 Briefing Paper on the Role of the Dietitian in the Prevention and Management of Nutrition-related Disease in Older Adults

Dietitians, as members of integrated interdisciplinary and multi-disciplinary teams, play a key role in the prevention and management of nutrition-related disease in older adults. They are uniquely qualified to apply scientific evidence to the promotion of healthy eating, individualised nutritional therapy and counselling to individuals and groups.

To perform their role in the prevention and management of nutrition-related disease in older adults, dietitians must demonstrate key competences in the knowledge, skills and attitudes which underpin gerontology and geriatric nutrition, i.e. dietitians should demonstrate an understanding of:
- basic principles of gerontology and geriatrics,
- age-related changes in physiology and metabolism leading to i.e. sarcopenia\(^1\) and frailty\(^2\),
- age-related changes in nutritional requirements and their nutritional implications (such as anorexia of ageing which can result in loss of body weight, increased risk of morbidity, infection, length of hospital stay, loss of autonomy and mortality),
- common age-related diseases and their nutritional impact (such as cardiovascular disease, stroke, cancer, fracture risk, renal disease, depression, dementia, Parkinson’s disease, pressure ulcers and common nutritional deficiencies such as vitamin B12, B6 and D deficiency).
- the impact of multiple nutritional co-morbidities that may exist at the same time in the same individual,
- an awareness of the typical environments associated with older adults care, e.g. the home environment, step-down rehabilitation care, long term residential care, nursing homes, rehabilitation units or in hospital,
- relevant aspects of research in older adults care,
- functional and organic mental health,
- socio-economic consideration relevant to older age: loneliness, poverty, depression, loss of spouse, etc,
- evidence based practice.

Older adults in the EU

Within Europe the proportion of older people in the population is very high. This is projected to remain so at least until 2050. The EU population over 65 years of age increased from 13.7% in 1990 to 17.4% in 2010. By 2060 it is predicted that the proportion of people over the age of 65 in Europe will increase to 30%, corresponding to 152 million people (WHO 2002). The number of people aged 60 and above in the EU is now rising by more than two million every year, roughly twice the rate observed three years ago. The rise of the ‘oldest old’ (those over 80 years of age) is particularly significant. It is forecasted to increase fourfold from the 1990 value by 2060. While the effect of demographic ageing will be felt throughout Europe, a recent study by the Committee of Regions ‘Active ageing: local and regional solutions’ clearly showed that it will impact some regions more severely than others. Life expectancy continues to rise. In 2008 average life expectancy for the EU-27 it was 76.4 years for men and 82.4 for women. Differences among member states are still very significant, ranging from

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\(^1\)Sarcopenia is associated with diminished muscle mass and function and changed metabolic conditions.

\(^2\)Frailty is associated with elderly people who exhibit sarcopenia, low physical activity, decreased walking speed, low muscle strength, unintentional weight loss and exhaustion.
The majority of older adults live healthy and independent lives, but there are large discrepancies among and within countries in social, occupational and educational experiences. A number of factors, including nutrition, have contributed to the increase in life expectancy. This offers the potential of raising average life-spans for the less-advantaged groups. Not only are people leading longer lives, but also healthier and more productive lives. The working population is ageing, as the proportion of older workers in employment increases.

The older adult population can be classified into 3 categories: the pre-war generation, the silent generation and the baby boomer generation (Becker 1993).

Generations differ strongly from each other. Seniors wish to be identified by what they find important in life and not by the fact that they are old, as many are still active, vital and healthy. Young seniors are often very concerned about their health and seek concrete reasons why they should change their lifestyle. They may wish to take matters into their own hands and to make their own choices.

The European Innovation Partnership on Active and Healthy Ageing http://ec.europa.eu/health/ageing/innovation/index_en.htm aims to increase healthy life years by two years by 2020.

The key priority pillars for this project are:
- prevention, screening and early diagnosis,
- care and cure,
- active ageing and independent living.

2012 was the “European Year for Active Ageing and Solidarity between Generations” emphasizing the importance of focusing on these priorities. The European Commission aims to support the initiative at a time when the EU grapples with a steadily ageing population and its impact on public services and finances. The term ‘Active ageing’ refers to the creation of more opportunities for older people to continue working, to stay healthy longer and to continue to contribute to society in other ways, for example through volunteering.

Health promotion and preventative health care should be encouraged, through measures that maximise healthy life years and reduce risk of dependency. Common conditions such as cardiovascular disease and type 2 diabetes are preventable and their consequences on older adults’ wellbeing can be managed. Owing to the impact that good nutrition has on health and well-being in later life, nutrition among older adults should be prioritised in society.

