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Nutritional Assessment of Older Adults

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Content

- Anthropometric Measurements
- Dietary Habits and Restrictions
- Identifying Signs of Malnutrition and Dehydration
- Screening for Nutritional deficiencies
- Screening for Dysphagia

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Importance of nutritional assessment in older adults

- Older adults are more susceptible to malnutrition due to factors like declining appetite, reduced food consumption, and the presence of multiple chronic illnesses.
- Undernutrition can lead to muscle loss, weakness, and decreased functional capacity, making it harder to perform daily activities.
- Many medications can affect nutrient absorption and utilization, impacting nutritional status.
- Chronic diseases like diabetes, heart disease, and kidney disease can affect nutritional needs and increase the risk of malnutrition.

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Importance of nutritional assessment in older adults

- Cognitive decline can affect food choices and eating behaviors, leading to nutritional problems.
- Nutritional assessment allows for early identification of at-risk individuals, enabling timely interventions to improve nutritional status.
- Addressing nutritional needs can enhance energy levels, promote weight management, and improve overall well-being.
- Nutritional support can help maintain muscle mass and strength, improve mobility, and enhance functional independence

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Older Adult Physiological/Biological Digestive Changes

Changes in healthy older adults:

- Neurodegeneration of the aging gut nervous system (dysphagia, reflux, constipation)
- Decreased gastric secretions with aging
- Appetite and food consumption declines-less hungry, fuller between meals, eat more slowly, consume smaller meals
- “Anorexia of aging”- net body weight loss
- Decreased taste and smell

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Older Adult Changes in Body Weight/Composition

Changes with healthy elderly:

Without strength training, people can lose up to 30% of their muscle mass between ages 50 and 70. After 70, the rate of muscle loss accelerates further. .

This leads to an increase body fat (intra-hepatic and intra-abdominal)*Net Decline in skeletal mass-sarcopenia

Cause is multi-factorial-decreased physical activity, decreased resting metabolic rate, diminished sex hormones and reduced growth hormone secretion

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Psychological & Social Issues in Older Adult Nutrition

Psychological	***Social***
Delirium	Poverty
Dementia	Isolation
Depression/anxiety/bereavement	Inability to shop/prepare and cook food
Alcoholism	

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Common Issues that Impact Older Adult Nutrition

- Hydration-30 ml/kg body weight
- Mobility
- Teeth
- Fiber
- Chronic illnesses and medications
- Reduced Income

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Common Issues that Impact Older Adult Nutrition

- Sticky uncomfortable feeling of mouth or dry mouth
- Being unhappy
- Choking on Food
- Constipation

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Calorie requirement of Older adults

For Women		
Not physically active	Moderately active	Active
1600 cal	1800 cal	2000 – 2200 cal
For Men		
Not physically active	Moderately active	Active
2000 – 2200 cal	2200 – 2400 cal	2400 – 2800 cal

Food myths and taboos

- Foods considered as “cold” (such as cucumber, ladies fingers, watermelon, king coconut, curd, sour plantains (Ambul), green gram, kiri bath etc.) are avoided to prevent the phlegm.
- Foods considered as “heaty” (tuna fish, tomatoes, durian, mangostin, rambuttan, gaduguddah etc.) are not good for health.
- Nutrient rich food (fish, meat, eggs, green leaves etc.) worsens diarrhoea.
- Bitter gourd is avoided during the medication or for dinner.
- Curd, yoghurt and milk lead to diarrhoea and flatulence.

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Nutritional Assessment in Older Adults

Dietary assessment

- **Food Records (Diet Diaries):**

Individuals record everything they eat and drink for a specified period (e.g., 3 days or 1 week).

- **24-Hour Recall:**

A structured interview where individuals recall all foods and beverages consumed in the past 24 hours.

- **Food Frequency Questionnaires (FFQs):**

Individuals report how often they consume various foods and beverages over a longer period (e.g., a year).

- **Observational Methods:**

Observing individuals' food choices and intake in a controlled setting (e.g., in a clinic or research study).

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Specific Anthropometric Measurements:

Weight:

While weight can be a useful indicator of overall body mass, it's important to consider age-related changes in muscle mass and fat distribution when interpreting weight data.

Height:

Height can be affected by age-related changes in vertebral compression, making it a less reliable measure in older adults compared to younger individuals.

