

## Appendix C: Functional ability

**Table C1: Performance of upper limb scores per item**

Item	Item nr.	Side	Dimension	Subject	Without support	With support	Difference with-without support
Entry item					3	3	0
Shoulder abduction arms above head	1	Both arms	Shoulder	Subject 1	0	0	0
Raise both arms to shoulder height	2	Both arms	Shoulder	Subject 1	0	0	0
Shoulder flexion to shoulder height (no weights)	3	Right	Shoulder	Subject 1	0	1	1
Shoulder flexion to shoulder height (no weights)	3	Left	Shoulder	Subject 1	0	1	1
Shoulder flexion to shoulder height with 500g	4	Right	Shoulder	Subject 1	0	0	0
Shoulder flexion to shoulder height with 500g	4	Left	Shoulder	Subject 1	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Right	Shoulder	Subject 1	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Left	Shoulder	Subject 1	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Right	Shoulder	Subject 1	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Left	Shoulder	Subject 1	0	0	0
Hand(s) to mouth	7	Right	Elbow	Subject 1	1	1	0
Hand(s) to mouth	7	Left	Elbow	Subject 1	1	1	0
Hands to table from lap	8	Both arms	Elbow	Subject 1	1	2	1
Move weight on table 100g	9	Right	Elbow	Subject 1	1	2	1
Move weight on table 100g	9	Left	Elbow	Subject 1	1	2	1
Move weight on table 500g	10	Right	Elbow	Subject 1	1	2	1
Move weight on table 500g	10	Left	Elbow	Subject 1	0	2	2
Move weight on table 1kg	11	Right	Elbow	Subject 1	0	1	1
Move weight on table 1kg	11	Left	Elbow	Subject 1	0	1	1
Lift heavy can diagonally	12	Right	Elbow	Subject 1	0	0	0
Lift heavy can diagonally	12	Left	Elbow	Subject 1	0	0	0
Stack of three cans (heavy cans)	13	Right	Elbow	Subject 1	0	0	0
Stack of three cans (heavy cans)	13	Left	Elbow	Subject 1	0	0	0
Stack of five cans (heavy cans)	14	Right	Elbow	Subject 1	0	0	0
Stack of five cans (heavy cans)	14	Left	Elbow	Subject 1	0	0	0
Remove lid from container	15	Both arms	Elbow	Subject 1	1	1	0
Tearing paper	16	Both arms	Elbow	Subject 1	2	2	0
Entry item				Subject 2	3	4	1
Shoulder abduction arms above head	1	Both arms	Shoulder	Subject 2	0	0	0
Raise both arms to shoulder height	2	Both arms	Shoulder	Subject 2	0	2	2
Shoulder flexion to shoulder height (no weights)	3	Right	Shoulder	Subject 2	1	1	0
Shoulder flexion to shoulder height (no weights)	3	Left	Shoulder	Subject 2	1	0	-1
Shoulder flexion to shoulder height with 500g	4	Right	Shoulder	Subject 2	0	0	0
Shoulder flexion to shoulder height with 500g	4	Left	Shoulder	Subject 2	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Right	Shoulder	Subject 2	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Left	Shoulder	Subject 2	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Right	Shoulder	Subject 2	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Left	Shoulder	Subject 2	0	0	0
Hand(s) to mouth	7	Right	Elbow	Subject 2	1	1	0
Hand(s) to mouth	7	Left	Elbow	Subject 2	1	1	0
Hands to table from lap	8	Both arms	Elbow	Subject 2	2	2	0
Move weight on table 100g	9	Right	Elbow	Subject 2	2	2	0
Move weight on table 100g	9	Left	Elbow	Subject 2	2	2	0
Move weight on table 500g	10	Right	Elbow	Subject 2	1	2	1
Move weight on table 500g	10	Left	Elbow	Subject 2	1	1	0
Move weight on table 1kg	11	Right	Elbow	Subject 2	1	1	0
Move weight on table 1kg	11	Left	Elbow	Subject 2	1	1	0
Lift heavy can diagonally	12	Right	Elbow	Subject 2	1	1	0
Lift heavy can diagonally	12	Left	Elbow	Subject 2	1	1	0
Stack of three cans (heavy cans)	13	Right	Elbow	Subject 2	0	1	1
Stack of three cans (heavy cans)	13	Left	Elbow	Subject 2	0	0	0

