

Health and Community Care

Older People Living in the Community – Nutritional Needs Barriers and Interventions: A Literature Review

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Good nutrition plays a vital role in the well-being and health of older people but also helps delay and reduce the risk of developing disease. This literature review focuses on the nutritional needs of older adults living in the community, the barriers to them meeting their nutritional needs, and interventions which may be successful in improving nutritional intake.

Main Findings

- Certain changes occur as people age which can affect the ability to eat. These include weight gain or weight loss, loss of muscle and increases in fat, a deterioration in taste, smell and state of teeth, and not least, as people get older, they are more likely to be chronically ill or have a disease. Much thought should be given to texture and flavour of food as well as nutrient composition of food for older people because of these changes. In addition, the natural deterioration in teeth with age, combined with the increasing numbers of old people and the greater number of people retaining their teeth, will place an increased demand on dental services.
- Generally, the nutritional requirements of the older adult are the same as those for the rest of the adult population, and so like the rest of the adult population, older people should try to eat less saturated fat, eat more fibre and have a minimum of 6-8 glasses of fluid each day. Although vitamin and mineral requirements remain the same, energy requirements are generally lower in older people so the nutrient density of the older person's diet is of prime importance. In addition they should take a daily vitamin D supplement, as recommended by the Scientific Advisory Group for Nutrition however this recommendation is currently being overlooked. As older people are entitled to free prescriptions, this supplement could be prescribed thereby eliminating cost as a barrier to people taking up this recommendation.
- Universal use of nutritional screening tools in the community in Scotland would help identify and quantify how many older people have nutritional problems which may impact on their ability to continue living independently at home. A pilot scheme could test the feasibility of this.
- There are a number of barriers which hinder some older people living in the community in Scotland in meeting their nutritional requirements. These include issues around social isolation; grief, depression and other mental health factors; chronic illness and disability, and the impact of medication associated with any conditions; food safety issues, access to food and a lack of nutritional knowledge/education. Poverty/ budgeting skills may also be barriers to healthy eating for some.
- Any strategy to improve the nutritional status of older people living in the community should involve a package of care combining diet, and where appropriate supplements, and activity rather than any of these measures in isolation. Outcomes which should be measured need to include any improvement in the ability to perform activities of daily living as well as physical changes such as weight gain.
- Some strategies which look to have potential benefits in improving nutritional intakes in older people are social eating, training peer educators as community nutrition assistants, allocating longer time slots to home care workers assisting older people with nutritional needs and tailoring meals for older people specifically.

Background and Context

Although there is a plethora of information on the nutritional needs of older people living in the community there are few succinct summaries of this evidence. In addition there is little known about effective interventions which could be utilised to improve the nutritional status of older people living in the community. The aims of this literature review were to:

- Identify the nutritional needs of older people living in the community and barriers to them meeting their nutritional requirements.
- Identify effective dietary and other interventions, including interventions to improve food access for older people (including cooking clubs, delivered meals/food etc) and use of supplements (of which vitamin D may be one), to improve health outcomes (including nutritional status) of this population group.

Literature published between 1998 and 2008 was reviewed. However, specific key reports and studies of high importance (which remain the current key position papers) published prior to 1998 are also included. The review focuses on older people living in Scotland aged 50+ however, relevant studies from elsewhere are also included.

As the World Health Organisation (WHO) define the older adult as those people over the age of 50 years this group is a very diverse population. Whilst general healthy eating advice is appropriate for most of this population many have additional nutritional needs and these needs are discussed in the review. As recommendations for nutritional interventions in the overweight and obese population are made elsewhere this review focuses on the older adult population who have or are at risk of developing undernutrition.

Studies involving only institutionalised older people and those chronically ill with degenerative disease have not been included.

In Scotland, the numbers and proportions of older people are growing. By 2031 it is predicted that the proportions of people aged 50 years and over will rise by 28%. In contrast the proportion of people aged over 75 years is predicted to rise by 75%. This increase has important implications for health planners. Identifying and meeting the needs of older people has the potential to reduce this increase in social and health care expenditure.

