Nutrition:
Putting guidelines into practice

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Objectives

• Review the 2014 clinical practice nutrition guidelines of the National Pressure Ulcer Advisory Panel

• Evaluate nutrition strategies to help patients meet their goals
Nutrition Recommendations

• Nutrition screening
• Nutrition assessment
• Energy intake
• Protein intake
• Hydration
• Vitamins and minerals
1. Screen nutritional status for each individual at risk of or with a pressure ulcer:
   • At admission to a health care setting;
   • With each significant change of clinical condition;
   and/or
   • When progress toward pressure ulcer closer is not observed.

(Strength of Evidence = C; Strength of Recommendation = 🤕)
Nutrition Recommendations

Nutrition Screening

2. Use a valid and reliable nutrition screening tool to determine nutritional risk.
   (Strength of Evidence = C; Strength of Recommendation = 

3. Refer individuals screened to be at risk of malnutrition and individuals with an existing pressure ulcer to a registered dietician or an interprofessional nutrition team for a comprehensive nutrition team for a comprehensive nutrition assessment.
   (Strength of Evidence = C; Strength of Recommendation = 

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Determining Who is Malnourished

Valid Screening Tools

Mini Nutrition Assessment (MNA)
http://mna-elderly.com/default.html

Malnutrition Universal Screening Tool (MUST)
http://www.bapen.org.uk/pdfs/must/must_full.pdf

Nutrition Risk Screening (NRS-2002)
http://www.nutritotal.com/br/icnso/aspen/?acao=bu&categoria=2&id=76

Short Nutrition Assessment Questionnaire (SNAQ)
http://www.fightmalnutrition.eu/fileadmin/content/maulNutgrition/Screening_tools/SNAQ_Engels.pdf
Screen for Jane Doe shows potential nutrition risk, what is the next step?
Nutrition Recommendations

Nutrition Assessment

1. Assess the weight status of each individual to determine weight hx. Then identify significant weight loss (=5% in 30 days or = 10% in 180 days).
   (Strength of Evidence = C; Strength of Recommendation = ☑️)

2. Assess the individual’s ability to eat independently.
   (Strength of Evidence = C; Strength of Recommendation = ☑️ ☑️)

3. Assess the adequacy of total nutrient intake (i.e., food, fluid, oral supplements, and enteral/parenteral feeds)
   (Strength of Evidence = C; Strength of Recommendation = ☑️ ☑️)
Registered Dietitian assessment indicates weight loss & inability to meet nutrition needs.....
Energy
Nutrition Recommendations
Energy Intake

1. Develop an individualized nutrition care plan for individuals with or at risk of a pressure ulcer.
   (Strength of Evidence = C; Strength of Recommendation = 🌟)

2. Follow relevant and evidence-based guidelines on nutrition and hydration for individuals who exhibit nutritional risk and who are at risk of pressure ulcers or have an existing pressure ulcer.
   (Strength of Evidence = C; Strength of Recommendation = 🌟)
Nutrition Recommendations

Energy Intake

3. Provide 30-35 calories/kg body weight for adults with a pressure ulcer who are assessed as being at risk of malnutrition.
   (Strength of Evidence = B; Strength of Recommendation = ☑️ ☑️)

4. Adjust energy intake based on weight change or level of obesity. Adults who are under weight, or who have had significant weight loss, may need additional energy intake.
   (Strength of Evidence = C; Strength of Recommendation = ☑️ ☑️)
Energy Intake

5. Revise and modify/liberalize dietary restrictions when limitations result in decreased food and fluid intake. These adjustments should be made in consultation with a medical professional and managed by a RDN whenever possible.

   (Strength of Evidence = B; Strength of Recommendation = ☑️)

6. Offer fortified foods and/or high calorie, high protein oral nutritional supplements between meals if nutritional requirements cannot be achieved by dietary intake.

   (Strength of Evidence = B; Strength of Recommendation = ☑️ ☑️)
Nutrition Recommendations

Energy Intake

7. Consider enteral or parenteral nutritional support when oral intake is inadequate. This must be consistent with the individual’s goals.

(Strength of Evidence = C; Strength of Recommendation = ☑️)
Nutrition Recommendations
Protein Intake

1. Provide adequate protein for positive nitrogen balance for adults assessed to be at risk of a pressure ulcer.
   (Strength of Evidence = C; Strength of Recommendation = )

2. Offer 1.25 to 1.5 gms protein/kg body weight daily for adults at risk of a pressure ulcer and malnutrition when compatible with goals of care, and reassess as condition changes.
   (Strength of Evidence = C; Strength of Recommendation = )
Nutrition Recommendations
Protein Intake

3. Provide adequate protein for positive nitrogen balance for adults with a pressure ulcer.
   (Strength of Evidence = B; Strength of Recommendation = 👍)

4. Offer 1.25 to 1.5 gms protein/kg body weight daily for adults with an existing pressure ulcer and who are assessed to be at risk of malnutrition when compatible with goals of care, and reassess as condition changes.
   (Strength of Evidence = B; Strength of Recommendation = 👍)
Nutrition Recommendations
Protein Intake

5. Offer high calorie, high protein nutritional supplements in addition to the usual diet to adults with nutritional risk and pressure ulcer risk if nutritional requirements cannot be achieved by dietary intake.

