



The magazine of the Food Ethics Council



Food

An age old concern

Summer 2013 Volume 8 Issue 2 www.foodethicscouncil.org

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Food Ethics, the magazine of the Food Ethics Council, seeks to challenge accepted opinion and spark fruitful debate about key issues and developments in food and farming. Distributed quarterly to subscribers, each issue features independent comment and analysis.

The Food Ethics Council challenges government, business and the public to tackle ethical issues in food and farming, providing research, analysis and tools to help. The views of contributors to this magazine are not necessarily those of the Food Ethics Council or its members.

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Edited by: Liz Barling
Design: James Adams
www.getupandgodesign.com

Printed by: Newman Thomson Limited, Burgess Hill. Printed on 80% post-consumer recycled paper.
ISSN 1753-9056

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Cover photo: Kai Chan Vong

Feast or famine?

Feeding an ageing population



Sooner or later we all have to admit that we are getting older; it's not just something that happens to our parents and grandparents. Many of us don't pause to think about the implications of this – particularly in relation to food. We should – because they are profound.

It is now common knowledge that if we eat unhealthily we can end up reducing our lifespan, but what is less talked about is what happens when an unhealthy lifelong diet meets increased longevity. A growing number of older people, beset with problems associated with bad diet, will live an uncomfortable old age, needing more social and medical care.

At a recent Food Ethics Council Business Forum meeting, we explored how ready the food system is for the implications of an ageing population. According to the House of Lords Committee on Public Services and Demographic change, the UK Government and our society are woefully underprepared for ageing – and seemingly that applies to much of the food system too (in the UK and beyond).

This issue of Food Ethics sets out to highlight and explore the complex but critical relationships between food and ageing. It is important to start by saying – as do a number of contributors – that we must be careful not to treat the older population as a homogenous group. Looking at different sectors of society will help us build up a better picture of what ageing means for food and vice versa.

Atterton and Revoredo-Giha (p12) emphasise the need to understand food purchasing behaviour – in this case of retirees in Scotland – to “inform policies and decision-making on food demand, supply and marketing, and, more broadly on diet, nutrition and quality of life”. Buying food is something that many people take for granted, but not so for many older people. Mitchell (p15) makes a persuasive case that government and business should do a lot more to make good food shopping easier for older people.

Nutrition and diet is an area where some of the linkages between food and ageing are most visible. Take mental health – a growing issue and one often linked to ageing. Experts estimate the number of people in the UK with dementia will have risen to around a million in the UK by 2021. Some scientists now refer to Alzheimer's as ‘diabetes of the brain’. Richardson (p6) argues that the evidence for nutrition as an important influence on dementia risk is compelling. Mandleker and Chambers (p20) note that problems of an

unhealthy diet are often exacerbated amongst those living in care homes. There are around 20,000 care homes in the UK and recent evidence suggests that dementia affects 80% of their residents. There is potentially a vicious circle at play here: poor diet may contribute to mental health, which in turn may impact appetite and ability to eat. So, in that sense, food is cause and effect of conditions often associated with ageing.

The links between nutrition and dementia are still being explored. In contrast, obesity is an area that is better understood – even if there is a lot to do to diffuse the obesity ‘timebomb’. Haslam and Cook (p11) consider the question of what it means to grow old with obesity, summarising that: “Longevity comes at a price, and an individual may suffer many more years of physical discomfort as a result of living longer with the effects of obesity.” Whilst many people will live healthier and longer, there will be an increasing proportion who are frail. This raises deep ethical questions, like whether it is right or fair that some older people are enabled to lead healthier lives for longer, whilst many others are not.

There are undoubtedly many physical, psychological and physiological changes associated with ageing – and food has a key role to play, not just in whether people stay healthy, but also their ability to recover from illness quickly. That's why Jackson (p20) puts hospital food under the microscope and points out that we can expect to see more malnourished older patients in our hospital wards in the years to come if changes are not made.

I would argue we need to go further still and try to prevent high levels of malnutrition occurring before people enter hospitals. Poor appetite is often thought to be a ‘by-product’ of ageing, but it doesn't have to be. Obesity is the (unfortunate) ‘poster child’ of bad diet, but malnutrition is an issue that requires more attention, more research and more preventative action.

The story isn't all doom and gloom. The rise of ageing food citizens and ageing food consumers brings lots of opportunities too. As Thomas (p21) notes, some food businesses are changing their product offers to cater to older consumers, for example the rise of functional foods. Both Lewis (p17) and Emmott (p18) write about the benefits of linking older people with growing food – and about the importance of keeping active and sharing skills. What it means to be part of the older population is changing all the time – seventy is the new sixty, so they say. And we haven't even touched on the issue of older food producers – one for another issue perhaps?

I hope you'll agree that food and ageing matter. What we eat shapes the length and healthiness of our lives. Let's respect our older population and let's all eat better.

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Understanding malnutrition in the UK

An avoidable issue



We are living longer than ever. One in four babies born today will live to be over 100. Advances in healthcare, living standards and environment have ensured increased life expectancy and quality of life for many. **Dr Lisa Wilson** assesses some of the critical issues surrounding older people and nutrition.

UK population figures reflect a seismic shift in our population demographic, with more people aged over 65 than under 16 in 2010. The number of people aged 65 and over is projected to rise by nearly 50% in the next 20 years to over 16 million. Unfortunately, in many areas, policy has been slow to catch up with these changes and whilst it is true people are living longer, for many older people this means more years of their life spent in poor health. There remains a lack of awareness of the risk factors which impact on older people as they age and in particular the health and living experiences of those over 75.

Malnutrition is a major cause and consequence of poor health for older people in the UK, having a significant impact on both health and wellbeing. There are over one million people over the age of 65 and malnourished in the UK. In fact, it is estimated that one in ten people aged over 65 and living in their own homes are at risk of malnutrition; a figure reflected in hospital where 30% of people have been found to be malnourished on admission. It is estimated that 93% of malnutrition is found in the community and yet it is both under recognised and untreated. In terms of resource use and ill health, research has shown that malnourished people saw their GP twice as often, had three times the number of hospital admissions and stayed in hospital more than three days longer than those who were well nourished. In addition, malnutrition increases dependency on family, carers and support services often preventing older people from living independently.