Effects of Ageing

Certain changes occur as people age. These can affect the ability to eat. These include weight gain or weight loss, loss of muscle and increases in fat and not least, as people get older, they are more likely to be chronically ill or have a disease. This can lead to people being less able to perform

basic daily functions such as buying, preparing and eating food. Even a relatively low reduction in muscle increases risk of infection, increases the likelihood of death and more relevant to this project, reduces the ability to perform normal activities of daily living including eating, shopping and preparing food. Interventions and policy makers need to bear this in mind because older people will need more help with these basic activities if they are to eat well and stay healthy at home.

The deterioration in sense of taste, smell and state of teeth which people experience as they age means that much thought should be given to texture and flavour of food as well as nutrient composition of food for older people. The natural deterioration in teeth with age, combined with the increasing numbers of old people and the greater number of people retaining their teeth, has implications both for the increased demand for dental services and for any intervention planning for older people.

Nutritional Needs of Older Adults

There are a few key differences between the nutritional requirements of older people and the rest of the adult population. Energy requirements are lower in older people but vitamin or mineral requirements are unchanged therefore the diet should contain adequate nutrients in a smaller amount of energy.

As older people are at increased risk of developing cardiovascular disease it may be prudent to consider the total amount of fat and the type of fat provided in interventions. In particular, an intervention providing food for older people or any eating advice should replace any saturated fat i.e. animal type fat with unsaturated fats i.e. vegetable type fat.

Older people have a relatively higher intake of protein compared to younger adults. As there is some evidence that excessive protein intakes are associated with health risks, excessively high intakes should be discouraged.

Due to the increased risk of dehydration in older people fluid intakes should be considered as part of intervention strategies. Alongside this the increased risk of constipation in older people means that adequate fibre and fluid should be encouraged.

People aged over 65 years should take a vitamin D supplement to enable them to meet the requirement of 10µg vitamin D daily and thus optimise their vitamin D status. However, it is acknowledged that the cost and tablet size of vitamin D supplements have tended to limit their usefulness in the past. Although cost may be an issue in some populations, it should not be for older people as they are entitled to free prescriptions and vitamin D could be prescribed.

Estimating the extent of the problem: use of screening

Dealing with the consequences of malnutrition has become a significant financial burden for health and social care systems. It is currently difficult to determine the number of older people living in the community in Scotland who have not been eating well, and who may need help because of this. It is possible that undernutrition could be prevented or treated with the implementation of appropriate screening and management within the community. Screening for undernutrition has been highlighted as important by the British Association of Parenteral and Enteral Nutrition. The introduction of a systematic screening approach i.e. screening at the point of registration and then when there is clinical concern may improve nutritional screening practices in the community in Scotland. However there are limitations with nutritional screening not least the fact that the cost effectiveness and the impact on outcome of nutritional screening in the community cannot be estimated at this point in time. This is recognised to be an enormous undertaking and so piloting would be required. Screening tools are not currently designed for this and hydration and constipation would also have to be taken into account.

There seems enough evidence¹ to say that a higher BMI up to 29kg/m² is acceptable for most people aged 70 years and over. The evidence points to a higher than average Body Mass Index being less risky than a low one in older 'old' people and a healthy BMI for older people is set to be higher than in the rest of the population. This should be taken into account in any screening programme of older people in the community.

Barriers to Older People Meeting their Nutritional Requirements

There are a number of barriers which hinder some older people living in the community in Scotland in meeting their nutritional requirements. These include issues around:

- social isolation;
- grief, depression and other mental health factors;
- chronic illness and disability, and the impact of medication associated with any conditions;
- food safety issues (the number of cases of the top food poisoning killer, *Listeria*, has increased dramatically in the over 65 age group over recent years. Ensuring good food hygiene practice will contribute towards maintaining nutritional status in the over 65's.;

¹ Based on Rajala et al.'s (1990) finding that higher BMI decreases the likelihood of mortality in the very old, and Beck and Ovesen (1998) suggestion that a BMI of 24 – 29kg/m² is healthy for most older adults.

- access to food. (Changes to the location of food stores results has resulted in more limited shopping opportunities for older people. This is heightened for older people in rural areas);
- lack of nutritional knowledge/education. (Increased food knowledge could increase exposure to foods and food ideas and result in a more varied and suitable diet);
- poverty and /or a lack of budgeting skills may also be barriers to healthy eating for some.

