Improve your Hands-On Nutrition Physical Exam Skills:

Julie Kurtz, MS, RD, CDE, CNIS
AZDA Conference
June 10, 2011
Objectives:

Demonstrate (practice) the basic nutrition physical assessment skills to include the following:

a) Loss of subcutaneous fat

b) Bilateral muscle wasting
Basic Nutrition-Focused Physical Examination Techniques

- **Inspection**
  Critical observation of color, shape, texture, size. Uses the senses of sight, smell, and hearing. Most frequently used.

- **Palpation**
  Tactile exam to feel pulsations and vibrations, assess body structures (including texture, size, temperature, tenderness and mobility).

- **Percussion**
  Assessment of “sounds” to determine body organs’ borders, shape and position.
Subcutaneous Fat Loss

Orbital

Ribs & Chest

Triceps
Loss of Subcutaneous Fat

Orbital Fat pad
“hollow eye”

Prominent brow bone
Subcutaneous Fat loss
Orbital fat pads

Technique: Inspection
Inspect for loss of bulge under eye (fat pad); characterized by hollow eye

- Well-nourished – Slightly bulged fat pad
  - Significant findings:
  - Mild-Moderate fat loss– Dark circles, somewhat hollow
  - Severe fat loss– pronounced, hollow, depressed, dark circles, loose skin
Let's quiz your skills?
Orbital Fat Pad

Well-Nourished?
Mild-Moderate?
Severe?
Subcutaneous Fat loss

Triceps

Posterior view

Triceps area on arm most identified with fat loss
Subcutaneous Fat loss
Triceps

Technique: Palpation
Palpate (pinch skin) between thumb and forefinger over the back of the upper arm over the tricep muscle

- **Well-nourished** – Ample fat tissue between folds of skin

**Significant Findings**
- **Mild-Moderate** fat loss– Fingers almost touch, some depth to pinch
- **Severe** fat loss– Very little space between folds or fingers touching
Lets quiz your skills
Triceps

Well-Nourished? Mild-Moderate? Severe?
Loss of Subcutaneous Fat

Chest/Lower Ribs

- Technique: Inspection
Subcutaneous Fat Loss
Chest/Lower Ribs

Observe the mid-axillary line at the costal margin or lower ribs; observe for loss of fullness or loose skin;

- Well-nourished -> ample fat tissue; chest wall should not be visible nor should ribs be visible

**Significant findings:**
- Mild-Moderate fat loss: loose skin – somewhat apparent ribs
- Severe – Skin is stretched; prominent well-defined ribs
Let's quiz your skills – Chest/Ribs

Well-Nourished?
Mild-Moderate?
Severe?
Muscle Wasting

- Temporal
- Clavicle
- Shoulder
- Pectoral
- Interosseous
- Quads
- Calves
- Deltoid
- Scapula
- Knee
- Calf
Bi-lateral Muscle wasting

- Includes: muscle volume, tone, function and gender
- Upper body more susceptible to muscle loss, independent of functional status
- Muscle loss from inactivity or bedrest is most prominent in the pelvis and upper leg
- Muscle wasting determined by palpation for volume and tone; flat areas or hollow area where muscle should be; prominence of bones
- Neurological deficits (that may present with unilateral wasting); may produce false-positive findings
Bi-lateral Muscle Wasting

Temporal Wasting

Prominent brow bone
Bi-Lateral Muscle Wasting Temple

Observe patient straight on; turn head from side to side; look for prominence of brow bone; scooping or hollowing indicated wasting of temporalis muscle

- Well-nourished - > can observe well-defined muscle

**Significant Malnutrition Findings:**
- Mild-Moderate - > slight depression of temporalis muscle
- Severe – Hollowing, scooping depression
Let's quiz your skills

Temporal Wasting

Well-Nourished?
Mild-Moderate?
Severe fat wasting?

#1
#2
#3
Upper Body Muscle Wasting

Deltoid, Shoulder, Pectoris, Clavicle
Upper Body Muscle Wasting

Observe pectoral and deltoid muscle and look for prominent protruding of bone; protrusion of bone indicates wasting of pectoral and deltoid muscles

- Well-nourished - > Clavicle bone not prominent in men but visible in women

*Significant Malnutrition Findings:*
- Mild-Moderate - > some protrusion of clavicle
- Severe - > Protruding/prominent bone
Upper Body Wasting - Shoulders

Observe patient straight on with arms at side looking for squaring of shoulders; loss of roundness at junction of shoulder and neck; and shoulder and arm (significance loss of deltoid muscle)

Well-nourished -> Rounded, curves at the junction of shoulder and neck; shoulder and arm

*Significant Malnutrition Findings:*

- Mild-Moderate -> some protrusion of acromion process
- Severe -> Protruding or prominent bone “squaring of shoulder”
Let's quiz your skills – Upper Body Muscle wasting

#1

#2

#3

Well-Nourished?
Mild-Moderate?
Severe Wasting?
Bilateral Muscle Wasting
Interosseous Muscle

Interosseous Muscles
Interosseous Muscle

Observe interosseous muscle between thumb and forefinger with palm down (back of hand). Have patient press thumb and forefinger back and forth with pressure to inspect muscle.

- Well-nourished – may bulge in male and be flat/bulge in female

**Significant Malnutrition Findings:**
- Mild-Moderate - Slightly depressed or flat
- Severe – flat or depressed area between thumb and forefinger
Let's quiz your skills –

Interosseous Muscle Wasting

Well-Nourished?
Mild-Moderate?
Severe?
Considerations in Practice

- **Acquiring the skills**
  - **Education**
    - Physical Examination Techniques and Procedures
    - General Survey
    - SGA
  - **Video’s**
  - Formal learning - Seminar/Workshops for guided practice experience
  - Literature
  - Informal learning - volunteer to work with other professionals that practice SGA or physical examination skills
References

- http://healthlinks.washington.edu/nutrition/section9.html#b
- Photos used with permission of patient