- **The ageing process**

According to WHO Active Ageing is built on three pillars; participation, health and security. Nutrition is part of each of these three pillars. The main purpose is to maintain independence and prevent disability by rehabilitation and to ensure quality of life (WHO 2002). Ageing is an irreversible and progressive process, affecting social, mental, emotional and physiological abilities. The frailty concept includes low physical activity, decreased walking speed, low muscle strength, unintentional weight loss and exhaustion. It has a negative impact on physical function and quality of life, and increases risk of injuries from falls. Sarcopenia is an important component in the frailty concept referring to diminished muscle mass, function and changed metabolic conditions. These age-dependent alterations make older adults especially vulnerable to disease-related malnutrition.

Anorexia of ageing is defined as “unintentional decline in food intake” and, as a result, weight loss,
that begins near the end of life; it represents a sign of failure to maintain levels of food and fluid intake necessary to preserve energy stores.

Energy and nutrient requirements vary with health status and stage in life. Therefore ‘healthy food’ has different meanings during the life course. Normally energy and nutrient intake decreases in older age groups. However, when intensified by disease food consumption can become too low to meet the requirements for maintenance or the recovery of health. The consumption of appropriate appetizing food, with adequate composition and texture is an important prerequisite for the older person’s well-being. It is essential to facilitate and maximize the added benefit of medical treatment and physical rehabilitation.

Nutritional differences in various groups of older adults should be identified (Suominen ea (2012)). Multidisciplinary cooperation and education led by experts in nutrition concerning assessment of nutrition and nutritional care of older adults is needed (Suominen ea (2007). One of the most common nutrition problems in the older adult is disease-related malnutrition.

- **Role of the dietitian in active and healthy ageing**
  In the ageing population, the role of the dietitian is essential. Their expertise and knowledge is necessary in the prevention and treatment of malnutrition at a strategic, educational and operational level for the two main target groups: the healthy older person and the sick older person, including the frail older person.
  Nutrition is embedded in the management of chronic diseases, malnutrition and functional abilities of the older person. Nutrition also plays a preventative role and is identified as a key component of quality of life (Perry & Mc Laren (2004)).

  - **Prevention of malnutrition within the healthy older adult**
    - This may occur at group or individual level in a variety of settings.
    - Within the community, programmes may consist of nutrition education workshops and practical nutrition & cookery programmes, involving Active Retirement groups or Active Ageing groups. These nutrition programmes are often evaluated and peer-reviewed. Their aim is to address the risk of malnutrition and dehydration.

Although no amount of physical activity can stop the biological ageing process, there is evidence that regular exercise and encouraging favorable lifestyle behaviours - even at advanced ages - can minimize the physiological effects of an otherwise sedentary lifestyle and increase active life expectancy by limiting the development and progression of chronic disease and disabling conditions by older adults. So it is advisable to include recommendations for an active lifestyle into dietitian-involved health promotion projects.
Prevention of malnutrition with frail older adults

This may require an individual dietetic consultation with appropriate follow up. The education of these clients and/or their carers through lectures/workshops addressing malnutrition risk is thought to be very valuable.

The dietitian plays an important role within Primary Care interdisciplinary teams. Joint working with the other Allied Health Professionals, Nursing, Medical and Social Services facilitates early and rapid problem solving and enables the client to be cared for in a patient-centred holistic way. Nutrition and its parameters should be fundamental in any generic screening tool used for generic holistic team working.

The importance of a brief annual dietetic check-up of this age group cannot be underestimated. It can identify malnutrition earlier and prevent a worsening condition developing, thus extending the quality of life of older adults.

Older adults often adhere to diets they have been advised to follow when younger and/or during the acute stage of a disease. It is the dietitians’ role to explain why a strict diet may no longer be advisable for them and the possible adverse effects of following such a diet.

The dietitian is also the right person to advise on the appropriate intake of Oral Nutritional Supplements, both prescribed and available over the counter. These often provide vitamins, minerals & trace elements as well as energy, protein and fat. The appropriate use of these is based on the specific nutritional status of an individual at a particular time.

Since poly-pharmacy is common in older adults, drug-nutrient interactions are another important issue in the nutritional follow-up. Drug-nutrient interactions may result in poor nutritional status. Adverse drug effects are one of the most common reversible causes of protein-energy under-nutrition. Medication can induce weight loss by causing anorexia, nausea, vomiting, diarrhea, constipation, cognitive disturbance, or increased metabolism.

