**Van Lieshout Test & Van Lieshout Test- Short Version**

Adapted from Post MWM et al. Measurement Properties of the short version of the Van Lieshout test for arm/hand function of persons with tetraplegia after spinal cord injury, Spinal Cord, 44: 763-771, 2006; Appendix A & B. Used with permission from Nature Publishing.

The total VLT-SV score is the mean of the item scores, ranging from 0 (worst arm/ hand function) up to 5 (best arm/ hand function). Administration time of the VLT-SV is 25–35 min.

Below is the Van Lieshout Test. The bolded items (5, 6, 11, 13-19) constitute the Van Lieshout Test –Short Version.

 *General performance of the arms aimed at movement of the body*

VLT 1: wheelchair

Measure – ability to propel a manual wheelchair

Task - the subject is asked how and for what purposes he/she uses the wheelchair in daily life

VLT 2: transfers

Measure – Ability to perform transfers
Task – The subject is asked how he/she performs transfers to and from the wheelchair

VLT 3: push-ups
Measure – Ability to lift (eg to reduce the weight on the buttocks while seated)
Task – Perform a push-up while seated in the wheelchair

*Positioning and stabilizing the arms*
VLT 4: stabilization
Measure – Ability to stabilize both arms against gravity
Task – take up the positions as described during 5 s

**VLT 5: arch task**Measure – Shoulder and elbow extension
Task – perform a semicircular movement of the arm against gravity in the frontal plan by moving the hand along a vertical semicircular plastic tube

**VLT 6: forward reaching**
Measure – ability to reach forward
Task – move a bottle across a table towards the body and back

VLT 7: reaching low
Measure – ability to reach low
Task – pick up a bottle from a crate that is placed on the floor while seating in the wheelchair

VLT 8: reaching high
Measure – ability to reach above shoulder height
Task – place a bottle on a shelf

*Development of the opening and closing of the function hand*
VLT 9: sensation
Measure – sensibility of the hand
Task - position randomly placed equally sized objects in order of weight by lifting or pushing

VLT 10: thumb closure
Measure – wrist-related thumb closing
Task – the position of the thumb during maximal wrist extension and maximal wirst flexion is described

**VLT 11: thumb opening**Measure – wrist-related thumb opening
Task – pick up and release cylindrical objects of different size using lateral pinch

VLT 12: finger closure
Measure – wrist-related finger closure
Task – the position of the fingers during maximal wrist extension and maximal wrist flexion is described

**VLT 13: finger opening**Measure – wrist-related finger opening
Task – pick up and release a small and a large tin

*Grasp and release*
**VLT 14: grasp function of the thumb**Measure – grasp function of the thumb
Task – pick up a coin in 10 different thumb positions

**VLT 15: thumb strength**Measure – functional power of the grip using lateral pinch
Task - pick up a jug containing water using the thumb, pour water into a glass, and put the jug on the table

**VLT 16: finger strength**
Measure – functional power of the grip of the fingers during maximal wrist extension
Task – pick up a jug containing water using the fingers, pour water into a glass, and put the jug on the table

*Manipulation using both thumb and fingers*
**VLT 17: pen grip**Measure – functional grip of the hand
Task – write own name and place signature on a piece of paper. Describe the grip used.

**VLT 18: opening a bottle**
Measure – ability to perform a complex bilateral task
Task – open a bottle with a crown cork using an opener

**VLT 19: lighting a match**Measure – ability to perform a complex bilateral task
Task – pick up a matchbox, take out a match, secure the match, and light it

Van Lieshout Test Worksheet:

Patient Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Scores (0-5):**
Item:

1. \_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_
5. \_\_\_\_\_\_\_\_
6. \_\_\_\_\_\_\_\_
7. \_\_\_\_\_\_\_\_
8. \_\_\_\_\_\_\_\_
9. \_\_\_\_\_\_\_\_
10. \_\_\_\_\_\_\_\_
11. \_\_\_\_\_\_\_\_
12. \_\_\_\_\_\_\_\_
13. \_\_\_\_\_\_\_\_
14. \_\_\_\_\_\_\_\_
15. \_\_\_\_\_\_\_\_
16. \_\_\_\_\_\_\_\_
17. \_\_\_\_\_\_\_\_
18. \_\_\_\_\_\_\_\_
19. \_\_\_\_\_\_\_\_

**Total VLT Score: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Van-Lieshout Test Short Version:

Patient Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Scores (0-5):**
Item:

1. \_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_
5. \_\_\_\_\_\_\_\_
6. \_\_\_\_\_\_\_\_
7. \_\_\_\_\_\_\_\_
8. \_\_\_\_\_\_\_\_
9. \_\_\_\_\_\_\_\_
10. \_\_\_\_\_\_\_\_

**Total VLT-SV Score: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**