SUPPLEMENTARY MATERIALS

Table S1. The detailed methods of the Graded and Redefined Assessment of Strength, Sensibility, and Prehension (GRASSP)

Domain	Description
Strength	Upper limb muscle strength was evaluated by the manual muscle test (MMT) and graded on a 5-point scale adapted from the Medical Research Council (MRC) scale in 10 muscles of the upper limb including anterior deltoid, biceps (C5), wrist extensors (C6), triceps and opponens pollicis (C7), extensor digitorum, 3rd finger flexor and flexor pollicis longus (C8), 5th finger abductor and first dorsal interossei (T1). Ten grades for each side were summed to render a total strength subtest score ranging from 0–50 for each upper limb.
Sensation	Semmes-Weinstein monofilament was tested across three locations of the dorsal and palmar side (total of six locations on right or left side) around the 1st, 3rd, and 5th fingertips just below the nailbed for each hand. Scores of each location ranged from 0–4 (no response, 0). Scores of the three locations for the dorsal and palmar side of each hand were summed respectively and represented as subtests scores of 'dorsal sensation' and 'palmar sensation' (score range from 0–12 each).
Prehension	
Qualitative	Qualitative prehension was graded in the ability to generate three grasps including cylindrical grasp, lateral key pinch, and tip-to-tip pinch. Scores range from 0 to 4 for each grasp, 0 indicating no voluntary control of wrist and digits, 4 indicating voluntary control of the wrist and digits to generate the grasp. Total scores range from 0–12 for each hand.
Quantitative	Quantitative prehension was tested with six tasks including 'pour water from a bottle', 'open jars', 'pick up and turn a key', 'transfer nine pegs from board to board', 'pick up four coins and place in slots', and 'screw four nuts onto bolts'. Each task is graded from 0–5, 0 indicating the task cannot be conducted at all and 5 indicating the task is conducted without difficulties using the expected grasping pattern and unaffected hand function. Total scores ranged from 0–30 for each hand.

Data available from: http://www.grassptest.com.