**Supplementary Table 2: aLiFE assessment tool**

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| **aLiFE assessment tool: Strength activities** | | | | | |
| **Bend your knees** | **Instructions** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| Squatting | * Have support available * The exercise must be pain free | 100% quarter squat   * No support * Hold for 5 seconds | 74% half squat   * No support * Hold for 5 seconds | 74% quarter one legged squat   * No support * Hold for 5 seconds | 71% quarter one legged squat   * No support * Bending forward and picking up item from stairs * Hold for 5 seconds |
| Lunging | * Have support available * The exercise must be pain free | 96% partial lunge   * During standing * Hold for 5 seconds | 92% partial lunge   * During walking (4m) | 79% full lunge   * During standing * Hold for 5 seconds | 63% full lunge   * During walking (4m) |
| **On your toes** | **Instructions** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| Walking on toes | * Heels must be off the ground | 100% Distance 2 m   * Hold support | 96% Distance 4 m   * No support | 96% Distance 6m   * No support | 96% Distance 8m   * Carrying a heavy item (e.g., laundry basket, water bottle crate) * No support |
| **On your heels** | **Instructions** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| Walking on heels | Toes must be off the ground | 100% Distance 2 m   * Hold support | 100% Distance 4 m   * No support | 96% Distance 6m   * No support | 93% Distance 8m   * No support |
| **Up the stairs** | **Instructions** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| Stair climbing | * Walk up the stairs * Use your legs rather than pulling up with your hands | 92% Walking up the stairs   * No support | 92% Walking up the stairs   * Carrying a heavy item (e.g., laundry basket, water bottle crate) | 70% Walking up two stairs at a time | 48% Walking up two stairs at a time   * Carrying a heavy item (e.g., laundry basket, water bottle crate) |
| **Sit-to-stand** | **Instructions** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| Standing up from a seated position | * Sit with bottom to front of chair * Push up from legs. | 100% Rising from a chair   * no hand support | 100% Rising from a chair slowly   * No hand support * Must take at least 5 seconds | 92% Rising from a standard chair   * Approx 75% body weight on left/right leg (on your toe) * No hand support | 71% Rising from a a standard chair slowly   * Approx 75% body weight on left/right leg (on your toe) * No hand support * Must take at least 5 seconds |

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| **aLiFE assessment tool: Neuromotor activities** | | | | | |
| **Decreased base of support** | **Instructions** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| Tandem stand | * Heel-to-toe stand * Hold for 15 sec | 100% hold support | 89% no support | With **one** additional challenge:   * 71% Manual: brushing hair (simulate) * 68% Cognitive (serial 3 subtraction task from random number) * 26% Eyes closed * 45% Head turn * 42% Pivot turn (without reactive step) | With **two** additional challenges:   * 23% Manual + cognitive * 13% Manual + eyes closed * 10% Eyes closed + cognitive * 3% Head turn + eyes closed * 0% Pivot turn + eyes closed |
| One-leg stand | * Support available * Hold for 15s sec * Record least stable leg:   🞏 Left 🞏 Right | 100% hold support | 85% no support | With **one** additional challenge:   * 65% Manual: brushing hair (simulate) * 68% Cognitive (serial 3 subtraction task from random number) * 26% Eyes closed * 3% Eyes closed * 10% Head turn * 48% Standing scale: pick item from chair | * With **two** additional challenges: * 7% Manual + cognitive * 0% Manual + eyes closed * 0% Eyes closed + cognitive * 0% Head turn + Eyes closed |
| Tandem walk | * Heal to toe walk * Walking distance 2.0 metres | 100% hold support | 85% no support | With **one** additional challenge:   * 68% Manual: carry glass of water * 68% Cognitive * 13% Eyes closed * 36% Head turn * 26% Crouching: pick item from floor | * With **two** additional challenges: * 3% Manual + cognitive * 3% Manual + eyes clodssed * 0% Eyes closed + cognitive * 0% Head turn + eyes closed |
| **Shifting weight to limits of stability** | **Instructions** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| Leaning | * Lean as far as possible forward * Bend at ankle joint (not waist) * Hold for 10 seconds | 100% Feet shoulder-width apart, no support | 93% Feet together, no support | Feet together, with **one** additional challenge:   * 71% Manual: brushing hair (simulate) * 74% Cognitive task (serial 3 subtraction task from random number) * 68% Eyes closed * 39% One-leg stand | Feet together, with **two** additional challenges:   * 29% Manual + cognitive * 32% Manual + eyes closed * 26% Eyes closed + cognitive * 16% One-leg stand + manual * 7% One-leg stand + eyes closed |
| **Stepping over objects** | **Instructions** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| Forwards and backwards | * Place foam block on floor * step forward and backwards over block (30cm high) | 100% hold support | 92% no support | With **one** additional challenge:   * 71% Manual: carrying a dinner plate * 74% Cognitive (serial 3 subtraction task from random number) * 36% Forward hopping over object (instead of stepping) | With **two** additional challenges:   * 45% Manual task + cognitive task * 16% Hopping + cognitive task |
| **Stepping, hopping, jumping in different ways (agility)** | **Instructions** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| Stepping and changing direction | * Perform forward, backward, sideward stepping | 100% Basic step pattern | 92% Intermediate step pattern | 77% Advanced step pattern |  |
| Square stepping, hopping, jumping | * Perfom square stepping/ hopping * Document if stepping and/or hopping was performed correct and safe | Basis step pattern:   * 77% Stepping * 45% Hopping | Intermediate step pattern   * 71% Stepping * 45% Hopping | Advanced step pattern   * 48% Stepping * 29% Hopping | Expert step pattern  Level 4: 10%  Level 5: 10%  Level 6: 7% |

Presented is the aLiFE Assessment Tool (aLAT) used to tailor the aLiFE strength and neuromotor activities. The trainer assessed all activities shown in the assessment tool during the first home visit for setting the starting level, which is the level participants can execute safely without trainer assistance and supervision. Additional task are standardized as shown in the table. During the assessment the trainer also explains the underpinning activity principles. If the participants is able to perform a certain level safely during the intervention period, they should attempt to progress to the next level in order ensure the effectiveness of the training. % values in the table indicate the percentage of study participants able to perform a specific task in the aLAT as described in the paper.