The Hearing Aid Podcasts

Episode 2.08 Show Notes
Nutrition

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Broadcast Date: 29th November 2016

Learning Outcomes

Knowledge

- To understand the factors that influence the maintenance of good and poor nutrition
- To understand the impact of dementia on nutrition
- To be able to describe the simple interventions which may improve nutrition

Skills

- To be able to assess a person for malnutrition
- To be able to select the most appropriate interventions to improve nutrition in your patients

Attitudes

- To understand that everyone has a role in the identification and management of poor nutrition
- To understand the importance of nutrition in caring for older patients

Definitions:

- Nutrition is the intake of food, considered in relation to the body's dietary needs.
- Good nutrition – an adequate, well balanced diet combined with regular physical activity – is a cornerstone of good health.
- Poor nutrition (regardless of cause) can lead to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and reduced productivity.

WHO Definition of Nutrition

Practical Definition:

- In context of ill health, the 'problems' we often encounter are related to illness or disease impacting on a person's ability to maintain good nutrition.
- Illness may increase a person's nutritional requirements to maintain good health. This is why weight loss is such a 'red flag' sign of illness. (increased need)
- The illness itself may interfere with a person's ability to maintain their own nutrition for example a swallowing difficulty. (physical impediment)

Key Points from Discussion

Nutrition pathways - plate to mouth so to speak

The pathways and components for maintaining adequate nutrition are multiple and complex! Here we highlight a few key elements that need to be in place.

- Recognise hunger and remember it
- Multi-sensory process: smells, sight
- See plate, see and identify food on plate
- Use cutlery
- Dexterity to lift food to mouth
- Executive function (frontal lobe function for planning complex tasks in sequence)
- Salivation, dentition and chewing,
- Coordination of swallowing (could be whole episode in itself!)

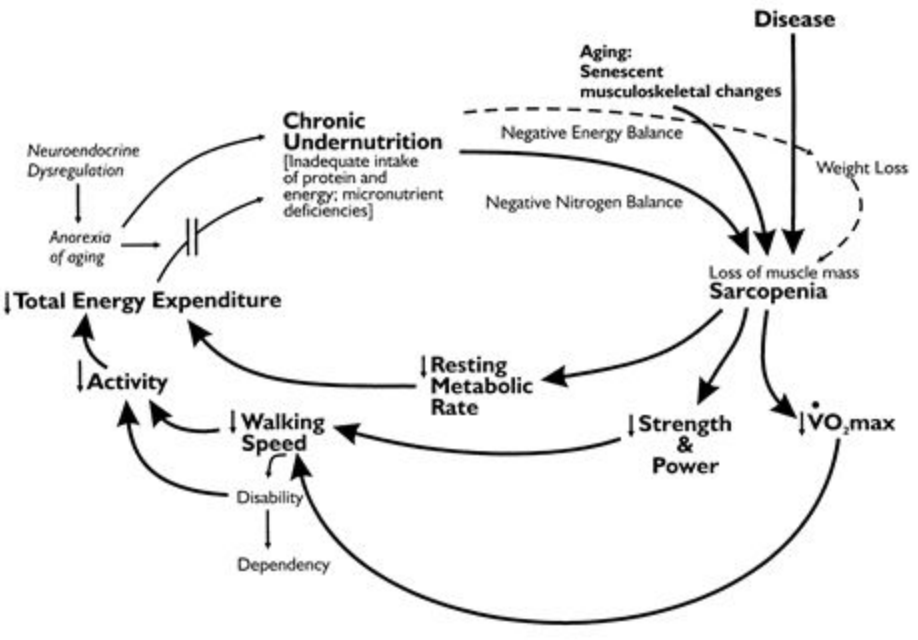
- Taste and enjoy the food (social and emotional experience), taste bud decrease with age and change, for example *umami*.
- Social event, if lonley may not prioritise food.
- Passage of food into stomach / intestines to absorb nutrients
- Access to food: mobility, financial, others choosing meals

These multiple components really demonstrate that an MDT approach is essential to optimise nutrition, for example:

- Doctors: look for non-intake cause of malnutrition e.g. catabolic state of illness or cancer, malabsorption, medication review e.g. gastritis, dry mouth, nausea, constipation, low mood, SOB
- Nurses / HCAs: mood, co-ordinating person centred care plan of preferences, recommendations etc., liaising with family e.g. food likes, dislikes, identification of assistance to mealtimes (e.g red trays), encouraging / prompting vs assistance. Mouth care / dentition.
- Dietician: skilled calculation of requirements and deficits and prescription of supplements if needed
- SALT: if dysphagia present in particular to assess cause and recommend appropriate thicknesses/ consistencies. Good at working out cause, so in particular pattern of dementia indicating longer term issue versus acute decline.

Why does it matter? Malnutritional states can lead to increased risk of complications and feeds into the frailty state.

- Higher risk of skin breakdown
- Impaired immunity
- Reduced functional reserve.
    - In particular micronutrients and the relative constituents of food are important - and loss of some of the micronutrients (vit a and zinc for example) reduce wound healing. Vitamin C def. leads to scurvy / Thiamine def. Leads onto Wernicke's and Korsakoff's syndromes. Etc.



