



Examining Health from Every
Angle: Optimizing Patient Care
through Quality NFPE'S

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Objectives

- Understand the importance of nutrition focused physical exams
- Describe how to assess muscle loss/fat wasting
- Identify additional tools to assist you with your physical exam assessment (hand grip strength, fluid/dehydration assessment)



Why are NFPE's important?

NFPE is a head-to-toe physical exam used by the dietitian as part of their nutrition assessment.

Helps when there are inaccuracies in anthropometric measurements

Weights can be skewed by edema, dehydration

Helps determine fat vs muscle loss

Why are NFPE's important?

- According to a 2012 consensus statement by The Academy (AND) & ASPEN, malnutrition is the presence of two or more of the following:
 - Insufficient energy intake
 - Weight loss
 - Loss of muscle mass
 - Loss of subcutaneous fat
 - Localized or generalized fluid accumulation
 - Decreased functional status
- The last four of these are best assessed by a physical exam

How to Ask, Overcoming Barriers

- How do you help your patients/families understand why we are performing physical exams?
 - Type in chat box
 - Asking permission
- Sleeping/swaddled babies, ostomies, lines, etc.
- Rule of thumb: Always wash hands, clean equipment with alcohol

Physical Signs of Fat Loss

- Orbital region: Hollow look? Dark circles? Loose skin? Is it bouncy?
- How to assess: Touch below eyes and above cheekbone
- Severe loss – Pronounced hollowness/depression
- Mild-Moderate loss – Slight hollowness, dark
- Well nourished – Slight bulging



Physical Signs of Fat Loss

- Buccal Fat Pads: Flat vs Full / Rounded cheeks
- How to assess: Visualize and touch below the cheek bones and above the jawbone
- Severe loss: Hollow, sunken cheeks
- Moderate loss: Flat cheeks with minimal “bounce” when palpated
- Well nourished: Full, round cheeks



Physical signs of Fat Loss

- Upper arm (triceps): Tips- do not include muscle in pinch. Do fingers touch?
 - How to assess: Bend arm at 90 degrees, pinch arm at midpoint and roll down until only pinching fat
 - Severe loss: Mostly skin, very little space between fingers (may touch)
 - Moderate loss: Some fat tissue
 - Well nourished: Ample fat tissue



Physical Signs of Fat Loss

- Thoracic region: Ribs visible with prominent spaces between.
- How to assess: Patient standing (if possible) and visually assess fat stores along ribs and above hip bone (are ribs visible?)
- Severe loss: Ribs visible with prominent depressions, hip bone prominent
- Moderate loss: Ribs visible with mild depressions
- Well nourished: Chest is full, ribs not visible



Notes on Fat Loss

- May be seen visually but physical exam is still important
- Usually more prominent in upper body
- Remember that this is just one part of your assessment, keep it in context and always as questions



Physical Signs of Muscle Wasting

- Temporalis muscle: Ask to chew, should feel muscle moving up and down. Depression or hollow?
- Inflated balloon vs. ketchup packet vs. ball of yarn
- Face is one of the first places you might see changes



Physical Signs of Muscle Wasting

- Pectoralis muscle: Use clavicle, can you hook your finger under?
- Inflated balloon vs. ketchup packet vs. ball of yarn



Physical Signs of Muscle Wasting

- Deltoid muscle: Deltoid is your landmark. Rounded or Square?
- Inflated balloon vs. ketchup packet vs. ball of yarn



Physical Signs of Muscle Wasting

- Trapezius/Rhomboid muscle: Use scapula, push on wall
- Inflated balloon vs. ketchup packet vs. ball of yarn



Physical Signs of Muscle Wasting

- Calf muscle: Thin and flat, minimal definition. Bulb vs. Flat
- Quadricep: Use knee, prominent? Indentations in inner and outer thigh? You can grasp skin to differentiate between fat and muscle.
- Ask questions to get an idea of functional status



