

# Capabilities of Upper Extremities Instrument (CUE)

## Assessment Overview

### Assessment Area

**ICF Domain:**

Activity

**Subcategory:**

Mobility

### You Will Need

**Length:**

32 item – around 30 minutes

**Scoring:**

7-point scale (1 = "Totally limited, can't do at all", 7 = "Not at all limited". Sum of item scores range from 32 to 224 (higher scores reflecting better function). Left and right arm/hand function can be derived separately. Percent of normal function score calculated using:  $(\text{total score} - 32) / 192 * 100\%$ .

### Summary

The Capabilities of Upper Extremity Instrument (CUE) measures functional limitation and assesses the amount of difficulty experienced in performing specific actions with one or both arms and hands in people with tetraplegia.

Questions focus on someone's ability to reach or lift; pull and push with their arms; move and position their arm and wrist; use their hand and fingers; and press with the tip of the index finger.

### Availability

Available for free here:

[http://www.scireproject.com/sites/default/files/worksheet\\_capabilities\\_of\\_upper\\_extremity\\_questionnaire\\_cue.docx](http://www.scireproject.com/sites/default/files/worksheet_capabilities_of_upper_extremity_questionnaire_cue.docx)

**Languages:** English

## Assessment Interpretability

### Minimal Clinically Important Difference

Not established in SCI

### Statistical Error

**SEM** = 12.2

(Marino et al. 1998; n=154)

### Typical Values

**Mean CUE score:** 78.8 (SD: 29, range: 4-124, median = 78)

(Kalsi-Ryan et al. 2012; n=72, chronic tetraplegia)

## Measurement Properties

### Validity – High

#### High Spearman's $\rho$ correlation with GRASSP subtests (All $P < .0001$ ):

Sensation total  $_{(R+L)}$ :  $\rho = 0.77$

Strength total  $_{(R+L)}$ :  $\rho = 0.76$

Prehension performance total  $_{(R+L)}$ :  $\rho = 0.83$

(Kalsi-Ryan et al. 2012;  $n=72$ , chronic tetraplegia)

#### High correlation with ASIA Upper Extremity Motor Score:

$r = 0.782$

( $P < .05$ ; Marino et al. 1998;  $n=154$ )

#### High correlation with Functional Independence Measure:

$r = 0.738$

( $P < .05$ ; Marino et al. 1998;  $n=154$ )

Number of studies reporting validity data: 3

### Reliability – High

#### High Internal consistency:

$\alpha = 0.96$

(Marino et al. 2012,  $N=30$ , 30 males, Mean age: 44.8 years, 10 incomplete, 20 complete injury)

Number of studies reporting reliability data: 1

## Responsiveness

#### Floor/Ceiling Effect:

Not established in SCI

#### Effect Size:

Not established in SCI

#### Number of studies reporting responsiveness data:

Not established in SCI