Malnutrition also contributes to wider healthcare costs including increased prescriptions for medicines such as antibiotics due to increased infections, increased morbidity and mortality and has a significant impact on quality of life. People should be able to stay independent, healthy and able to live their lives as they choose and a lack of food and nutrition should not be preventing them from doing that. In policy terms there has been significant research on the impact of malnutrition both to the individual and to society. The cost of malnutrition and its associated outcomes has been estimated to be in the region of billions and was quoted this year as being the 6th largest potential source of savings in health. We can no longer ignore the problem of malnutrition; there is a 'cost' to doing nothing as the situation will only get worse. Malnutrition is both preventable and unnecessary. So why

has it remained a 'hidden' issue compared to other nutrition issues such as obesity? One of the major challenges is that people still mistakenly believe that it is normal to become thinner as you get older. This is not the case. Losing weight is a sign that there are stresses, lack of appetite or illness which is contributing to an increased risk of malnutrition. So, if we know there is a problem, how do we better understand it, work to reduce the incidence of malnutrition and support older people to remain healthy?



Causes and consequences of malnutrition

Preventable malnutrition:

The Malnutrition Task Force has developed a definition of preventable malnutrition (that not directly resulting from disease) that takes into account the myriad influences on a person's nutritional status. Preventable malnutrition is a state of poor nutrition and/or hydration which can be avoided if the right actions are taken to address the causes. Preventable malnutrition is not specifically related to disease or illness, but these may often be a consequence or contributing factor linked to poor dietary intake and ill health. The challenge with malnutrition is that it can be difficult to identify on an individual level where malnutrition results from illness (where people feel less like eating) versus lifestyle factors, as the two become entangled, making identifying the underlying cause challenging. However, as the majority of malnutrition begins in the community many of the causes of malnutrition can be linked to the impact of food access, poverty and physical ability, issues which are not limited only to older age, but are often exacerbated by the ageing process.

Malnutrition and Food Access

There are many reasons why someone may begin to lose weight, eat less or lose interest in food including bereavement, depression, low income, physical environment, effect of medication, disability, recent illness or change in life circumstances. The major influences can be grouped into several common themes:

Access & Affordability

- Difficulties in shopping due to a lack of appropriate public or private transport or due to physical mobility which prevent walking, carrying food or travelling long distances.
- Low income – one in five older people live in poverty in the UK – some people have to choose between eating and heating. In the winter of 2006/7 one million older people cut back on food shopping in order to pay their heating bill.

Barriers

- To eating or getting support such as depression, poor appetite, lack of interest in food or cooking particularly when living alone.

Capability & knowledge

- Older people, their family, professional carers and staff knowledge have a significant impact on food available, as does the capability to provide good nutrition, appetising foods or appropriate foods for those losing weight.
- Older people often experience difficulty in preparing and cooking food due to physical mobility or ability (e.g. standing to cook or lifting heavy pans).

Disease and illness related malnutrition

- Disease and illness can put an older person at increased risk of malnutrition. This may be due to reduced appetite, ability to swallow and digest food, the effect of medication or because of changing nutritional needs due to the person's condition.

The Malnutrition Task Force

The Malnutrition Task Force, established in 2012, is an independent group of experts across Health, Social Care and Local government united to address the problem of preventable malnutrition in older people. Our group includes an older

people representative and regularly consults with older people to raise awareness and better understand how older people see malnutrition, weight loss, poor appetite and the ageing process. The Task Force was established under the Dignity in Care agenda and is hosted by AGE UK, the aim being to raise awareness with the public, increase understanding of the problem and provide tools and best practice examples for health and social care professionals, commissioners, local authorities and other professionals to develop practical, effective solutions in their area. What makes us different is that the Task Force is an independent group of experts from a wide range of fields, able to address the issue from health, public health and social care angles. We build on previous initiatives but focus on what works in a practical setting.

Our vision is that the prevention and treatment of malnutrition should be at the heart of everything we do to ensure older people can live more independent, fulfilling lives. Our aim is to reduce malnutrition in older people so it optimises their health, reduces unnecessary costs across the NHS, health and social care systems and crucially improves their quality of life. By addressing this issue, the Malnutrition Task Force aims to make a major difference to the health and quality of life of older people and bring about significant cost benefits across health and social care.

The objective of the Task Force is to actively influence behaviours across the NHS, residential care and in the community, developing mechanisms and collating examples of how to identify, prevent and minimise the risk of malnutrition, across all settings. Specifically we hope to:

- create products to influence the levers for change including examples of good practice that demonstrate benefits where it is being achieved;
- mobilise action in the public sector, charities and companies to make the change happen;
- make recommendations to central and local government, and the NHS Commissioning Board.

What are we trying to achieve?

The Malnutrition Task Force is working to actively influence behaviours across the NHS, residential care and in the community to prevent and reduce malnutrition in older people. Malnutrition is a major cause and consequence of poor health and older people are particularly vulnerable. The cost of malnutrition is estimated to be in the region of billions. By addressing this issue, the Malnutrition Task Force aims to make a major difference to the health and quality of life of older people and bring about significant cost benefits across health and social care. Our first tools launched at the beginning of May and our website already includes case studies, working examples of good practice, shared learning and support to determine the extent to which malnutrition affects your area. Malnutrition can affect everyone and it is only by understanding and addressing the causes and working to raise awareness, screen effectively and have solutions in place that we can begin to tackle this preventable condition and support older people to have more active and fulfilling lives. ■

Dr Lisa Wilson, PhD, RN (Public Health) is a consultant for the International Longevity Centre-UK and a member of the Malnutrition Task Force.

For more information visit: www.malnutritiontaskforce.org.uk

Nutrition and dementia

Food for the brain



Alzheimer's disease and other forms of dementia already pose unprecedented challenges to health and social service provision in the UK and other developed countries, let alone to the affected individuals and their families, writes **Dr Alex Richardson**.

Most people assume that cognitive decline and dementia, along with other chronic, degenerative diseases, are only to be expected now that we are living longer than ever before. But are we really? In recent times, life expectancy did increase steadily from around 1900 (the usual starting point for modern-day comparisons). However, in the mid-Victorian period (1840-1870) people who survived childbirth and infancy lived just as long as we do today, although their causes of death were strikingly different – mainly involving infections or accidents. Less than 7% of people died from cardiovascular disease or cancers, which account for over 70% of deaths today. Similarly, dementia was recognised then, but it was a remarkably rare condition.

In addition to the historical records, contemporary studies of cognitive function and brain pathology also indicate that cognitive decline and dementia are not inevitable consequences of ageing. Instead, they are among the many degenerative conditions sometimes called 'diseases of civilisation' – or perhaps more appropriately, 'diseases of affluence', because they so closely track economic development. Others include obesity, Type II diabetes, cardiovascular disease, cancer and osteoporosis, as well as allergies and other immune disorders. These were all quite rare as recently as the mid-19th century, but now typically affect 60% or more of the adult population. Huge changes in diet and lifestyle followed from industrialisation, and have occurred too rapidly for our genetic, biochemical and physiological systems to be able to adapt to them. Compared with the mid-Victorians, we suffer from a chronic lack of exercise, and increased exposure to pollution and other environmental toxins. Many would argue that social isolation and other sources of social and psychological stress are also more common. All of these factors can contribute to physical and mental ill-health.