(repeat)

Item	Item nr.	Side	Dimension	Subject	Without support	With support	Difference with-without support
Stack of five cans (heavy cans)	14	Right	Elbow	Subject 2	0	0	0
Stack of five cans (heavy cans)	14	Left	Elbow	Subject 2	0	0	0
Remove lid from container	15	Both arms	Elbow	Subject 2	1	1	0
Tearing paper	16	Both arms	Elbow	Subject 2	2	2	0
Entry item				Subject 3	3	3	0
Shoulder abduction arms above head	1	Both arms	Shoulder	Subject 3	0	0	0
Raise both arms to shoulder height	2	Both arms	Shoulder	Subject 3	0	0	0
Shoulder flexion to shoulder height (no weights)	3	Right	Shoulder	Subject 3	0	0	0
Shoulder flexion to shoulder height (no weights)	3	Left	Shoulder	Subject 3	0	0	0
Shoulder flexion to shoulder height with 500g	4	Right	Shoulder	Subject 3	0	0	0
Shoulder flexion to shoulder height with 500g	4	Left	Shoulder	Subject 3	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Right	Shoulder	Subject 3	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Left	Shoulder	Subject 3	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Right	Shoulder	Subject 3	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Left	Shoulder	Subject 3	0	0	0
Hand(s) to mouth	7	Right	Elbow	Subject 3	2	2	0
Hand(s) to mouth	7	Left	Elbow	Subject 3	1	1	0
Hands to table from lap	8	Both arms	Elbow	Subject 3	2	2	0
Move weight on table 100g	9	Right	Elbow	Subject 3	2	2	0
Move weight on table 100g	9	Left	Elbow	Subject 3	2	2	0
Move weight on table 500g	10	Right	Elbow	Subject 3	2	2	0
Move weight on table 500g	10	Left	Elbow	Subject 3	1	1	0
Move weight on table 1kg	11	Right	Elbow	Subject 3	1	1	0
Move weight on table 1kg	11	Left	Elbow	Subject 3	0	1	1
Lift heavy can diagonally	12	Right	Elbow	Subject 3	0	0	0
Lift heavy can diagonally	12	Left	Elbow	Subject 3	0	0	0
Stack of three cans (heavy cans)	13	Right	Elbow	Subject 3	0	0	0
Stack of three cans (heavy cans)	13	Left	Elbow	Subject 3	0	0	0
Stack of five cans (heavy cans)	14	Right	Elbow	Subject 3	0	0	0
Stack of five cans (heavy cans)	14	Left	Elbow	Subject 3	0	0	0
Remove lid from container	15	Both arms	Elbow	Subject 3	0	0	0
Tearing paper	16	Both arms	Elbow	Subject 3	2	2	0
Entry item				Subject 4	3	3	0
Shoulder abduction arms above head	1	Both arms	Shoulder	Subject 4	0	0	0
Raise both arms to shoulder height	2	Both arms	Shoulder	Subject 4	0	1	1
Shoulder flexion to shoulder height (no weights)	3	Right	Shoulder	Subject 4	1	1	0
Shoulder flexion to shoulder height (no weights)	3	Left	Shoulder	Subject 4	0	1	1
Shoulder flexion to shoulder height with 500g	4	Right	Shoulder	Subject 4	0	0	0
Shoulder flexion to shoulder height with 500g	4	Left	Shoulder	Subject 4	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Right	Shoulder	Subject 4	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Left	Shoulder	Subject 4	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Right	Shoulder	Subject 4	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Left	Shoulder	Subject 4	0	0	0
Hand(s) to mouth	7	Right	Elbow	Subject 4	0	2	2
Hand(s) to mouth	7	Left	Elbow	Subject 4	0	2	2
Hands to table from lap	8	Both arms	Elbow	Subject 4	2	2	0
Move weight on table 100g	9	Right	Elbow	Subject 4	2	2	0
Move weight on table 100g	9	Left	Elbow	Subject 4	2	2	0
Move weight on table 500g	10	Right	Elbow	Subject 4	1	2	1
Move weight on table 500g	10	Left	Elbow	Subject 4	1	1	0
Move weight on table 1kg	11	Right	Elbow	Subject 4	1	1	0
Move weight on table 1kg	11	Left	Elbow	Subject 4	0	1	1
Lift heavy can diagonally	12	Right	Elbow	Subject 4	1	2	1
Lift heavy can diagonally	12	Left	Elbow	Subject 4	1	2	1
Stack of three cans (heavy cans)	13	Right	Elbow	Subject 4	0	0	0

