

The iNPH scale

Gait domain

The rating from an ordinal gait scale and the results from the 10-metre walk test (number of steps and time in seconds, mean of two consecutive trails) are converted to the following scores from 0 to 100. A mean gait domain score is calculated from the available converted scores.

| Ordinal rating of gait | 10 m walk test (steps) | 10 m walk test (seconds) |
|---|-----------------------------------|-------------------------------------|
| 1. Normal gait = 100 | <15.50 = 100 | <8.75 = 100 |
| 2. Slight disturbance of tandem walk and turning = 86 | 15.50–16.50 = 90 | 8.75–9.25 = 90 |
| | 16.75–17.25 = 80 | 9.50–9.75 = 80 |
| 3. Wide-based gait with sway, without foot corrections = 71 | 17.50–18.00 = 70 | 10.00–10.25 = 70 |
| | 18.25–19.25 = 60 | 10.50–10.75 = 60 |
| 4. Tendency to fall, with foot corrections = 57 | 19.50–20.25 = 50 | 11.00–11.50 = 50 |
| | 20.50–21.25 = 40 | 11.75–13.00 = 40 |
| 5. Walking with cane = 43 | 21.50–23.75 = 30 | 13.25–16.00 = 30 |
| 6. Bi-manual support needed = 29 | 24.00–27.25 = 20 | 16.25–19.25 = 20 |
| | 27.50–40.00 = 10 | 19.50–27.00 = 10 |
| 7. Aided = 14 | >40 or fail = 0 | >27 or fail = 0 |
| 8. Wheelchair bound = 0 | | |

Balance domain

The ordinal balance scale score is converted to the following balance domain scores from 0 to 100.

| Ordinal rating of balance |
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| 1. Able to stand independently for more than 30 s on either lower extremity alone = 100 |
| 2. Able to stand independently for 5 - 30 s on either lower extremity alone = 83 |
| 3. Able to stand independently with the feet together (at the heels) for more than 30 s = 67 |
| 4. Able to stand independently with the feet together for 5 - 30 s = 50 |
| 5. Able to stand independently with the feet apart (one foot length) for more than 30 s = 33 |
| 6. Able to stand independently with the feet apart for 5 - 30 s = 17 |
| 7. Unable to stand without assistance = 0 |

Neuropsychology domain

The results from four separate tests are converted to the following scores from 0 to 100. A mean neuropsychology domain score is calculated from the available converted scores.

| Grooved pegboard (fastest trial) | Rey Auditory Verbal Learning Test (sum of five trials) | Stroop, colour-naming | Stroop, interference |
|--|--|----------------------------------|---------------------------------|
| <79 = 100 | >44 = 100 | <68 = 100 | <132 = 100 |
| 79–87 = 90 | 38–44 = 90 | 68–77 = 90 | 132–160 = 90 |
| 88–96 = 80 | 32–37 = 80 | 78–81 = 80 | 161–188 = 80 |
| 97–105 = 70 | 30–31 = 70 | 82–87 = 70 | 189–210 = 70 |
| 106–114 = 60 | 28–29 = 60 | 88–96 = 60 | 211–239 = 60 |
| 115–128 = 50 | 26–27 = 50 | 97–106 = 50 | 240–298 = 50 |
| 129–144 = 40 | 22–25 = 40 | 107–121 = 40 | 299–385 = 40 |
| 145–173 = 30 | 19–21 = 30 | 122–134 = 30 | 386–600 = 30 |
| 174–245 = 20 | 15–18 = 20 | 135–171 = 20 | >600 = 20 |
| 246–600 = 10 | 11–14 = 10 | 172–300 = 10 | Fail = 10 |
| >600 or fail = 0 | <11 or fail = 0 | >300 or fail = 0 | |

Continence domain

The ordinal continence scale score is converted to the following continence domain scores from 0 to 100.

| Ordinal rating of continence |
|--|
| 1 Normal = 100 |
| 2 Urgency without incontinence = 80 |
| 3 Infrequent (not daily) incontinence without napkin = 60 |
| 4 Frequent incontinence with napkin = 40 |
| 5 Bladder incontinence (i.e. complete loss of bladder control) = 20 |
| 6 Bladder and bowel incontinence (i.e. complete loss of bladder and bowel control) = 0 |

Total iNPH score

The total iNPH scale score is the mean of the available domain scores with the gait domain score x 2.

| Total iNPH score |
|---|
| $\frac{2 \times \text{Gait domain} + \text{Balance domain} + \text{Neuropsychology domain} + \text{Continenence domain}}{5 \text{ (or number of available domain scores)}}$ |

Reference

Hellström P, Klinge P, Tans J, Wikkelsø C. A new scale for assessment of severity and outcome in iNPH. Acta Neurol Scand. 2012 May 16. doi:10.1111/j.1600-0404.2012.01677.x.