Our diets have also changed dramatically. Careful analyses show that between 1840-70, the UK working classes actually ate what amounted to a 'super-Mediterranean diet', rich in fresh vegetables, fruits and wholegrains, as well as fish and seafood; foods that were all relatively plentiful, accessible and cheap. Since then, technological developments have transformed food production, processing, packaging, storage and transport, and therefore the diets that most people consume. While many of these changes have been highly beneficial, the downside is that food has effectively become just another commodity, produced and traded purely for profit, with little thought given to its fundamental role in nourishing bodies and brains. Sadly, there is considerable truth in the adage that 'good foods make bad commodities, and good commodities make bad

foods'. Many features of modern, western-type diets are not only evolutionarily novel, but are now known to be literally pathological (i.e. disease-causing).

By comparison with mid-Victorian times, the amount of sugar (and other refined carbohydrates) we consume has increased dramatically. It's found in almost all processed foods, from cakes, biscuits and confectionery to soft and alcoholic drinks (and alcohol). White bread, rice, pasta and many other cereal products as well as most 'ready meals', takeaways, sauces, soups and salad dressings also contain it. Over time, excessive sugar consumption promotes insulin resistance, a key driver of the so-called 'metabolic syndrome', which is associated not only with Type 2 diabetes and cardiovascular disease, but also dementia. The links with dementia are now so strong that some scientists refer to Alzheimer's disease as 'Type 3 diabetes', or 'diabetes of the brain'. Insulin resistance in human brain cells is directly associated with cognitive impairment; and in animal models, diabetes induces Alzheimer's-type pathology (i.e. amyloid-beta plaques and neurofibrillary tangles) in the brain and retina. These in turn can exacerbate insulin resistance, creating a vicious cycle of further degeneration.

Fructose – which makes up 50% of ordinary sugar (sucrose) and a similar proportion of the 'high fructose corn syrup' now used to sweeten many processed foods and drinks – appears to be the real problem. This is because unlike glucose (the other 50% of sugar), it is effectively toxic to the liver when consumed chronically in high doses – contributing to insulin resistance and metabolic syndrome, abnormally high blood fats, and 'non-alcoholic fatty liver disease'. Unlike glucose, it also appears to bypass our normal hormonal mechanisms for appetite regulation, giving fructose a potentially causal role in the obesity epidemic. Fructose is found naturally in ripe fruits and some vegetables, and is perfectly safe when consumed in this form, because it is accompanied by sufficient fibre (and essential nutrients) that it does not overload the liver's capacity to process it. Without sufficient dietary fibre, however, and when consumed in excess over long time periods, recent data suggest that fructose as a white powder may indeed be 'pure, white and deadly'. Impairments in memory and cognition (along with the adverse metabolic and hormonal changes associated with diabetes) can be induced in just six weeks in animals fed a high-fructose diet, although it is noteworthy that omega-3 fatty acids appear to combat these damaging effects of excessive sugar intake. Unfortunately, omega-3 deficiency is another classic feature of modern, western-type diets – and also one which has repeatedly been linked with cognitive decline and dementia.



Photo: Rodrigo Soldon

Around 60% of the brain's dry mass is fat – so both its structure and functioning depend crucially on the type and balance of fats in our diets. Natural saturated fats are not harmful in moderation, but the toxic trans fats produced by hydrogenation of vegetable oils are. Yet these are still found in many cheap margarines, processed foods and takeaways, as the UK government refuses to ban them, relying instead on 'voluntary action' from the food industry. Trans fats are twisted, poisonous versions of natural omega-3 and omega-6 polyunsaturates, which are essential nutrients that must be provided by our diets. Both omega-3 and omega-6 are essential to the brain and nervous system (as well as for cardiovascular and immune system health), but we need them in the right balance. Very broadly, omega-6 are pro-inflammatory and pro-thrombotic, whereas omega-3 have opposing effects, reducing inflammation and improving blood flow. Modern, western-type diets tend to provide an excess of omega-6 fats (mainly from vegetable oils, but also from meat, eggs and dairy products) and very little omega-3 (of which the long-chain forms EPA and DHA, found in fish and seafood, are by far the most important). This imbalance not only promotes physical health problems such as cardiovascular disease and inflammatory disorders, but may also underlie many associated mental health conditions, including ADHD, depression and dementia.

In population studies, higher intakes of omega-3 from seafood appear protective against cognitive decline and dementia. Biochemical studies have also linked low blood omega-3 concentrations in older adults with impaired attention, memory and other aspects of cognitive function – and with reduced brain volume. However, 'correlation is not causation', and to date only marginal if any benefits from omega-3 supplementation have been found in the few controlled treatment trials of omega-3 supplementation. This may simply reflect the many difficulties involved in designing and conducting such studies. Equally, it might reflect a more fundamental problem. Most research into nutritional interventions for dementia (and other conditions) involves only one substance in isolation. In real life nutrients operate synergistically – which is why they are best consumed from real foods. Fish and seafood provide not only long-chain omega-3 (EPA and DHA), but are also important sources of other key nutrients such as iodine, zinc, Vitamin D, selenium and the B vitamins.

Certain B vitamins (folate, vitamin B12, and B6) have repeatedly been linked with dementia and associated biomarkers (including reduced brain volume) in population and experimental studies. Deficiencies in any one of them can increase homocysteine, a toxic by-product of normal metabolism, and another well-known risk factor for both cardiovascular disease and dementia. A recent controlled trial has just shown a remarkable 90% reduction in brain shrinkage following B vitamin supplementation versus placebo in older adults (although the researchers were careful to explain that 'more research is needed' to provide definitive evidence of cognitive benefits).

Various nutrients with 'antioxidant' properties (other vitamins, minerals and many of the substances found in vegetables, fruits, herbs, spices and other whole foods) are also thought to be protective. The processes that underlie the neuropathology of cognitive decline, Alzheimer's disease and other forms of dementia have now been well-documented, and include: degeneration of lipid membranes and synapses, abnormal protein processing (involving amyloid-beta, and tau), vascular risk factors (including hypertension, elevated cholesterol), inflammation, and 'oxidative stress'. There is good evidence that nutrition is relevant to all of these components – most of which are inter-related – and as with cardiovascular disease, a 'Mediterranean-type' diet would appear to offer the best protection against cognitive decline and dementia. Research findings reinforce the need for early intervention. They also indicate that interventions aimed at multiple aspects of the neurodegenerative process are likely to have the greatest therapeutic potential. Some combinations of nutrients have shown promise in animal models, and in human clinical trials one such ('Souvenaid') has already shown benefits for early-stage Alzheimer's disease, and is now being tested in a large-scale EU-funded study.

