

Physical Exam – Parameters Useful in the Assessment of Nutritional Status

<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>
Orbital Region – Surrounding 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
Upper Arm Region- Triceps/biceps	Arm bent, roll skin between fingers, do not include muscle in pinch	Very little space between folds, fingers touch	Some depth pinch, but not ample	Ample fat tissue obvious between folds of skin
Thoracic and Lumbar Region - Ribs , Lower Back, Midaxillary line	Have patient press hands hard against a solid object	Depression between the ribs very apparent. Iliac Crest very prominent	Ribs apparent, depressions between them less pronounced. Iliac Crest somewhat prominent	Chest is full, ribs do not show. Slight to no protrusion of the iliac crest.
<i>Muscle loss</i>				
Temple Region - Temporalis Muscle	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
Clavicle Bone Region - Pectoralis Major, Deltoid, Trapezius Muscles	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
Clavicle and Acromion Bone Region - Deltoid Muscle	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

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Scapular Bone Region – Trapezius, Supraspinus, Infraspinus Muscles	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
Dorsal Hand - 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>				
Patellar Region – Quadricep Muscle	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
Anterior Thigh Region - Quadriceps Muscles	Ask patient to sit, prop leg up on low furniture. Grasp quads to differentiate amount of muscle tissue from fat tissue.	Depression/line on thigh, obviously thin	Mild depression on inner thigh	Well rounded, well developed
Posterior Calf Region- Gastrocnemius Muscle	Grasp the calf muscle to determine amount of tissue	Thin, minimal to no muscle definition	Not well developed	Well-developed bulb of muscle
<i>Edema</i>				
Rule out other causes of edema, patient at dry weight	View scrotum/vulva in activity restricted patient; 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

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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* 2012;(112):424-431.

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