These are in varying degrees relevant to older people and have to be considered when devising interventions to improve nutritional status.

It is imperative that social and psychological needs of older people should be considered alongside their physical needs to optimise nutritional intake. Depression, possibly linked to social isolation and/or bereavement, may limit an older persons ability to eat well and thereby meet their nutritional requirements.

Strategies to improve the nutritional status of older people living in the community

Various strategies can be adopted to improve the nutritional status in older people living in the community. Evidence from systematic reviews has been sifted to determine the effectiveness of previously used interventions to manage problems resulting in protein and energy (macronutrient) and vitamin and mineral (micronutrient) deficiencies.

- A package of care including diet and activity may be more effective in improving the ability to perform normal day-to-day activities than diet alone.
- Dietary advice together with supplements seems to be effective in managing undernutrition. There is evidence to support the use of oral nutritional supplements in hospital settings, but there is limited evidence for the benefit of these in the community setting.
- Weight gain alone should not be considered the primary outcome in research in the area of nutritional interventions and so fat in isolation should not be used as a supplement. The ability to perform activities of daily living should also be considered.
- There is clear evidence² to support the recommendation by the Scientific Advisory Group for Nutrition for vitamin D supplementation, and this should be implemented universally.

² Low Vitamin D status has previously been identified in older people in Scotland (National Diet and Nutrition Survey (NDNS) for adults over 65 years (Finch et al., 1998).

There are a number of national and local initiatives which have the potential to positively impact on older people's dietary intake. A more coordinated approach to service provision and increased evaluation of these services is recommended.

Nevertheless, some strategies which look to have potential benefits in improving nutritional intakes in older people are:

- Social eating e.g. lunch clubs or involving other family members has the potential to improve dietary intake and positively impact on quality of life.
- Training peer educators as community nutrition assistants
- Allocating longer time slots to home care workers assisting older people with nutritional needs
- Tailoring meals for older people specifically. Giving children's meals to older people will not meet the nutritional needs of older adults.

Examples of good practice include developing community kitchens, food trains, food cooperatives and home delivery services.

Conclusion

Older people are at significant risk of nutritional difficulties for a variety of reasons. There are well documented strategies for identifying and treating malnutrition in the hospital setting but this is not true for the community setting. Literature suggests that older people in the community at nutritional risk are not being identified and there is a serious lack of research to support the use of nutritional screening in the community. As a result it is also not known whether nutritional screening can improve nutritional outcomes.

The quality of the diet is extremely important to ensure that carbohydrate, fat, protein, energy (macronutrients) and vitamin and mineral (micronutrient) requirements are met. Meeting these requirements can be difficult for the frail older person.

There is only limited evidence which evaluates the impact of dietary interventions and most of the evidence has been collected in the acute setting.

There are a number of policies available which could impact on the nutritional needs of older people in the community. There are also a number of localised initiatives which have been developed to improve the diet of older people living in the community. The impact of these initiatives on nutritional status and dietary intake has not been evaluated.

Recommendations

There are opportunities to change current practices to enhance the nutritional health of older adults in Scotland.

If further research demonstrated it to be cost effective, nutritional screening practices could be piloted in the community taking into account particular needs of that population. Nutritional screening should also take into account barriers an individual has to meeting their nutritional requirements.

Consideration should be given as to how to enhance the uptake of public health messages related to diet, nutrition and supplementation in older adults which are currently not being followed. In particular focus should be on dietary intake rather than supplementation in the first instance. The exception to this is vitamin D where the need for supplementation to enable people over 65 to meet their daily requirements is well established.

Enhancing nutritional intake and optimising weight and muscle stores should not be considered in isolation. Considering older people's ability to participate in activities of daily living, preventing falls and independent living initiatives should also be considered.

As has been highlighted in this summary report, there is much which can be done through good nutrition to keep older people healthy and living in their own homes in the community in Scotland.

This document, along with "Older People Living in the Community – Nutritional Needs Barriers and Interventions: A Literature Review" the full research report of the project, and further information about social and policy research commissioned and published on behalf of the Scottish Government, can be viewed on the Internet at: <http://www.scotland.gov.uk/socialresearch>. If you have any further queries about social research, please contact us at socialresearch@scotland.gsi.gov.uk or on 0131-244 7560.



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