

**NINDS CDE Notice of Copyright
Wheelchair Circuit**

Availability:	<p>The Wheelchair Circuit is freely available in the following publication: Kilkens et al. (2002). For more information about this instrument, please visit: Wheelchair Circuit Link</p>
Classification:	Exploratory: Spinal Cord Injury (SCI) and SCI-Pediatric (age 5 and over)
Short Description of Instrument:	<p>Construct measured: Wheelchair Mobility Generic vs. disease specific: Disease specific Means of administration: Administered by a clinician Intended respondent: Participant # of items: 9 # of subscales and names of sub-scales: 3, tempo, technical skill, and physical capacity</p>
Comments/Special instructions:	<p>Background: The test was developed to measure manual wheelchair mobility (skill and performance). It was developed for SCI.</p> <p>There are 9 items, which cover 3 aspects of mobility:</p> <ol style="list-style-type: none"> 1) Tempo (tasks = figure-of-8 shape and sprint) 2) Technical skill (tasks = crossing a doorstep, mounting a platform, and transferring) 3) Physical capacity (tasks = wheelchair propulsion and ascending slopes)
Rationale/Justification:	<p>This is a performance-based measure intended to be administered by a clinician. During each of the following tasks, performance time, distance, or successful completion are recorded. There is a resting time of 2 minutes between each task.</p> <p>Psychometric testing in SCI. Reliability: Intra-rater reliability for the total WC (ICC=0.98), for both individual tasks (ICC=0.71–0.99), and for record peak heart rate during tasks (ICC=0.68–0.96); Inter-rater reliability for the total WC (ICC=0.97), individual tasks (ICC=0.76–0.98), and record peak heart rate during tasks (ICC=0.82–0.99). Validity: The total ability score and performance time score significantly correlate to the FIM mobility subscale score, peak power output, and VO2 peak. Responsiveness: Standardized response means have been calculated between start of rehabilitation program and discharge: 0.6 for Ability score; 0.9 for Performance time score; and 0.8 for Physical strain score.</p> <p>Appropriate for subacute and chronic injury.</p>

NINDS CDE Notice of Copyright
Wheelchair Circuit

References:	<p>Kilkens, O. J., Dallmeijer, A. J., De Witte, L. P., Van Der Woude, L. H., & Post, M. W. (2004). The Wheelchair Circuit: Construct validity and responsiveness of a test to assess manual wheelchair mobility in persons with spinal cord injury. <i>Arch Phys Med Rehabil</i>, 85(3), 424–431.</p> <p>Kilkens, O. J., Post, M. W., van der Woude, L. H., Dallmeijer, A. J., & van den Heuvel, W. J. (2002). The wheelchair circuit: reliability of a test to assess mobility in persons with spinal cord injuries. <i>Arch Phys Med Rehabil</i>, 83(12), 1783–1788.</p>
--------------------	--