

Physical Exam – Parameters Useful in the Assessment of Nutritional Status (1-3) (see notes below table)

<u>Exam areas</u> <i>Subcutaneous fat loss</i>	<u>Tips</u>	<u>Severe Malnutrition</u>	<u>Mild-Moderate Malnutrition</u>	<u>Well Nourished</u>
Below the Eye	View patient when standing directly in front of them, touch above cheekbone	Hollow look, depressions, dark circles, loose skin	Slightly dark circles, somewhat hollow look	Slightly bulged fat pads. Fluid retention may mask loss
Neck	View patient from the front and side.	Neck anatomy is clear and individual muscles, especially the sternomastoid and trapezius muscles, as well as the clavicles, are easily visualized.	Individual muscle anatomy less apparent visually. Clavicles less protuberant	Subcutaneous fat present, muscles not easily visualized
Triceps/biceps	Arm bent, roll skin between fingers, do not include muscle in pinch	Very little space between folds, fingers touch	Some depth to pinch, but not ample	Ample fat tissue obvious between folds of skin
Ribs - Lower Back - Mid axillary line	Have patient press hands hard against a solid object	Depression between the ribs very apparent	Ribs apparent, depressions between them less pronounced	Chest is full, ribs do not show
<i>Muscle loss</i>				
Temple (Easiest to view/assess)	View patient when standing directly in front of them, ask patient to turn head side to side	Hollowing, scooping, depression	Slight depression	Can see/feel well-defined muscle

Neck	View the patient from the front and side	Neck muscles, especially sternomastoid and trapezius are notably reduced in size.	Muscle mass mild to moderately decreased; clavicles less protruberant.	Appropriate muscle mass present
Clavicle	Look for prominent bone. Make sure patient is not hunched forward	Protruding, prominent bone	Visible in male, some protrusion in female	Not visible in male, visible but not prominent in female
Shoulder	Patient arms at side; observe shape	Shoulder to arm joint looks square. Bones prominent. Acromion protrusion very prominent	Acromion process may slightly protrude	Rounded, curves at arm/shoulder/neck
Scapula	Ask patient to extend hands straight out, push against solid object.	Prominent, visible bones, depressions between ribs/scapula or shoulder/spine	Mild depression or bone may show slightly	Bones not prominent, no significant depressions
Interosseous Muscle	Look at thumb side of hand; look at pads of thumb when tip of forefinger touching tip of thumb	Depressed area between thumb-forefinger	Slightly depressed	Muscle bulges, could be flat in some well nourished people
<i>Lower body less sensitive to change</i>				
Knee	Ask patient to sit with leg propped up, bent at knee	Bones prominent, little sign of muscle around knee	Knee cap less prominent, more rounded	Muscles protrude, bones not prominent
Quadriceps (front thigh) muscles	Ask patient to sit, prop leg up on low furniture. Grasp quads to	Depression/line on thigh, obviously thin	Mild depression on inner thigh	Well rounded, well developed

	differentiate amount of muscle tissue from fat tissue.			
Gastrocnemius (calf) muscle	Grasp the calf muscle to determine amount of tissue	Thin, minimal to no muscle definition	Not well developed	Well-developed bulb of muscle
Edema				
Rule out other causes of edema, patient at dry weight	View sacral area in activity restricted patients; ankles in mobile patient	Deep to very deep pitting, depression lasts a short to moderate time (31-60sec), extremity looks swollen (3-4+)	Mild to moderate pitting, slight swelling of the extremity, indentation subsides quickly (0-30 sec)	No sign of fluid accumulation

Notes:

1. Introduce yourself to the patient/family
2. Provide rationale for examination request
3. Ask the patient for permission to examine them
4. Wash/dry hands thoroughly; wear gloves
5. Use standard precautions to prevent disease transmission

References:

1. McCann L. Subjective global assessment as it pertains to the nutritional status of dialysis patients. *Dialysis & Transplantation*. 1996; 25(4):190-202.
2. Council on Renal Nutrition of the National Kidney Foundation. *Pocket Guide to Nutrition Assessment of the Patient with Chronic Kidney Disease*, 3rd ed. (McCann, L, ed.) 2005 Last accessed 5/30/12 at <http://www.scribd.com/doc/6991983/Pocket-Guide-to-Nut-Crd>

3. Secker DJ, Jeejeebhoy KN. How to perform subjective global nutritional assessment in children. J Acad Nutr Diet 2102;(112):424-431.

Most of the following examples show patients experiencing extreme problems. Most patients will present with signs that are less pronounced. However, it is hoped that these pictures give you a better idea of the anatomy involved.

General Observations

General State of Health Orientation
Body Features Speech
Weight-loss or gain Functional Status



Temple, Neck



Shoulder, Clavicle



**Knee, Lower Thigh,
Upper Calf**

Scapula, Ribs



Interosseous



Eyes, Temple

FAT LOSS



Mid 2006 - 219 lbs

Dec '07 - 197 lbs

March '08 - 186 lbs

June '08 - 178 lbs

Edema of the Extremities

Edema