Until recently, little attention has been paid to nutrition in relation to mental health in the elderly in research or clinical practice. Given the evidence now available, and the disappointing lack of progress in developing new pharmacological treatments, this is starting to change. Clearly, individuals differ markedly in their vulnerability to cognitive decline and dementia. Genetic factors (some of which, like ApoE, have already been identified) undoubtedly contribute to this variation in resilience, but so do many environmental factors including socioeconomic status, level of education, smoking and other substance use, lack of exercise, social isolation and other psychosocial stressors. However, the evidence for nutrition as an important influence on dementia risk in addition to these factors is now compelling. Furthermore, as with other degenerative conditions such as heart disease and cancer, diet interacts with and modifies the risks from both genetic and other environmental factors, and it does so across the lifespan.

If the UK and other developed countries are to succeed in reversing the upward spiral of health, social, economic and personal costs associated with dementia, then effective changes in policy and practice to improve nutrition at the population level are urgently warranted, as well as dietary guidance and support for the individuals and families already affected. ■

Dr Alex Richardson is Senior Research Fellow, Centre for Evidence-Based Intervention, University of Oxford and Founder Director of FAB Research. More information and a longer, referenced version of this article is available from Food And Behaviour Research: www.fabresearch.org

Listeria and the over-60s

Reducing the risks



Microbiological foodborne disease is an important global public health concern, and one that disproportionally affects older people, writes **Helen Kendall**.

It is estimated that annually 17 million people in the UK experience foodborne illness as a result of microbiological food contamination, the estimated economic cost of which is £1.5 billion. It is also widely acknowledged that vulnerability to foodborne disease is not linear and the 60+ are disproportionately disadvantaged. This was highlighted in 2009, when the UK Health Protection Agency (HPA) reported an increase of 53% in cases of listeriosis between 2001 and -2007 from a baseline in 2000. Most of these cases were sporadic and the increase was witnessed almost exclusively in people aged 60+, accounting for an approximate tripling of cases in this cohort.

Although listeria is responsible for relatively few cases of foodborne disease when compared with other pathogens, it is considered important. This is because of the severity of listeriosis, which is accountable for the greatest number of deaths in absolute terms of any foodborne pathogen. In response to this alarming increase, a review into its causes by the Food Standards Agency's (FSA) Social Science Research Committee (SSRC) identified a limited understanding of the food safety behaviours and attitudes of older consumers and their domestic food safety practices (SSRC, 2009) as a contributing factor. Funded by the FSA, the research aimed to address this knowledge deficit by developing a baseline quantitative understanding of lifestyle, attitudes towards, knowledge of, and behaviours associated with food and food safety amongst those aged 60+ in the North East of England. Subsequently it explored the everyday domestic food provisioning practices of a sub-sample of ten households selected from the quantitative phase. Using a range of traditional and novel observational techniques, this research sought to develop nuanced understandings of the food provision and handling practices of the 60+. Appreciating the complexity of food choice, it questioned how, if at all, domestic food safety best practice recommendations aligned with observed practice.

Domestic food safety schools of thought

Early research assessing domestic food safety practice was focused exclusively on the individual (typically the primary food handler in the home) and relied significantly on self-reported methods (surveys and questionnaires). But this focus did not consider or appreciate the complexity of food choices, actual behaviours or the habitual and tacit nature of food provisioning and handling practices. In recognising this gap, methodological thinking in this field has become more interpretivist.

This thinking has led to a need for more nuanced understandings of domestic food safety practice and the necessity of situating research in the home. One way of undertaking this home-based research is to attempt understand the way that life is lived in the kitchen through observational methods, providing a more holistic account of how consumer domestic food safety behaviour fits within this context. Siting research within the home allows the researcher to explore people's knowledge, understanding, skills and practice in domestic kitchen habits. This multi-layered exploration reveals key insights that have a unique bearing on the control of foodborne pathogens within the home.

Policy implications

The FSA research raises a number of issues for contemplation by food safety policy makers and stakeholders for people over 60 years old. First, the results obtained from the quantitative research contradict the common misconception (particularly within food safety communications) that the 60+ are a homogenous group. By successfully segmenting the older consumer, differences were highlighted in relation to attitudes towards food; knowledge of food-safety; and reported practices, illustrating the multidimensionality of risk faced by the cohort. Second, food provisioning practices were observed

to be the outcome of value negotiations made by the household to adapt to the incremental changes experienced as part of the ageing process that facilitated independent living.

This substantive theoretical contribution was termed 'Independence Transitioning'. In response to the overarching drive to maintain independence, those over 60 were observed to simplify their food provisioning and handing practices to prolong engagement with food preparation, which was characterised as a key marker of independence. Although food safety issues were implicit within these practices, they were not a salient factor within food provisioning or handling, and are not reflected in consumer food safety best practice recommendations.

In the light of this, risk communicators would thus be urged to reconsider the suitability of best practice recommendations for this cohort, redefining these to reflect actual practice. Finally, the importance of kitchen size, design and materiality was highlighted to inhibit the inclusion of 'standard' kitchen equipment and appliances (such as washing machines, cookers and hot water) that are fundamental to adherence to, and are embedded within food safety best practice recommendations. Given increases in the 60+ populations in the UK, housing designers involved with designing homes for older adults

should be encouraged to consider their role in facilitating older consumers' adherence to domestic food safety best practice recommendations. Acknowledgment of all of which should help contribute to the reduction of foodborne disease in the 60+. ■

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Photo: Derrick Tyson



Growing old with obesity

A chronic problem



What does the burgeoning obesity epidemic mean for our rapidly ageing population, and is the state ready to take on the challenges ahead? **Professor David Haslam** and diabetes nurse practitioner **Debbie Cook** investigate.

As baby-boomers become senior citizens, escalating obesity will increase frailty rates and nursing home admissions. Increasing rates of obesity have led to widespread concern about a global epidemic with profound negative health consequences. Elderly people comprise one of the fastest growing substantial segments of the population, with 12-15% of the population now over the age of 65 years, a figure predicted to increase to 25-30% by the year 2030.