(repeat)

Item	Item nr.	Side	Dimension	Subject	Without support	With support	Difference with-without support
Stack of three cans (heavy cans)	13	Left	Elbow	Subject 4	0	0	0
Stack of five cans (heavy cans)	14	Right	Elbow	Subject 4	0	0	0
Stack of five cans (heavy cans)	14	Left	Elbow	Subject 4	0	0	0
Remove lid from container	15	Both arms	Elbow	Subject 4	1	1	0
Tearing paper	16	Both arms	Elbow	Subject 4	2	2	0
Entry item				Subject 5	3	3	0
Shoulder abduction arms above head	1	Both arms	Shoulder	Subject 5	0	0	0
Raise both arms to shoulder height	2	Both arms	Shoulder	Subject 5	0	0	0
Shoulder flexion to shoulder height (no weights)	3	Right	Shoulder	Subject 5	0	0	0
Shoulder flexion to shoulder height (no weights)	3	Left	Shoulder	Subject 5	0	0	0
Shoulder flexion to shoulder height with 500g	4	Right	Shoulder	Subject 5	0	0	0
Shoulder flexion to shoulder height with 500g	4	Left	Shoulder	Subject 5	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Right	Shoulder	Subject 5	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Left	Shoulder	Subject 5	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Right	Shoulder	Subject 5	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Left	Shoulder	Subject 5	0	0	0
Hand(s) to mouth	7	Right	Elbow	Subject 5	1	1	0
Hand(s) to mouth	7	Left	Elbow	Subject 5	1	1	0
Hands to table from lap	8	Both arms	Elbow	Subject 5	0	0	0
Move weight on table 100g	9	Right	Elbow	Subject 5	0	2	2
Move weight on table 100g	9	Left	Elbow	Subject 5	1	2	1
Move weight on table 500g	10	Right	Elbow	Subject 5	0	0	0
Move weight on table 500g	10	Left	Elbow	Subject 5	1	0	-1
Move weight on table 1kg	11	Right	Elbow	Subject 5	0	0	0
Move weight on table 1kg	11	Left	Elbow	Subject 5	0	0	0
Lift heavy can diagonally	12	Right	Elbow	Subject 5	0	0	0
Lift heavy can diagonally	12	Left	Elbow	Subject 5	0	0	0
Stack of three cans (heavy cans)	13	Right	Elbow	Subject 5	0	0	0
Stack of three cans (heavy cans)	13	Left	Elbow	Subject 5	0	0	0
Stack of five cans (heavy cans)	14	Right	Elbow	Subject 5	0	0	0
Stack of five cans (heavy cans)	14	Left	Elbow	Subject 5	0	0	0
Remove lid from container	15	Both arms	Elbow	Subject 5	0	0	0
Tearing paper	16	Both arms	Elbow	Subject 5	0	0	0
Entry item				Subject 6	3	3	0
Shoulder abduction arms above head	1	Both arms	Shoulder	Subject 6	0	0	0
Raise both arms to shoulder height	2	Both arms	Shoulder	Subject 6	0	0	0
Shoulder flexion to shoulder height (no weights)	3	Right	Shoulder	Subject 6	0	2	2
Shoulder flexion to shoulder height (no weights)	3	Left	Shoulder	Subject 6	0	1	1
Shoulder flexion to shoulder height with 500g	4	Right	Shoulder	Subject 6	0	0	0
Shoulder flexion to shoulder height with 500g	4	Left	Shoulder	Subject 6	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Right	Shoulder	Subject 6	0	0	0
Shoulder flexion above shoulder with 500g weight	5	Left	Shoulder	Subject 6	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Right	Shoulder	Subject 6	0	0	0
Shoulder flexion above shoulder with 1 kg weight	6	Left	Shoulder	Subject 6	0	0	0
Hand(s) to mouth	7	Right	Elbow	Subject 6	2	2	0
Hand(s) to mouth	7	Left	Elbow	Subject 6	2	2	0
Hands to table from lap	8	Both arms	Elbow	Subject 6	2	2	0
Move weight on table 100g	9	Right	Elbow	Subject 6	2	2	0
Move weight on table 100g	9	Left	Elbow	Subject 6	2	2	0
Move weight on table 500g	10	Right	Elbow	Subject 6	2	2	0
Move weight on table 500g	10	Left	Elbow	Subject 6	2	2	0
Move weight on table 1kg	11	Right	Elbow	Subject 6	1	2	1
Move weight on table 1kg	11	Left	Elbow	Subject 6	1	1	0
Lift heavy can diagonally	12	Right	Elbow	Subject 6	1	2	1
Lift heavy can diagonally	12	Left	Elbow	Subject 6	1	2	1

