

# Waterlow Pressure Ulcer Scale

## Assessment Overview

### Assessment Area

**ICF Domain:**

Body Function

**Subcategory:**

Functions of the Skin

### You Will Need

**Length:**

5-10 minutes, 8 items

**Equipment:**

None, but Manual is recommended

**Scoring:**

Items scored from a minimum of 0-1 to a maximum of 3-5.

Summary score (3-45) is the sum of all item scores. Higher scores indicate poorer prognosis.

### Summary

The Waterlow Pressure Ulcer Scale is a clinician-administered and rated scale used to assess the risk for pressure ulcer (PU) development. It provides better sensitivity and specificity than the Norton Scale.

Every patient is evaluated on 8 items:

Age, Sex, Body build, Appetite, Contenance of urine and feces, Mobility, Skin appearance in risk areas, Special risks (disorders associated with tissue malnutrition, neurological deficits, medication, recent surgery or trauma)

The Waterlow scale is quick and easy to use, with no patient burden.

The scale omits items previously found to be important predictors of pressure ulcer development for people with SCI in acute and rehabilitation settings.

The reliability of the scale has not been demonstrated with a SCI population, but poor inter-rater reliability has been reported in other populations.

### Availability

Available for free here:

[http://www.scireproject.com/wp-content/uploads/worksheet\\_waterlow\\_pressure\\_risk\\_assessment\\_scale.docx](http://www.scireproject.com/wp-content/uploads/worksheet_waterlow_pressure_risk_assessment_scale.docx)

**Languages:** English

## Assessment Interpretability

### Minimal Clinically Important Difference

Not established in SCI

### Statistical Error

Not established in SCI

### Typical Values

**Mean (SD) Scores:**

All patients: 21.5

Patients with PU: 24.1

Patients with no PU: 18.4

(Ash 2002; N=144, 115 male; mixed injury types; mean (95%CI) days post-SCI at admission = 14(11-17))

**Threshold Values:**

10+ = at risk

15+ = high risk

20+ = very high risk

(Waterlow 1985)

## Measurement Properties

### Validity – **Moderate**

#### **Moderate** correlation with Norton Scale:

$$r = -0.50 \sim -0.56$$

(Wellard, 2000; N=60, majority males; SCI individuals with 1+ PU diagnosis)

#### **Moderate** ROC Analysis:

Area under curve = 0.76

(Ash 2002; N=144, 115 male; mixed injury types; mean (95%CI) days post-SCI at admission = 14(11-17))

**Number of studies reporting validity data: 2**

### Reliability

Not established in SCI

## Responsiveness

#### **Floor/Ceiling Effect:**

36% of patients at “very high risk”

Very high risk defined as a score of 20+

(Wellard, 2000; N=60, SCI individuals with 1+ PU diagnosis; Waterlow 1985)

#### **Effect Size:**

Not established in SCI

**Number of studies reporting responsiveness data: 1**