performance.
	Chinese version of the cognitive assessment scale	Brain cognition	The scale is a comprehensive assessment tool for cognitive performance across multiple domains. It consists of 30 items and evaluates visuospatial abilities, memory, language, calculation, abstract reasoning, attention, and orientation. The test typically takes around 10 minutes to administer. Scores range from 0 to 30, with higher scores correlating with better cognitive function.