Atrophied Muscles

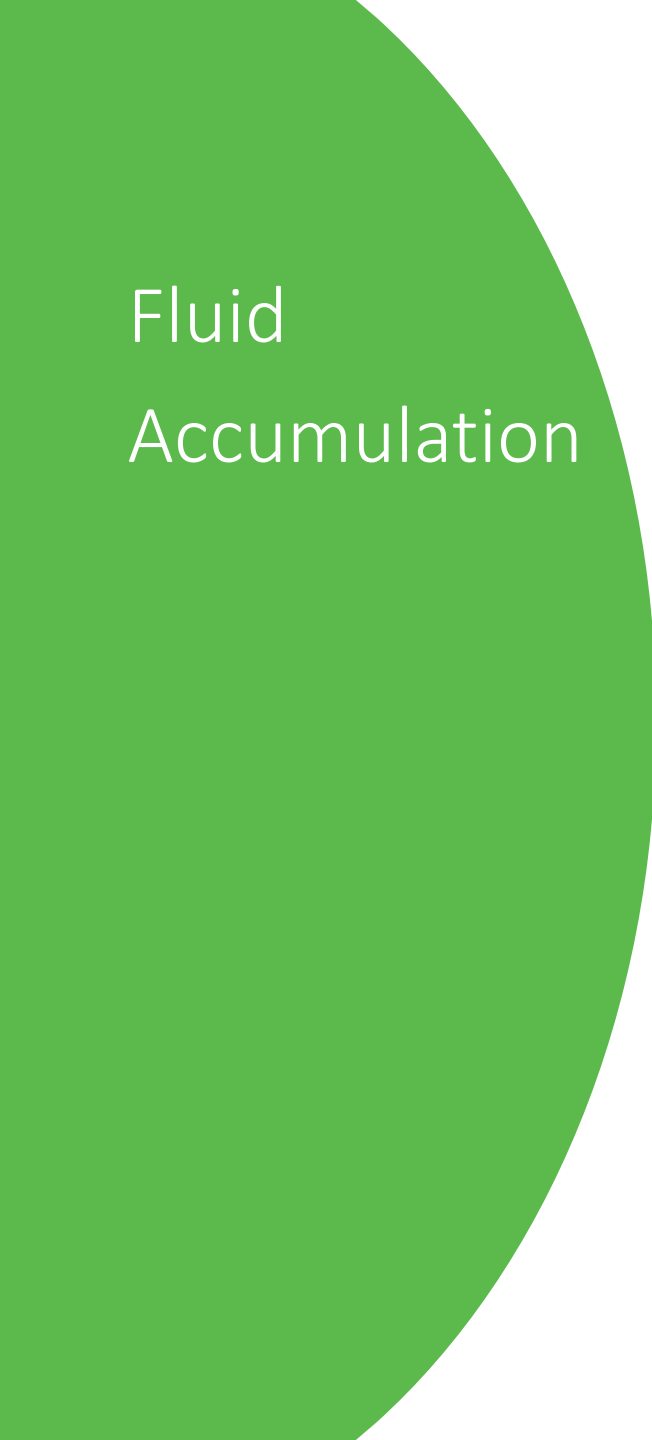
- Loss or thinning of muscle tissues
- Can occur from malnutrition OR disuse of the muscle




Functional Status

- Hand grip strength is recommended technique to measure functional status (Dynamometer)
- 3 measurements and average
- Validated for 6 years and older
- Only if can sit up or stand
- Must be the same brand





Fluid
Accumulation

- Dehydration
 - Skin turgor (Pinch skin on back of hand/forearm, skin should return to a normal flat position within 3 seconds)
 - Capillary refill (Press fingernail until it is white, color should return within 3 seconds)
 - Edema (--> RN typically checks, graded on a scale)
 - Face/neck
 - Hands
 - Feet/ankles
 - abdomen
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Malnutrition in Babies

Loose skin

Sunken fontanelle

Visible neck

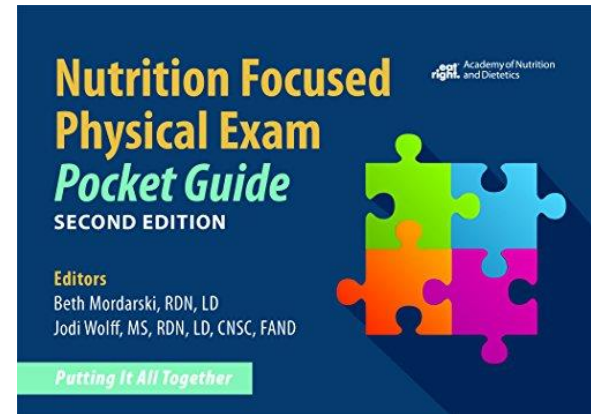
Round cheeks can be deceiving

Want to see a crease below butt

Meeting milestones?

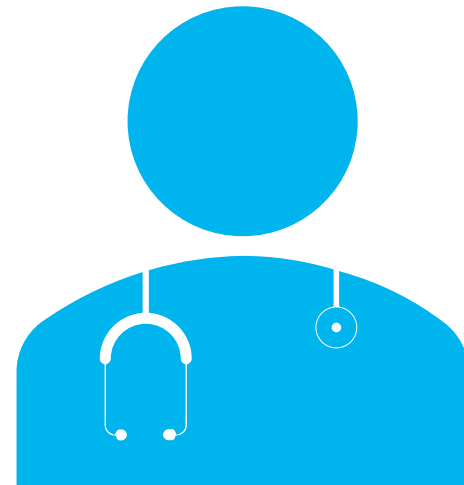
Nutrient Deficiencies

- Malnutrition:
 - Dark circles around eyes
 - Lanugo
 - Hair, pluckability
- Pediatric Nutrition Focused Physical Exam Pocket Guide
- Some of these physical signs of nutrient deficiencies can be confused with other medical issues



Summary

- Come prepared. Ask nurse or colleague for help if need be
- Explain why you're performing your physical exam
- Head to toe
- Importance of looking at the whole body



Case Study

- 7 YO Female admitted with chronic constipation and decreased PO x 1 month; has lost 8% UBW; noted to have some fluid accumulation
- Based on this information, what are your initial impressions?
- How would you approach this physical assessment?



Findings

Able to hook finger under clavicle

Visible ribs

Square shoulders

Temples felt like a ketchup packet

References

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