It is predicted that there will be 11 million more obese adults in the UK by 2030. Obesity is generally related to poor health outcomes such as diabetes, hypertension and depression, and is predicted to cost the UK between £1.9 and 2 billion per year by 2030. Increased prevalence of obesity alongside advancing age contribute to musculoskeletal degenerative diseases and development of sarcopenic obesity, an illness that causes muscle loss and means that older people, living in pain, lose much of their ability to go about their daily lives. These issues mean that mitigating obesity related health risks and improving quality of life is a medical and social imperative. Longevity comes at a price, and an individual may suffer many more years of physical discomfort as a result of living longer with the effects of obesity.

Physical and mental health

Obesity can exacerbate age-related decline in physical functioning and lead to frailty, as well as impairing quality of life. Social factors such as loneliness, low levels of care and support, bereavement and poverty all contribute to objective levels of poor health. Obesity decreases life expectancy by seven years in a 40 year old: the increase in risk of death with each unit increase in BMI declines progressively with age but remains substantial until the age-group of 75 years and older. Measured by BMI, obesity now affects around one in three men and women over the age of 45 years. Individuals are affected very differently by the ageing process. It is vital to recognise that food poverty and lower social class have an enormous impact on physical and mental health in the elder population, although it is important to avoid stereotypical views of older people.

Worldwide, the elderly population is increasingly becoming obese regardless of people's socio-economic status. Among the elderly, obesity increases the risks for a variety of morbidity conditions including cancers, diabetes, hypertension, stroke,

heart disease, metabolic syndrome, obstructive sleep apnoea syndrome, osteoarthritis, depression, disability, and lower scores on quality of life measures. Later life with increased associated bereavements, disability and chronic disease can contribute to the high prevalence of depression in older people.

Nutrition

As people age, they experience changes in their metabolism. Fat to muscle mass ratio alters and there is a progressive loss of lean muscle mass (from around the age of 30-40 years), which can steadily progress in contrast to body fat mass, which may increase throughout a person's life. As older people often experience a reduction in flavour and smell, they tend to eat less. This 'anorexia of ageing', can exacerbate the loss of lean muscle mass, compounded by relative disability and musculoskeletal dysfunction. Fear of the associated pain can often prevent a person from exercising, which further adds to the circle of disability, dysfunction and obesity accompanied by ill health.

Rising BMI, accompanied by a fall in lean muscle mass, is seen then to have serious health consequences for those over 65 years of age. However there appears to be a complex interplay between age and BMI. A raised BMI in the elderly may be associated with a reduction in deaths from cardiovascular disease, whilst at the same time associated with decreased mobility. Furthermore, there is evidence that the risks of obesity are overestimated in the elderly and obesity can even be protective.

Treatment of obesity

Although deleterious effects of obesity are well documented, treatment of obesity in older adults is controversial. A study of 93 participants demonstrated that a combination of diet and exercise together were more effective than either alone with lean body mass and bone mineral density decreasing less in the diet and exercise group than in the diet group. Very low calorie diets are not recommended in the obese elderly, and although there are few specific weight-loss treatments available for this cohort, techniques such as motivational interviewing can help to achieve successful behaviour modification. Dietary restriction in the elderly holds a greater risk of inadequate macro and micronutrient intake, so weight loss needs careful supervision.



Photo: Dan Dickinson

The elderly are more vulnerable to the current obesity epidemic, and also experience higher levels of morbidity than other population sub-groups, so it becomes both timely and pertinent to address the issue. However, although obesity is implicated in the cause of many co-morbidities, once diseases such as diabetes, hypertension and ischaemic heart disease have developed, then the presence of obesity may confer counterintuitive protection against mortality.

Cognitive decline

In a statement by the European Diabetes working party for older people (EDWPOP), it was acknowledged that 'the elderly' are not a homogenous group and may have varying levels of nutritional impairment which may influence and modify the impact on other co-morbidities, such as heart failure and obesity. In view of the limited benefits, this group advocates that restrictive diets should be avoided in patients over 70 years. In addition, there is increasing evidence that elderly people who lose weight have an increasing risk of dementia, and mortality is highest in those who decrease their BMI over time. There is now a wealth of data connecting obesity with cognitive decline and vascular dementia, especially in the elderly. Controversially, new research suggests that Alzheimer's disease may even be a disease state which arises when brain tissue becomes resistant to insulin. This is driven by the westernised diet and lack of exercise poisoning the brain and leading to obesity, metabolic disease and poor health outcomes.

It is not all bad news. Certain countries do not have populations that age unhealthily. Japan leads the way with healthy life expectancy (which is now 79.3 years for men). The Japanese have addressed hypertension, the leading cause of ill health globally, by tackling the population's salt consumption and promoting healthy eating against a background of regular health screens.

Helping the elderly to age healthily depends on helping them to accept life as it is, with limitations, and reducing regret and remorse – which are prominent features of ageing today. Government strategies incorporating local authority collaborative partnerships with the newly formed CCGs (Clinical commissioning groups) will need to address the problem. Increasing the availability of schemes for local people such as exercise classes, cognitive behaviour therapy and addressing needs by reducing the price of healthy food will increase the healthy life expectancy of our rapidly ageing population. Even if the obesity paradox exists, the experience of poorer health in old age can in part be ameliorated by seeking to stabilise the health and weight of the elderly population with bespoke health plans which enable them to lead healthy, productive lives as long as possible. ■

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Deconstructing food purchases

Shopping around



When **Jane Atterton** and **Cesar Revoredo-Giha** agreed to analyse food purchasing habits of Scottish retirees from a global food panel survey for this magazine, little did they realise that they would end up with more questions than answers.

Demographic ageing is a phenomenon being observed in many countries across the world, as more people live longer and the average age of the population increases. Moreover, in most high income countries, the ageing process is more marked in rural areas than urban areas, mainly due to the out-migration of young people and the in-migration of older age groups to these areas. Population ageing has profound implications for many aspects of life and society, including the demand for, and purchase of, food. As older people make up an ever-increasing proportion of our future population, particularly in rural areas, it is vitally important that we understand their purchasing behaviour to inform policies and decision-making on food demand, supply and marketing, and, more broadly, on diet, nutrition and quality of life.

Based on data from a global food panel survey, this article explores the extent to which retirees in Scotland have different food purchasing patterns when compared to the rest of the population. Do they tend to buy more or less of a particular product? Do purchasing patterns vary in different parts of Scotland, between urban and rural areas for example? If so, what does this mean for the future of the food and drink industry and for future policies on food, quality of life, diet and nutrition?