The dietitian also has a role in the nutrition-related education of the multidisciplinary team. The development of structured education programmes with healthcare professionals in the community (general practitioners, community/homecare nurses etc) is a valuable part of the job.

By addressing the malnutrition and dehydration risk in frail older people who are chronically ill and may have dementia, the dietitian has been able to show significant clinical benefits and treatment outcomes.

Treatment of healthy older adults

This may consist of dietary counseling for an acute medical problem requiring nutritional adaptation to preventing the deterioration of health in this client group. A dietitian can provide the specialist nutritional support required, tailored to the individual need of the client, which will obviously vary from individual to individual. It is advisable to simultaneously undertake a brief nutritional check-up (intake of fluid, energy, protein, fibres, vitamins, minerals) and weight evaluation.

Since the outcome of treatment of some established diseases and geriatric syndromes is more effective with higher-intensity exercise (e.g., type 2 diabetes, clinical depression, osteopenia, sarcopenia, muscle weakness), it is advisable to motivate people to have an active lifestyle and to cooperate in a multidisciplinary way to improve the activity level. Reducing sedentary behaviour has recently become a target for behavioural scientists, as it has been shown that the reduction of prolonged sitting, in obese adults, reduces post-prandial glucose and insulin responses.
is a growing body of evidence that suggests breaking up sitting time approximately every 30 minutes can improve weight and metabolic outcomes.

- **Treatment of sick and/or frail older adults focusing on under-nutrition malnutrition.**
  Under-nutrition malnutrition risk screening should be implemented in all care settings. The earlier this problem is recognized, the easier it is to avoid or treat. Therefore the implementation of a validated nutrition screening tool, an appropriate malnutrition care pathway, a communication structure and a structure for referral to the dietitian is essential in the health care setting.
  Dietitians treat malnutrition by individually-tailored intervention. A structured nutrition & dietetic treatment process results in better outcomes for the frail older person in all care settings and may result in cost savings for the service provider.
  Dietitians should have input to all care-settings for older peoples services: acute hospital, community residential care sites, nursing homes, community primary care teams, rehabilitation teams and own-home care.

To deliver a ‘person centred’ approach requires an understanding of food habits. Understanding the motivation behind these food choices is essential for compliance to a prescribed diet therapy, which may also require the intake of oral nutrition supplements.

Dietitians specialising in the care of older adults must have a profound understanding of gerontology, geriatric and ethical considerations and when treating this care group pay attention to the following:
- approach older adults in a respectful way and try to empower them,
- focus on changes in cognitive and physical abilities and how changes in these abilities affect the conditions for treatment goals,
- communicate at an appropriate level of functioning and intelligence with the aid of supportive materials:
  - provide clarity - do not use jargon and technical terms,
  - make use of images and clear illustrations to clarify what you explain,
  - use sufficiently large font and clear signs and symbols in written matters.
- apply Cognitive Behavioural Therapy skills,
- take into consideration the financial situation, lifestyle and level of support from relatives or social workers,
- always prioritise the overall quality of life and respect the will of the older adult.

As previously mentioned, the role of the dietitian in care of older adults is multifactorial: strategic, educational, clinical, administrative and evaluative.

- **Strategic level**
  Dietitians have an important role to play within health and social care organisations. It is essential that they are able to influence operational and strategic policy; implementing quality and standards of care; leading and influencing appropriate change to health provision and the processes and systems within and by so doing facilitating the coordination of nutrition related programmes at a population level.
  Dietitians often work alone and therefore rely on effective teamwork with other health care professionals and co-workers in order to provide a holistic nutrition and dietetic service. They

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We must be very much aware of the fact that very old adults with the greatest nutritional problems also often are not in a mental state to be able to independently take care of what is prescribed.
should plan and set specific goals which should address specific areas which influence the prevention and treatment of nutrition/disease related malnutrition within older adults care, e.g. prevention strategies, clinical strategies, education strategies, meal structure, production and environment strategies, evaluation strategies and physical activity to prevent falling and sarcopenia.

- **Educational level**
  As qualified nutrition experts within older adults care, dietitians should work towards improving their professional image with the public. This can be achieved by increasing their visibility in the media, boosting their profile to both public and professional target groups.

  **Public target groups:**
  - The risk of nutrition-related disease within the older adult population should be highlighted with the co-operation of associated community groups and organisations via practical channels.