(Strength of Evidence = A; Strength of Recommendation = ✓)

6. Assess renal function to ensure that high levels of protein are appropriate for the individual.

(Strength of Evidence = C; Strength of Recommendation = ✓ ✓)
Nutrition Recommendations
Protein Intake

7. Supplement with high protein, arginine, and micronutrients for adults with a pressure ulcer Category/Stage III or IV or multiple pressure ulcers when nutritional requirements cannot be met with traditional high calorie and protein supplements.

(Strength of Evidence = B; Strength of Recommendation = 👍)
Nutrition Recommendations

Hydration

1. Provide and encourage adequate daily fluid intake for hydration for an individual assessed to be at risk of or with a pressure ulcer. This must be consistent with the individual’s comorbid conditions and goals.

   (Strength of Evidence = C; Strength of Recommendation = ✅ ✅)

2. Monitor individuals for signs and symptoms of dehydration, including change in weight, skin turgor, urine output, ↑serum Na, and/or calculated serum osmolality.

   (Strength of Evidence = C; Strength of Recommendation = ✅)
Nutrition Recommendations

Hydration

3. Provide and encourage adequate daily fluid intake for hydration for an individual assessed to be at risk of or with a pressure ulcer. This must be consistent with the individual’s comorbid conditions and goals.

(Strength of Evidence = C; Strength of Recommendation = ☑️ ☑️

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VITAMINS AND MINERALS
Both are essential for a healthy body and to prevent certain diseases.

**VITAMIN A**
- Found in beta-carotene.
- Promotes good eyesight.
- Helps growth.
- Healthy skin & tissue.

**B VITAMINS**
- B1 - Thiamin
- B2 - Riboflavin
- B3 - Niacin - Helps release energy.
- B9 - Folic Acid - Important for pregnant women.

**VITAMIN C**
- Protects body from infections.
- Helps in absorption of calcium and iron.
- Helps heal wounds.

VITAMINS
- cereals
- fish
- blackcurrants
- lemons
- oranges
- red meat
- spinach
- green leafy vegetables
- milk
- dairy products

**VITAMIN D**
- Helps absorption of calcium for healthy teeth and bones.

**CALCIUM**
- Strong teeth and bones.
- Lack of calcium can lead to brittle bones (Osteoporosis / Rickets).

**IRON**
- Forms part of Haemoglobin.
- Gives blood cells red colour.
- Lack of iron leads to anaemia.
Nutrition Recommendations
Vitamins and Minerals

1. Provide/encourage individuals assessed to be at risk of pressure ulcers to consume a balanced diet that includes good sources of vitamins and minerals.

   (Strength of Evidence = C; Strength of Recommendation = 🌟🌟)

2. Provide/encourage an individual assessed to be at risk of a pressure ulcer to vitamin and mineral supplements when dietary intake is poor or deficiencies are confirmed or suspected.

   (Strength of Evidence = C; Strength of Recommendation = 🌟)
Nutrition Recommendations
Vitamins and Minerals

3. Provide/encourage an individual with a pressure ulcer to consume a balanced diet that includes good sources of vitamins and minerals.

   (Strength of Evidence = B; Strength of Recommendation = ☑️ ☑️)

4. Provide/encourage an individual with a pressure ulcer to take vitamin and mineral supplements when dietary intake is poor or deficiencies are confirmed or suspected.

   (Strength of Evidence = B; Strength of Recommendation = ☑️)
Vitamins and Minerals to consider

- Vitamin A & C
- Zinc
  - Dietary intake
  - MVI Supplement
  - Does patient need additional supplement?
  - Issues with over supplementing?
    - DRI 8-11 mg/day
    - Tolerable upper limit of 40 mg/day
    - Copper
What can I do to help Jane Doe meet her nutrition goals?
NPUAP Pressure Injury Prevention Points: Nutrition

- Consider hospitalized individuals as at risk for undernutrition and malnutrition from their illness or as NPO for diagnostic testing.
- Use a valid and reliable screening tool to determine risk of malnutrition, such as the Mini Nutritional Assessment.
- Refer all individuals at risk for pressure injury from malnutrition to a registered dietitian/nutritionist.
- Assist the individual at mealtimes to increase oral intake.
- Encourage all individuals at risk for pressure injury to consume adequate fluids and a balanced diet.
- Assess weight changes over time.
- Assess the adequacy of oral, enteral, and parenteral intake.
- Provide nutritional supplements between meals and with oral medications, unless contraindicated.

References