National Records of Scotland (NRS) projections indicate that the population of pensionable age in Scotland is expected to increase by 26% from 2010 to 2035. This compares with a much lower 7% increase in the working age population over the same period. While Scotland's projected population growth is less than that in the rest of the UK, its age structure means that it will age more rapidly. In fact, the proportion of Scotland's population of pensionable age is expected to grow by 2.9 percentage points between 2010 and 2035, compared with a 1.7 percentage point rise for the UK as a whole.¹

Moreover, there are predicted to be geographical variations in the speed and extent of ageing, with rural areas likely to see their populations ageing faster than urban areas, as a result of rural residents ageing in-situ, in-migrants in older age groups moving in, and young people leaving. People aged 45 years and older already make up 53% of the population of remote rural

Scotland,² compared to 47% in accessible rural areas and 42% in the rest of Scotland. Aberdeenshire, Shetland and Orkney are all expected to see their pensionable age populations increase by more than 34% over the next twenty years.³

The food consumption patterns of older people have been explored in previous research studies. For example, work by Fraser et al. (2000)⁴ in England found that older subjects ate red meats more frequently but consumed less poultry and drank less coffee than younger subjects. Data from Defra's Family Food Survey in 2010⁵ revealed that fruit and vegetable purchasing increases with age (and with income). Elsewhere in Europe, older people living in three French cities were found to eat meat, fish, cereals, raw vegetables and pulses less regularly, while subjects living alone were less regular consumers of almost all foods.⁶ However, much less research attention has been given to how retirees allocate their food expenditure across the different food and drink categories. Geographical variations in this behaviour, for example, between urban areas, small towns and rural areas, have received particularly limited attention. Such research is important in helping us to understand retirees' food and drink preferences when compared to the average allocation, and therefore help formulate appropriate marketing and policy responses. These responses may need to be tailored to different geographical areas if purchasing behaviours are found to vary in different parts of Scotland. For example, issues of food price, access and quality may be particularly important for those older people living in rural parts of Scotland.

The analysis in this article is based on data from Kantar Worldpanel for Scotland for the period 2006-2011, which covers approximately 1,300 demographically representative households across Scotland. The dataset includes information about detailed weekly food and drink purchases for consumption at home, as well as demographic information. The data were analysed to examine how retirees allocate their food and drink expenditure across the different categories and how this compares with the Scottish average. In addition, the analysis explores differences across the population as a whole, and between the retired and other adults, in urban areas, small towns and in rural areas.⁷ A series of ratios were

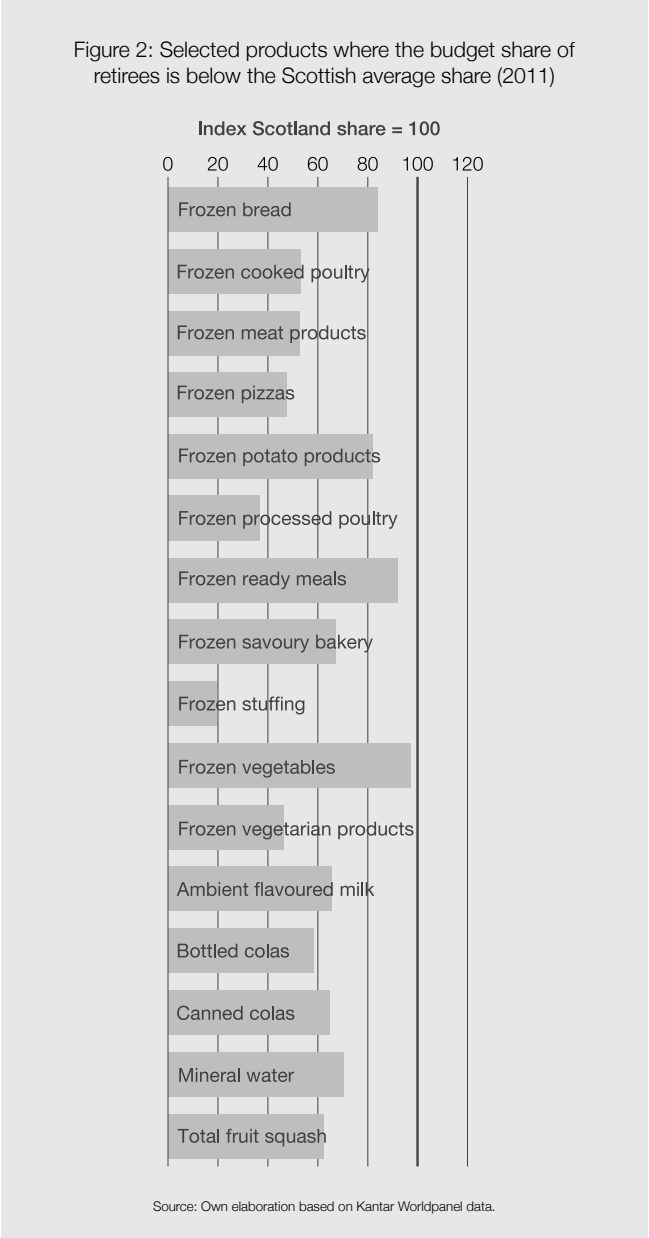
produced which enabled an examination of which food products the retired are more likely to purchase than other adults, and which they are less likely to purchase. The analysis reveals some interesting patterns which have implications for how future purchasing of different food types may change as demographic ageing continues, and how policy-makers may need to respond in terms of food marketing, food supply, and diet and nutrition.

The analysis initially focuses on items for which the purchasing allocations of Scotland's retirees are higher than the Scottish population. Figure 1 shows the purchasing allocations across Scotland as a whole in 2011, and reveals that retirees spend noticeably more than the Scottish population on fresh meat (including lamb, bacon joints and rashers, pork and black and white pudding), fresh fish, (chicken's) eggs and fruit and vegetables. The retired also spend more on hot beverages and alcoholic drinks. Spending on these items has fluctuated from year to year but overall has remained relatively stable over the 2006-2011 period.



In contrast, as shown in Figure 2, the retired spend considerably less than the population as a whole on frozen items (including stuffing, processed poultry, vegetarian products, meat products, pizzas and prepared foods). In terms of drinks, they spend considerably less on bottled colas (including lemonade and other flavours), canned colas, fruit squash and take home soft drinks. Again spending on these items has fluctuated from year to year but overall has remained relatively stable from 2006-2011, with the exception of frozen meat products where purchasing has declined over the period. There are many products where there is no noticeable difference in the purchasing of retirees compared to the rest of the population, including chilled burgers and grills, biscuits, frozen fish, chilled sausage meat and chilled bakery products.