  **Professional target groups:**
  - Information regarding current international, national and/or local clinical guidelines for the prevention and management of nutrition-related disease should be created and communicated to relevant professional personnel within the older adults care environment to promote best practice. The dietitian should demonstrate competence in using various effective communication channels in order to communicate key messages, e.g. local meetings, seminars, websites, e-mails, procedures, reports, personal support etc. and should focus on being visible and accessible via these channels.

- **Clinical level**
  Nutrition is imbedded in the management of chronic diseases, malnutrition and functional abilities of the older person. Nutrition also plays a preventative role and is identified as a key component of quality of life (Perry & Mc Laren (2004)).
  Dietitians should aim to follow examples of best practice when treating the older person. One method of ensuring that this happens is to follow peer reviewed guidelines. The ‘Model and Process for Nutrition and Dietetic Practice’, BDA 2012 is one example of how to do just this. Dietitians in the context of patient treatment should develop a nutrition care process for the carers to follow. To avoid problems, the nutrition intervention should always be labeled with a nutrition diagnosis.
  Dietetic input within care establishments is essential. They have an important role in menu modification and design, making the provision of therapeutic diets possible.
  In nursing homes, and other settings where food is produced, food should be manufactured in a safe and nutritionally correct way. It should be appetizing and have a high energy and protein content and texture modification if required.
  Motivational interviewing is used to motivate the client in changing lifestyle. However, some older adults are not candidates for diet or lifestyle changes. The dietitian always has to respect the autonomy and wishes of the individual.

  The dietitian should be a member of every primary care team. Their contribution can prevent avoidable admissions and promote early hospital discharges. Links with social services can be invaluable in that a dietitian can make sure that the provision of ‘meals on wheels’, or other social food provision, is relevant and nutritionally appropriate.
The dietitian should always work according to the ethical considerations of the ESPEN guidelines for geriatric nutrition, while reducing morbidity and mortality is a priority in younger seniors, in geriatric patients maintenance of function and quality of life is often the most important aim.

Consideration of the functional age, quantity versus quality of life and presence of organic or functional mental health issues should also be considered. In terminal illness the person’s advance directives should be of primary importance before commencing therapy.

If lifestyle changes or dietary regimens are too rigid or difficult for a patient to adhere to, the risks to them from severe and unnecessary dietary restrictions can result in decreased food intake, resulting in unintended weight loss and malnutrition.

The dietitians’ role with the frail older person covers the broad spectrum of clinical interventions and includes:
- Identifying & assessing malnutrition (risk). Implementing appropriate lifestyle & nutritional support strategies with the individual, family & staff. Malnutrition after stroke has been associated with limited response to rehabilitation (Davis et al. 2004); increased risk of chest infections due to reduced respiratory muscle function (Arora & Rochester 1982); apathy, depression, fatigue and loss of motivation (Keys et al. 1950) leading to lack of willingness to participate in these programmes (Nip et al. 2011). It was found that dietary energy intake predicts rehabilitation outcomes and post-stroke nutritional support should be prioritised to ensure optimal recovery.
- Assessing and diagnosing nutrition-related problems for the prescription of nutrition therapy and calculating nutritional requirements for the prescription of oral nutritional supplements, enteral tube feeding and parenteral nutrition; co-ordinating tube feeding arrangements for patient/family/carer.
- Working in collaboration with all members of the health and social care team, such as linking with speech and language therapy in the management of dysphagia, or with physiotherapy in the management of physical activity (e.g. preventing falling and sarcopenia).
- Providing nutritional advice to catering services on analysis and development of menus and therapeutic diets.
- Educating health care professionals on the topic of malnutrition and its relationship with frailty, and the role of the health care professionals regarding the prevention and treatment of malnutrition (risk).
- Educating and supporting patient, family/carers to maintain nutritional status; developing a client-focused nutritional care plan; implementing eating/mealtime strategies for cognitively impaired; advising on lifestyle/social factors which impact on nutritional intake.
- Promoting and implementing evidence based practice with healthcare professionals, resulting in positive outcomes for patients and health service resources.
  - Malnutrition in >65 years is 43% in hospitals and 42% in residential facilities in Ireland (BAPEN NSW 2010)). Implementation of nutritional screening tools & referral pathways are recommended.
  - Dietetic interventions with healthcare professionals results in more appropriate prescribing practices and a 14.5% reduction in prescribing of oral nutritional supplements (Kennelly et al. 2011)).
  - Expanding nurses’ role to replace gastrostomy tubes in residential care has shown reduction in acute hospital admissions (HSE Midlands 2005)).
- Following-up and evaluating the effectiveness of nutrition therapy regularly.
- Documenting actions according to relevant requirements and procedures

- **Research level**
  The dietitian has an important role in research of nutrition in ageing. Research to expand the knowledge about how to assess, diagnose and treat nutrition-related conditions in the older adults is very useful. e.g. understanding the relationship between behavioural aspects of dementia and how this can impact on nutritional status is currently being researched and will be of particular significance for health care services and policy development (McKeon, Ireland - pending publication).

