

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 wrist 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: _____