Repeating the analysis for different geographical areas across Scotland – urban areas, small towns and rural areas – reveals very similar patterns. There are no noticeable differences in the food purchasing behaviour of retirees and the general population in urban areas and small towns, although some



differences are apparent in rural areas. It is still the case that the retired in rural Scotland spend noticeably less than the rest of the population on frozen items, but frozen processed and cooked poultry are particularly prominent in this group of food items. As in other geographical areas, retirees spend noticeably more than the rest of the population on fresh meat products. The data also reveals that retirees in rural areas allocate markedly more of their purchasing to alcoholic drinks than the Scottish population, perhaps reflecting higher than average income levels, particularly in accessible rural areas⁸ of Scotland.⁹

So what are the implications of these observed patterns? It seems that retirees demonstrate a preference for a relatively balanced diet, with a higher purchasing share of fresh meat, fruit and vegetables, and lower than average purchasing of frozen food. This seems to be the case across Scotland. This may be because they are more familiar with different types and cuts of fresh meat, and less familiar with frozen and processed foods. It seems that, on the basis of their current purchasing patterns, there may be particular opportunities for local food producers and networks and farmers' markets in terms of engaging with the retired population.

The purchasing preferences also suggest that retirees have a better knowledge of how to cook fresh meat appropriately, as well as more time to spend cooking. However it is worth noting that the data shows a decline in the purchasing of fresh and frozen meat by retirees in recent years, and this may be a response to rising prices. Previous research has suggested that against a backdrop of rising food prices (as observed in the UK since 2007), people will respond by buying less food, or by switching to less nutritious and cheaper food.¹⁰ At the same time, research has also suggested that people aged over 65 had the biggest increase of any age group in the amount they spend on food (at both supermarkets and restaurants) between 2000 and 2010.¹¹



Photo: Britt-Marie Sohlstrom

Recently, there has been a shift away from the purchase of processed meat and ready meals, which have accompanied declining trust in the food industry as a result of food-related scandals (such as horsemeat in early 2013). However, as adults in the working age population move through the lifecycle into retirement, their current purchasing behaviour suggests that the consumption of these products may increase, while purchasing of fresh meat and fruit and vegetables decreases. Having said that, previous research has shown that people tend to be relatively cautious in their food purchases, buying those products with which they feel most familiar. These shifts will need to be monitored to ensure that policy-makers take appropriate action to maintain the health of older people in future, particularly as they move into older age (i.e. their 70s and beyond) and may find themselves living alone.

While there is evidence of growing consumer interest in maintaining health and wellbeing into old age, specifically through greater attention to diet and exercise,¹² appropriate policy interventions may be needed to ensure that older people – particularly those in old age, those living alone, and those living in rural locations – can continue to access healthy and affordable food and therefore maintain an adequate and balanced diet.¹³ Policy support may become more important as food prices continue to rise and as a squeeze on pensions may reduce the purchasing power of those entering the retired population. This may result in a shift towards more frozen food purchasing amongst older households, for example. A further appropriate policy response may be to improve education and information relating to fresh meat cuts and fresh fruit and vegetables and how to prepare and cook them amongst those who are moving towards retirement. These trends may manifest themselves in rural locations somewhat differently to urban locations. For example, there may be particular implications for older people in rural areas as there is a decline in small, independent food retailers and access to distant large supermarkets is more difficult.

This initial analysis of the differing purchasing patterns of retirees has revealed some interesting findings, but has also raised many additional avenues for further research. The data can be used to compare purchasing patterns across different age groups (i.e. across the lifecycle), for example, exploring differences between consumers in their 60s and those who have reached 'older age' (their 70s, 80s and above). Such a project would enable an exploration of food purchasing trends as people transition through the life course. The influence of income on the food purchasing behaviour of different age groups could also be explored. It would also be interesting to explore how purchasing patterns have changed in response to changes in the retail sector, such as the rise of online shopping and home delivery arrangements. Such analysis is likely to reveal some interesting geographical variations, resulting both from the varying availability of next generation broadband – and varying familiarity and confidence with using it – and of home delivery services in rural and urban areas. ■

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Food shopping Dismantling the barriers



Many older people find food shopping a real challenge. **Michelle Mitchell** describes some of the ways that Age UK is helping them, and calls on government and businesses to do more to make food shops more inclusive of older customers.

It is estimated that 1.3 million people over the age of 65 are suffering from malnutrition. More often than not the condition is preventable, but it regularly goes undetected. Yet the consequences can be devastating. Left untreated, malnutrition can result in older people being admitted to hospital or it can dangerously slow down recovery from illness or injury.

In this comparatively prosperous country, why is malnutrition among older people so common? Part of the problem lies in the misinformed perception that losing weight is just part of getting older, which results in it so often going unnoticed and untackled. In addition, rising food prices combined with historically low interest rates and – for many – a fixed income, mean that older people often feel they can't afford a balanced diet. Currently 1.7 million older people are living in poverty. Others may simply have poor appetites, a common by-product of ageing which leads to food tasting bland and unappetising unless it is more highly flavoured. Many older people also struggle with the physical barriers to shopping such as getting to the supermarket, tackling food packaging and cooking. All of these must be addressed if the UK is to overcome malnutrition in older people. An easy place to start is to challenge the physical obstacles facing older people.

Simply getting to the supermarket or local shop, taken for granted by most of the population, presents major problems for many older people. Age UK research shows that 19% of people aged 65 and over report they have a longstanding illness that prevents or makes it difficult to shop for food. Those unable to drive have to rely on public transport, primarily buses, which may be infrequent, especially in rural areas. Twenty three percent of people over the age of 65

have difficulty getting to a bus stop and 25% say they have problems standing up for long periods of time or finding a seat once on board.

If they do manage to get to a shop, older people often face their next challenge: poor layouts. Here they face a number of obstacles, including narrow aisles, poor signposting, shelves that are too high or low, freezers and trolleys that are too deep, and a lack of toilets and rest areas. No wonder supermarkets can seem like an overwhelming obstacle course for the less physically robust. Carrying heavy bags is another acute problem and 40% of older people say they usually only shop for their immediate needs to avoid carrying heavy bags.

While online food shopping has become increasingly popular in the UK as a whole, more than half of all people aged 65 plus – 5.2 million people – have never used the internet, many because of poor eyesight, dexterity or cost. Furthermore, those older people who do internet shop are more likely to incur a substantial delivery charge because of the smaller quantities typically ordered.

Age UK has also found that many older people complain of food being sold in portions that are too large, packaging that is difficult to open and unreadable labelling. Jars, tins, child-proof bottles and ring pull tins are particularly unpopular. With almost one in five of the UK population over State Pension age, and annual spending of older households now topping £121 billion (up from £109 billion a year earlier), taking steps to make retail more inclusive of older consumers is not just a moral imperative but also surely makes good business sense, particularly as many of the fixes simply require

awareness of the problem rather than major expenditure. Age UK would like to see the design of current and future stores reviewed to ensure they are easy to navigate for the less mobile and include more rest areas and toilets. Out of town shops should consider offering transport and staff better trained in how to assist older shoppers. In addition, important food labelling should be in easily legible font and colour contrasts, packaging should be designed with the less dextrous in mind and special offers should be targeted at older people and others who can't benefit from multi-buy discounts. All this should be backed up with internet training for those who want to go online.