At an academic level, dietitians can contribute to the inclusion of modules on nutrition for the older adult in nursing and medical training; develop continuing education programmes for professional colleagues and support student training programmes in the specialism of older adults.

- **Administrative level**
  Nutrition therapy in older adults care should be patient-focused and may therefore include addressing meal times and modification of mealtimes, oral nutrition supplements and/or vitamin and mineral supplements, dietary fortification (energy and/or protein) and texture modification. When planning nutritional care for older adults it is essential to respect their autonomy and take ethical factors into account in order to achieve optimal quality of life.

**Overview.**
Dietitians play a critical role in developing national nutritional recommendations and advising on incorporating these into menu policy in acute hospitals & community residential services. Food served in care environments for older adults should not only meet the nutritional requirements of older people, but also the sensory requirements, as the sensory appreciation of a meal often determines its consumption.

It is therefore important to consider the environment as well as the menu composition (including seasonal variations), the quality of ingredients (including spices, herbs and seasoning), food preparation techniques, cooking time and cooking temperature in order to maximise the eating experience.

Menus should provide a variety of textures, colours and flavours and should be adapted to suit requirements for modified diets. Familiar foods tend to be more acceptable to older people, however, since food habits are becoming more international, other choices may also be welcome.

The particular preferences and dislikes of the individual, together with the need for adapted cutlery or assistance in eating and drinking, should be documented and respected.

Individuals should be encouraged to maintain control of their food intake e.g., to choose and serve their own food with or without assistance. Special attention should be given to mealtimes, particularly with respect to:
- **Meals and mealtimes**
  - Is there enough time to eat?
- Designated times of main meals and snacks; is there sufficient time between meals throughout the course of the day?
- The length of time between the last meal at night and breakfast the following day; is this too long e.g. 10-12 hours.
- Snacks and drinks; are snacks and fluids available between scheduled meal times?
- Is the temperature of the meal appropriate?
- Modified diets; are all required dietary modifications (texture, consistence, ready to eat fruit, etc) available?
- Protected mealtimes and snacks; are designated times protected for meals and snacks?
- Autonomy; are people in a position to choose with whom, when, where (dining room or own room) and what they eat?
- Monitoring; is there anyone who can check/control the appropriate fluid and food intake and the chewing and swallowing capacity of the person?
- Variation; is there enough variety for individuals in long-term care? Pictorial menus should be available for patients with communication difficulties.

**Eating environment**

- Dining area; is the dining area clean, calm, comfortable, pleasant and, if necessary, functionally adapted?
- Dining table; is the dining table clean, set appropriately, inviting?
- Eating position; are individuals seated and positioned appropriately in order to enjoy their meal comfortably and safely?
- Assistance; is trained assistance available if required?
- Presentation; are meals appetising, of correct temperature and portion size?
- Accessibility; are crockery, cutlery and packaging appropriate for the individual?
- Attitude; are personnel attentive, have meals been described before serving, do personnel discuss personal issues at mealtimes?

Food safety is of particular concern as older adults are very vulnerable to the effects of food poisoning due to the high risk of immune-depression in this age group.

In some countries, dietitians are involved in the prevention and control of foodborne diseases through providing appropriate food safety education and training to carers and older adults. Dietitians are often involved in the identification and reporting of food safety issues to the appropriate authorities.

**Evaluator level**

The role of the dietitian as a quality reviewer/evaluator is essential in closing the circle of dietetic management in older adults care. Whether it is in a strategic, educational, clinical or administrative role, the dietitian has a responsibility to evaluate the effectiveness of their actions. The use of audit and research may be helpful in this process.

Dietetic objectives in all roles should be developed according to the SMART principle, i.e., Specific, Measurable, Achievable, Relevant, Timely. This provides the framework and timescale by which dietetic outcomes may be evaluated. (Model & process for nutrition and dietetic practice BDA 2012)
The findings of these evaluations are of immense benefit in the future strategic planning of the role of dietetics within older adults care.

