### **Assessment Overview**

#### Assessment Area

**ICF Domain:** 

**Body Structures** 

Subcategory:

Digestive, Metabolic and Endocrine

#### You Will Need

Length:

Less than 5 minutes

#### Scoring:

The patient's mass in kilograms is divided by the square of the patient's height in meters to give the BMI score. (e.g., 80kg/1.8m<sup>2</sup> = 24.69).

#### Summary

The Body Mass Index (BMI) is a measure of physical health that compares a person's weight with their height. A person's BMI can be self-determined by referencing their height and weight in a BMI chart.

The World Health Organization's cutoff scores for classifying obesity status in the general population are: BMI of 18.5 to 24.9 = normal, BMI of 25.0 to 29.9 = overweight, BMI of 30.0 or higher = obese.

In the SCI population, it will be important to adjust and consider a person's BMI score in accordance with their SCI. In people with SCI, it is usually encouraged that their BMI be a couple of points lower than what would be recommended for someone without SCI.

## Availabil<u>ity</u>

Full BMI Chart:

https://www.nhlbi.nih.gov/health/educational/lose\_wt/BMI/bmi\_tbl.pdf

## **Assessment Interpretability**

Minimal Clinically Important	Statistical Error	Typical Values (SCI)
Difference Not established in SCI	Not established in SCI	Male: Mean BMI (SD) = 26.21 (5.9) BMI categorization: Underweight = 5.8% Normal weight = 36.6% Overweight = 35.1% Obese = 21.0%
		Female: Mean BMI (SD) = 24.46 (6.7) BMI categorization: Underweight = 11.0% Normal weight = 51.2% Overweight = 22.6% Obese = 12.8% (Alschuler et al. 2012; n=488 with SCI, 324 males, 164 females; mean age: 55.84 years; AIS A-D)

Measurement Properties			
Validity – Low to High	Reliability – Not established in SCI		
<b>High Correlation of BMI with abdominal fat (kg):</b> r = 0.92	Not established in SCI		
<b>High Correlation of BMI with total fat (kg):</b> r = 0.91	Number of studies reporting reliability data: 0		
<b>High Correlation of BMI with abdominal fat (%):</b> r = 0.80			
<b>High Correlation of BMI with total fat (%):</b> r = 0.77			
Low Correlation of BMI with CVD risk (Framingham risk score): r = 0.29 (Cragg et al. 2015; n=27, 70% males; 30% females; mean age (SD): 40 (11) years: ASIA A-D: injury level: 59% cervical, 41% thoracic: mean time since			
Moderate Correlation of BMI with bioelectrical			
<b>obesity):</b> r = 0.51 (Eriks-Hoogland et al. 2011: n=23: 100% males: mean age (SD): 43.3 (12)			
years; 22 ASIA and 1 ASIA B; mean time since injury (SD): 14.6 (13.3) years)			
Number of studies reporting validity data: 9			

# Responsiveness

Floor/Ceiling Effect:

Effect Size:

Not established in SCI

Not established in SCI

Number of studies reporting responsiveness data: 0