

Appendix 1- Nutritional Risk Screening (NRS 2002)

Initial Screening Checklist

If the answer to any question is **YES**, Final Screening is performed.

If the answer is **NO** to all questions, the patient is re-screened at weekly intervals. If, for example, the patient is scheduled for a major operation, a preventative nutritional care plan is considered to avoid the associated risk status.

1. Is BMI < 20.5?
2. Has the patient lost weight within the last 3 months?
3. Has the patient had a reduced dietary intake in the last week?
4. Is the patient severely ill (e.g. in intensive therapy)?

Final Screening			
Impaired nutritional status		Severity of disease (= increase in requirements)	
Absent Score 0	Normal nutritional requirements	Absent Score 0	Normal nutritional requirements
Mild Score 1	Wt loss > 5% in 3 months, or food intake below 50-75% of normal requirement in preceding week	Mild Score 1	Hip fracture,* chronic patients, in particular, with acute complications: <i>cirrhosis,* COPD,* chronic hemodialysis, diabetes, oncology</i>
Moderate Score 2	Wt loss > 5% in 2 months, or BMI 18.5-20.5 + impaired general condition, or food intake of 20-60% of normal requirement in preceding week	Moderate Score 2	Major abdominal surgery,* stroke,* <i>severe pneumonia, hematologic malignancy</i>
Severe Score 3	Wt loss > 5% in 1 month (> 15% in 3 months), or BMI < 18.5 + impaired general condition, or food intake of 0-25% of normal requirement in preceding week	Severe Score 3	Head injury,* bone marrow transplantation,* <i>intensive care patients (APACHE > 10)</i>
Score:	+	Score:	= Total score:
Age	if ≥ 7- years: add 1 to total score above		= Age-adjusted total score
<p>Score ≥ 3: the patient is nutritionally at risk, and a nutritional care plan is initiated. Score < 3: Weekly rescreening of the patient. If the patient, for example, is scheduled for a major operation, a preventative nutritional care plan is considered to avoid the associated risk status.</p>			

NRS-2002 is based on an interpretation of available randomized clinical trials. An asterisk (*) indicates that a trial directly supports the categorization of patients with that diagnosis. Diagnoses shown in *italics* are based on the prototypes given below. Nutritional risk is defined by the present nutritional status and risk of impairment of present status, due to increased requirements caused by stress metabolism of the clinical condition.

A nutritional care plan is indicated in all patients who are (1) severely undernourished (score=3), or (2) severely ill (score=3), or (3) moderately undernourished + mildly ill (score 2 +1), or (4) mildly undernourished + moderately ill (score 1 + 2).

Prototypes for Severity of Disease

Score=1: a patient with chronic disease, admitted to hospital due to complications. The patient is weak, but out of bed regularly. Protein requirement is increased, but can be covered by oral diet or supplements in most cases.

Score=2: a patient confined to bed due to illness, e.g. following major abdominal surgery. Protein requirement is substantially increased, but can be covered, although artificial feeding is required in many cases.

Score=3: a patient in intensive care with assisted ventilation etc. Protein requirement is increased, and cannot be covered, even by artificial feeding. Protein breakdown and nitrogen loss can be significantly attenuated.