Body Mass Index (BMI):

BMI (weight/height^2) is a common measure of body fat, but it can be less accurate in older adults due to changes in body composition.

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Waist Circumference:
measure of abdominal fat, which can be a risk factor for various health problems.
Mid-Arm Circumference (MAC):
measure of muscle mass and can indicate muscle wasting.
Triceps Skinfold Thickness (TSF):
measure of subcutaneous fat and can be used to assess fat stores.
Calf Circumference:
measure of lower leg muscle mass and can be used to assess muscle wasting.
Other Measurements:
Other measurements like hip circumference, knee height, and elbow amplitude may also be used to assess body composition and muscle mass.

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Clinical Assessment

Wasted , thin, skin, hair, nails, wound healing

Laboratory Investigations

albumin, transferring, serum cholesterol

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Screening tools

Mini Nutritional Assessment (MNA):
Assesses their nutritional status based on anthropometric measurements, dietary intake, and global- and self-assessment components.

Malnutrition Screening Tool (MST)/Malnutrition Universal Screening Tool (MUST):
Assesses their risk of malnutrition based on factors like recent weight loss and dietary intake.

Subjective Global Assessment (SGA):
This assessment tool relies on a clinical history and physical examination to evaluate the nutritional status of patients. It can be used to identify individuals at risk of malnutrition and to monitor their progress over time.

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Screening tools

DETERMINE Your Nutritional Health:

Quick and easy way for older adults to assess their own nutritional health and identify potential risk factors for malnutrition. It is based on seven warning signs, including disease, eating poorly, tooth loss, economic hardship, reduced social contact, multiple medicines, and involuntary weight loss or gain.

Other Screening Tools:

Other tools include the Simplified Nutritional Appetite Questionnaire (SNAQ), the Nutrition Risk Screening (NRS-2002), and the GNRI (Geriatric Nutritional Risk Index).

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Mini Nutritional Assessment (MNA)

- A validated nutrition screening and assessment tool that can identify geriatric patients age 65 and above who are malnourished or at risk of malnutrition.
- Is the most well validated nutrition screening tool for the elderly.
- Originally comprised of 18 questions, the current MNA now consists of 6 questions and streamlines the screening process.

https://www.mna-elderly.com/sites/default/files/2021-10/mna-mini-english.pdf

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Malnutrition Screening Tool (MST)

- A simple, two-question tool used to assess the risk of malnutrition in adults.
- Helps to identify individuals who may be at risk of malnutrition so that interventions can be put in place.
- The tool is easy to use and can be administered by a variety of healthcare professionals or even trained volunteers.

https://www.health.qld.gov.au/__data/assets/pdf_file/0029/148826/hphe-mst-pstr.pdf

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Malnutrition Universal Screening Tool (MUST)

- Takes 3-5 minutes
- High predictive value in hospital and community environment
- Get “risk” score of low, medium or high
- Validated
- Developed by the AAFP and American Dietetic Association

https://www.bapen.org.uk/pdfs/must/must_full.pdf

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MST vs MUST

Feature	MST	MUST
Focus	Weight loss, appetite, nutritional intake	Weight, weight loss, acute disease
Complexity	Simple, quick questionnaire	More comprehensive, multi-step assessment
Target Audience	General adult population	Adults in hospitals, community, and other settings
Management	Provides general risk assessment	Includes management guidelines for developing care plans

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Subjective Global Assessment (SGA):

- Is a nutritional assessment method that relies on a healthcare provider's clinical judgment and observation to evaluate a patient's nutritional status.
- It combines subjective elements like the patient's history, symptoms, and dietary intake with objective physical findings to provide a comprehensive evaluation.
- SGA is widely used in both clinical and research settings to assess nutritional status and predict outcomes, particularly in hospitalized patients.

https://nutritioncareincanada.ca/sites/default/uploads/files/SGA%20Tool%20EN%20BKWT_2017.pdf

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DETERMINE Your Nutritional Health

- a checklist, a tool developed by the Nutrition Screening Initiative, to assess the nutritional status of older adults.
- It's designed to help identify individuals at risk for poor nutritional health or malnutrition.
- The checklist is not a diagnosis, but rather a starting point for further assessment and support.
- By answering a series of questions, healthcare professionals can gauge whether someone might be at risk for nutritional problems

https://www.bivinsfoundation.org/wp-content/uploads/2022/08/Nutritional-Risks-Assessment.pdf

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Dysphagia screening

- Dysphagia screening involves various methods to assess a person's swallowing abilities and identify potential difficulties.
- These include bedside evaluations, questionnaires, and instrumental tests like videofluoroscopy (VFS).
- A bedside swallow exam can assess oral and pharyngeal function, while questionnaires and interviews can gather information about swallowing problems.
- Instrumental tests like VFS and FEES (Fiberoptic Endoscopic Evaluation of Swallowing) provide a more detailed view of the swallowing process.