How to measure / detect malnutrition

- Commonest is MUST score (in UK)
- Simple measurements like weight, height and BMI often not that simple (estimations, fluid etc).
- Mid upper arm circumference (MUAC) to estimate BMI
- Ulnar length as estimation of height

MUST Score (each step scores out of 2)

- Step 1: BMI
- Step 2: Unplanned weight loss
- Step 3: Acute illness and decreased intake for 5 days

Score 0 = low risk: repeat weekly in hospital, monthly in care homes, yearly in community for at risk groups (including the over 75s)

Score 1 = medium risk: food chart for 3 days - if intake adequate then monitor w/screening as above (except in community do 2-3 monthly), if intake inadequate - formulate plan for increased intake

Score 2 or more = refer to dietician, set goals to improve nutritional intake, monitor regularly weekly, monthly, monthly.

Oral Health

There is an independent association between oral health and malnutrition in older adults in long term care. This may affect in many ways, without getting too detailed here (another episode in future), even just starting simply with dry mouth, mouth ulcers, poor dentition (missing or painful teeth) or ill fitting dentures.

The association between malnutrition and oral health status in elderly in long-term care facilities: a systematic review. Van Lancker et al. 2012 Pubmed

Oral health in the elderly patient and its impact on general well-being: a nonsystematic review. Montoya et al, Clinical Interventions in Ageing, 2015. Pubmed

How to support optimal nutrition

For some people enteral support with feeding (i.e. an NG tube) is appropriate. For most it isn't and the aim is to support normal oral intake -> this is harder and requires lots of people working hard together to co-ordinate.

A systematic review of how best to promote and achieve 'normal' eating and feeding in adults with dementia to avoid undernutrition showed:

- "*Unlikely that a single intervention type would demonstrate improved eating ability (and therefore nutritional status) in all residents in a care unit due to the diverse range of challenges faced by the population with dementia." i.e. many studies had just multiple interventions and there were not many controlled studies of single interventions.*
- Moderate (level 3), grade B recommendations for:
    - Staff education
    - Environmental adaption e.g. high contrast plates, small dining rooms
    - Enhanced menus / decentralised food service
    - Nutritional screening
    - Background music / aquarium

The effectiveness of interventions to reduce undernutrition and promote eating in older adults with dementia: A systematic review. Jackson et al 2011.

Use of high protein oral nutritional supplements

- Meaning >20% energy from protein

- Reduced complications (mainly wound healing and general infections)
- Reduced readmissions
- Improved grip strength
- *Systematic review and meta-analysis of high protein versus control. Inadequate data to look at high versus low protein dietary supplements.*

Systematic review and meta-analysis of the effects of high protein oral nutritional supplements. Cawood et. al 2011. Pubmed

Dementia and supported nutrition

- Systematic review called EDWINA (Eating and Drinking Well IN dementiA!)
- Interventions included oral nutrition supplementation, food modification, dysphagia management, eating assistance and supporting the social element of eating and drinking.
- 43 controlled interventions included and none were judged to have low risk of bias.
- Oral nutritional supplements had short term but unclear long term benefit
- Food modification and dysphagia management: small studies, low quality with little evidence of improved nutritional status
- Eating assistance evidence was inconsistent
- Studies of social element although small and of low quality provided consistent suggestion of improvements in aspects of quality of life
- Overall quality of studies poor but promising interventions include: Oral nutrition supplements; pureed and reformed foods; thickened fluids; individual mealtime or between-meal assistance; family style meals and meals shared with staff or carers; meals with a facilitated social element; reminiscence cooking; finger food provision.

EDWINA: Effectiveness of interventions to directly support food and drink intake in people with dementia: systematic review and meta-analysis. Abdelhamid et. al BMC Geriatrics 2016. Pubmed

Dementia and artificial nutrition

- Artificial enteral feeding (NG or PEG) showed no benefit in advanced dementia (no nutritional improvements - i.e. it is not just the intake that is the problem).
- some small evidence of adverse effects
- Balancing medical benefits against QOL, cultural and personal wishes pre-dementia
- Good guidance from GMC

Tube feeding in patients with advanced dementia: a review of the evidence. Finucane et al, JAMA 1999. Pubmed

GMC Guidance for nutrition and hydration at the end of life.

Curriculum	Area	
NHS Knowledge Skills Framework	Suitable to support staff at the following levels: • Personal and People Development: Levels 1-3 • Service Improvement: Level 1 - 2	
Foundation curriculum	**Section** 1.3 1.4 2.1 7.9 10.1 10.3 10.5	**Title** Continuity of care Team working Patient as centre of care Interactions with different specialities and other professions Long-term conditions - Nutrition Health promotion, patient education and public health
Core Medical Training	Team working and patient safety Management of long term conditions and promoting self-care Communication with colleagues and cooperation Evidence and guidelines Geriatric Medicine History Taking Management of patients requiring palliative and end of life care Weight Loss Gastroenterology and Hepatology Public Health & Health Promotion	
GPVTS program	Section 2.03 The GP in the Wider Professional Environment	

	• Core Competence: Managing medical complexity Section 3.05 - Managing older adults • Core Competence: Managing medical complexity • Core Competence: Working with colleagues and in teams • Core Competence: Practising holistically and promoting health Section 3.17 - Digestive Health
PA Curriculum	2.4.3 - Gastrointestinal System: Undertake a nutritional assessment.
Paramedic	2.2.4 - The role of nutrition in health and illness.
ANP (Draws from KSF)	Section 6 Section 7 - Chronic & Exacerbation of Chronic Conditions • 7.17: Malnutrition • 7.27: Nutritional status including chronic and acute dehydration • 7.30: Problems with mouth Section 10

Feedback

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