(repeat)

<b>Item</b>	<b>Item nr.</b>	<b>Side</b>	<b>Dimension</b>	<b>Subject</b>	<b>Without support</b>	<b>With support</b>	<b>Difference with-without support</b>
Stack of three cans (heavy cans)	13	Right	Elbow	Subject 6	1	2	1
Stack of three cans (heavy cans)	13	Left	Elbow	Subject 6	1	2	1
Stack of five cans (heavy cans)	14	Right	Elbow	Subject 6	0	0	0
Stack of five cans (heavy cans)	14	Left	Elbow	Subject 6	0	0	0
Remove lid from container	15	Both arms	Elbow	Subject 6	0	0	0
Tearing paper	16	Both arms	Elbow	Subject 6	1	1	0

**Table C1: Additional activity scores per item**

Item	Side	Subject	Without support	With support	Difference with- without support
Use keyboard of a computer	Both arms	Subject 1	1	2	1
Eat with knife and fork	Both arms	Subject 1	1	2	1
Shake hands	Right	Subject 1	0	2	2
Shake hands	Left	Subject 1	0	1	1
Write	Both arms	Subject 1	2	2	0
Turn pages of a book	Both arms	Subject 1	1	2	1
Use manual wheelchair	Both arms	Subject 1	1	2	1
Use keyboard of a computer	Both arms	Subject 2	2	2	0
Eat with knife and fork	Both arms	Subject 2	1	1	0
Shake hands	Right	Subject 2	1	2	1
Shake hands	Left	Subject 2	1	1	0
Write	Both arms	Subject 2	2	2	0
Turn pages of a book	Both arms	Subject 2	2	2	0
Use manual wheelchair	Both arms	Subject 2	2	2	0
Use keyboard of a computer	Both arms	Subject 3	1	2	1
Eat with knife and fork	Both arms	Subject 3	2	2	0
Shake hands	Right	Subject 3	0	0	0
Shake hands	Left	Subject 3	0	0	0
Write	Both arms	Subject 3	2	2	0
Turn pages of a book	Both arms	Subject 3	1	2	1
Use manual wheelchair	Both arms	Subject 3	n.a.	n.a.	n.a.
Use keyboard of a computer	Both arms	Subject 4	2	2	0
Eat with knife and fork	Both arms	Subject 4	1	2	1
Shake hands	Right	Subject 4	1	2	1
Shake hands	Left	Subject 4	0	2	2
Write	Both arms	Subject 4	2	2	0
Turn pages of a book	Both arms	Subject 4	1	2	1
Use manual wheelchair	Both arms	Subject 4	2	2	0
Use keyboard of a computer	Both arms	Subject 5	1	1	0
Eat with knife and fork	Both arms	Subject 5	1	0	-1
Shake hands	Right	Subject 5	0	0	0
Shake hands	Left	Subject 5	0	0	0
Write	Both arms	Subject 5	1	1	0
Turn pages of a book	Both arms	Subject 5	1	2	1
Use manual wheelchair	Both arms	Subject 5	n.a.	n.a.	n.a.
Use keyboard of a computer	Both arms	Subject 6	2	2	0
Eat with knife and fork	Both arms	Subject 6	2	2	0
Shake hands	Right	Subject 6	1	2	1
Shake hands	Left	Subject 6	1	2	1
Write	Both arms	Subject 6	2	2	0
Turn pages of a book	Both arms	Subject 6	2	2	0
Use manual wheelchair	Both arms	Subject 6	n.a.	n.a.	n.a.

n.a. = not applicable because subject does not use a manual wheelchair