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Bedside Evaluations:

- **Observation:** Clinicians observe the patient's alertness, ability to cough, and presence of drooling or secretions.
- **Physical Exam:** Assessment of oral structures, muscle strength, and reflexes.
- **Swallow Trials:** Assessing the patient's ability to swallow different textures and volumes of food and liquids.
- **Water Swallow Test:** Assessing the patient's ability to swallow water from a cup or with a straw.

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Bedside Evaluations:

- **Gugging Swallowing Screen (GUSS):** A specific test designed for patients with neurological conditions, particularly stroke.
- **Daniels Test:** Assesses dysphonia, dysarthria, gag reflex, and voluntary coughing.
- **Volume-Viscosity Swallow Test (V-VST):** Measures oxygen saturation during swallows of different viscosities.
- **Modified Evans Blue Dye Procedure:** Used in patients with tracheostomy tubes to assess swallowing.

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Questionnaires and Interviews:

- **Eating Assessment Tool-10 (EAT-10):** A short questionnaire used to screen for dysphagia risk.

- **Dysphagia in Multiple Sclerosis Questionnaire:** A tool specifically designed for patients with multiple sclerosis.

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Instrumental Tests:

- **Videofluoroscopy (VFS):** Provides real-time visualization of the swallowing process using X-rays.

- **Fiberoptic Endoscopic Evaluation of Swallowing (FEES):** Uses an endoscope to view the upper airway during swallowing.

- **Manometry:** Measures pressure and muscle contractions in the esophagus.

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Other Screening Tools:

•**Cervical Auscultation:** Listening to swallowing sounds with a stethoscope.

•**Secretion Management Assessment:** Evaluating the patient's ability to manage secretions.

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Gugging Swallowing Screen (GUSS):

- a bedside screening tool used to assess the risk of dysphagia (difficulty swallowing) and aspiration in patients, particularly those with stroke.
- It can be performed by trained non-specialized staff and helps determine the appropriate dietary modifications for individuals at risk.

https://gussgroupinternational.wordpress.com/wp-content/uploads/2018/07/guss-instruction.pdf

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EAT-10 (Eating Assessment Tool - 10)

- is a simple, self-administered questionnaire used to screen for **dysphagia (swallowing difficulties)** in adults.
- It consists of **10 statements** related to swallowing symptoms, such as difficulty swallowing solids or liquids, pain while swallowing, or the impact of swallowing problems on daily life.
- A score of **3 or more** typically indicates the need for further clinical evaluation.
- EAT-10 is widely used in clinical settings due to its ease of use, reliability, and ability to track changes in swallowing function over time.

https://www.nestlemedicalhub.com/sites/site.prod.nestlemedicalhub.com/files/2019-11/EAT-10%20Interactive%20PDF.pdf

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Dysphagia in Multiple Sclerosis (DYMUS) Questionnaire

- **Can be used t**o detect **dysphagia symptoms** early in MS patients.
- Typically consists of **10 yes/no questions**, focusing on both **solid** and **liquid** swallowing difficulties.
- Each "yes" response is scored as 1 point, giving a total possible score of **0–10**. Higher scores indicate greater swallowing impairment.
- Quick, non-invasive, and easy to administer in clinical and research settings.

The DYMUS questionnaire is particularly valuable because dysphagia is a common but often under-recognized symptom in MS, and early identification can help prevent complications like aspiration pneumonia and malnutrition.

https://portal4care.cdlh.be/nl/BESTNL/Slikfunctie/Scales/Dysphagia%20in%20Multiple%20Sclerosis%20Questionnaire%20(DYMUS)-6-7.pdf

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Impact of Nutritional Assessment in Older Adults on Nursing Practice

- Early Identification of Malnutrition
- Improved Clinical Outcomes
- Personalized Care Planning
- Medication and Nutrition Interaction Management
- Health Promotion and Education
- Reduced Healthcare Burden
- Ethical and Holistic Care

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Thank you