Older adults are at a particular risk of undernutrition if they are not able to prepare a main meal independently or don’t receive ‘meals on wheels’. It is the dietitians’ responsibility to detect nutritional problems and act upon them appropriately. (Ref Malnutrition Task Group, BDA May 2013)

**Nutritional Screening**

Nutritional screening tools for the older adult population (MAG, MNA, MUST, SGA, NuRAS, SNAQrc, SNAQ65+ or NRI) should consider factors like BMI, recent weight loss, skin condition, respiratory function, dementia, nausea, and much more. In some cases, skinfold thickness, arm and calf circumference and grip strength measurements may be measured. These methods generally need an experienced assessor to measure correctly. Furthermore, it is also argued that nutritional screening should be done routinely.

**Nutritional Assessment**

The model and process for nutrition and dietetic practice (BDA July 2012) suggests following the ‘A,B,C,D,E’ (Anthropometric, Biochemistry, Clinical Findings, Dietary Intake and Environment ) pathway of assessment

The goal of nutritional assessment is to identify the presence, nature and extent of impaired nutritional status of any type: obesity or, perhaps more often among old people, undernutrition. Nutritional assessment evaluates different data related to dietary intake and/or body composition in order to develop a plan of care that will help improve the nutritional status. For this it is advisable to differentiate between routine screening done by nurses or doctors and nutritional assessment performed by the dietitian.

It is important to have policies on nutrition and hydration, followed by relevant procedures and protocols. Decisions on when it is appropriate to stop treatment but continue to keep the patient comfortable should be guided by protocol.

**Conclusion**

Dietitians have the potential to operate at all levels of care: strategic, educational & clinical. They can influence healthcare practices and be instrumental in developing and advocating policy change i.e. nutrition screening initiatives. Their influence within the nutrition industry, in promoting health education activities and improving services to older people is invaluable. Finally, their input within the multidisciplinary situation is essential, providing an expert opinion on nutrition in complicated clinical situations.

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Keep fit for life. Meeting the nutritional needs of older persons.

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  http://www.thpc.scot.nhs.uk/wordfiles/OlderPeople.pdf
Addendum

Routine nutritional assessment and nutritional risk screening approaches in older adults.

- Dietitians should take a lead role in the introduction of routine nutritional screening in hospitals, care homes and community settings. Most patients have to have a nutritional assessment within the first 24 hours of the admission. If the patient is not at risk on admission, no action is necessary, except rescreening every week in hospital or every 3 months in care homes. This is done to prevent malnutrition/undernutrition during the stay.
- Simple measures such as monitoring weight are vital to aid early identification of potential problems and allow appropriate action to be taken. Chair scales with a footrest should be available or scales suitable for wheelchairs.
- The use of a validated nutrition screening tool appropriate to the elderly and approved by a dietitian is recommended.
- An example of a simple screening tool is the ‘4 question approach’ (Lennard Jones et al (1995)) using the following:
  - Have you unintentionally lost weight recently?
  - Have you been eating less than usual? Food intake/waste
  - What is your normal weight?
  - How tall are you?
- Laboratory tests, which measure the concentration of a particular nutrient or variable affected by a particular nutrient in a tissue, are indicators of undernutrition. For example serum haemoglobin, ferritin, albumin, vitamin D, vitamin B12, vitamin B1, TLC, C-reactive-protein, BSE, etc… can be measured.

Best practices in counselling methodologies by European dietitians

- Techniques to help improve motivation and behavioural change
  - Motivational interviewing
  - Situational coaching
  - Discount rates (http://painconsortium.nih.gov/symptomresearch/chapter_4)
  - Mindful eating
- Workshops
  - Healthy nutrition
  - Menu planning (paying attention to budget and cultural differences)
  - How to read food labels
  - Healthy shopping
- Cooking classes
- Visualization tools used in education
  - Pictures of food portions
Further Reading

1. **Mini Nutritional Assessment (MNA)**
   - http://www.mna-elderly.com/

2. **Nutrition Risk Assessment Scale (NuRAS)**

3. **Nutritional Risk Index (NRI)**

4. **MAG Screening Tool for Adults at Risk of Malnutrition**
   www.bapen.org.uk

5. **SNAQrc and SNAQ65+**

6. **EFAD position paper on the role of the dietitian in the prevention and management of malnutrition in adults**
   - How to promote active ageing in Europe EU support to local and regional actors. The European Commission, The Committee of the Regions, AGE Platform Europe, 2011
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