Some of Age UK's local partners have stepped in to try to help older people who are struggling with food shopping. Age UK Berkshire provides a service to help older people internet shop at Tesco, Sainsbury, Asda and Waitrose. Family members, carers or local authorities suggest older people who might benefit. If they are interested in the scheme, an account is set

up via Age UK which enables them to order and to have their food delivered at a pre-arranged time without having to use the internet themselves. The service currently has 70 users and is run by staff and volunteers. The service costs £5 per shop – significantly less than the cost of paying a carer to carry out the chore or paying for a taxi to get to the store.

Age UK Norwich operates a slightly different shopping service which provides transport to large out of town supermarkets for older people who have difficulty using public transport and can't afford taxis. The buses are provided by community transport but the service is run by Age UK volunteers. With the UK's population ageing at a rapid rate, Government and businesses both have a lot to gain from helping older people to eat well and remain healthy and independent for as long as possible. With greater awareness and imagination there's no reason why it cannot be done.

Michelle Mitchell is the outgoing Charity Director General of Age-UK.



Photo: John Gargan

The Good Life

How food skills can link old and young



A new pilot scheme run by the Soil Association and Age UK is linking older people with schools, sharing gardening skills and enhancing quality of life. **Joanna Lewis** explains what led to this new initiative, and what both the children and adults stand to gain.

The importance of food skills for the young has been much in the news recently, with the welcome announcement that the Department for Education is proposing to make cooking and food growing compulsory for all pupils up to the age of 14. Hot on the heels of the celebrations, though, are concerns that schools might struggle to find enough staff with the skills to make this happen or with the time to commit to maintaining food growing areas outside of school hours.

Many of the 4500-plus schools in the Food for Life Partnership, a national programme led by the Soil Association with funding from public health and the Big Lottery Fund, have already grappled with this challenge and turned it into an opportunity to build links with the wider community, and older people in particular. We believe that older people in the community can play a vital role in supporting teachers with training in food skills and food hygiene. At present there is a tendency for many people, including politicians and policy makers, to frame the debate on ageing within a dependency narrative which sees older people as a 'burden' and a 'drain on the public purse'. But in reality, our older population is very diverse. Many are in good health with the time, skills and inclination to give something back to society. Properly captured, this potential is enormous. Grandparents are an obvious starting point.

At Carshalton Boys Sports College, a Food for Life Silver-awarded school in the London Borough of Sutton, grandparents share their gardening expertise with pupils every week and help with the school's 'Chicken Run Club' that houses ten chickens and a rooster. Carshalton Head teacher

Simon Barber believes food growing in the sixteen raised beds has played a crucial role in the school's success. "I just think it is amazing that this tiny scrap of land has had such a massive impact on the school – it has helped to change the whole approach to food here." Over 90% of students are now eating the healthy school lunches, compared with the national average of 39% in secondary schools.

At Haydonleigh Primary School, a Food for Life Silver-awarded school in Swindon, a group of grandparents was quick to respond when the school asked for volunteers to help run the school's gardening club, held each Wednesday. When Haydonleigh first joined the Food for Life Partnership in 2007, each class was given a square metre of earth in which to grow herbs. This was such a success that the school has transformed a larger piece of land into a dedicated food growing zone, with fourteen vegetable plots, a mini orchard and a polytunnel.

Marion Dowdell and her husband Keith are delighted to help out at Haydonleigh where their grandson Aaron attends. "My husband and I were both keen to support this project when we heard about it – just for the sheer enjoyment of helping the children" says Marion. "We really look forward to our Wednesdays now. The children love gardening and are so fascinated they ask us all sorts of questions about how, when and where things grow!" Eight-year-old Aaron says: "I feel really lucky because not everyone has their Nan and Gramps come to help the school with growing vegetables. I like gardening with them, it's lots of fun."

A family connection is not a prerequisite for older people to get involved, however. Research by the Department for Work and Pensions on people's aspirations for later life recently indicated that over half of respondents (53%) were interested in formal volunteering when aged 60 or over, with a third (33%) interested in informal volunteering.

At Tranmere Park, a Food for Life Silver-awarded primary school in Leeds, it all started with a coffee morning for the local community. As Deputy Head Alison Hodgson reported, "The school council gave the visitors a presentation about our Food for Life work so far and how they could get involved. They then showed everyone around our school, spending lots of time in our new school garden explaining what we have been growing and showing photographs of the produce grown last year. We enjoyed a nice cup of tea and some biscuits and buns made by the school cooking club. The visitors from the community were very impressed and some have signed up to help in school this year!"

The benefits to older people themselves of engaging in school life in this way can be enormous. According to Age UK, one in ten people over the age of 65 report feeling lonely all or most of the time and this can have a severe impact on people's quality of life as they get older. Given changing demographics and family patterns, the charity estimates that the number of people living alone aged 75 and over will increase by more than 40% over the next 20 years. It is in the interests of local government and the NHS to encourage and facilitate these links with schools, because tackling loneliness and isolation has been shown to reduce mortality and morbidity rates, and lonely individuals are more likely to use expensive primary and acute health services and need social care support.

Christmas lunches are an obvious first step for schools looking to invite in older people who might be at risk of loneliness. At Trinity C of E primary in Shropshire, a Food for Life Bronze school, Christmas lunch is a well-supported event enjoyed

by social clubs for the elderly in neighbouring villages and the local care home. The success of these annual events encouraged the school to make all lunchtimes 'open house' for the local sheltered accommodation community whenever they wish to join them. Lodge Lane Infants School, a Food for Life Silver-awarded school in Norfolk, has forged a link with a home for the elderly and invites the residents into school for the Christmas meal. The children set the tables, 'meet and greet' and then serve the meal and eat with their visitors. Afterwards they chat with them in the library and coffee is served whilst the children share reading books with them. This has become an extremely popular event with both generations.

older people can benefit from being invited into schools to eat alongside pupils

Harvest Festival is another hook for forging community links. At Waldegrave Secondary School in Twickenham, each tutor group creates a harvest box in the autumn term that is then delivered to an elderly member of the local community. Primrose Hill School in Camden holds a Harvest celebration when parents and grandparents are invited into school to taste vegetable soup made with produce from the school garden. Gifts of food are then collected for the pupils to take to a local day centre for the elderly.

Over the past six years the Food for Life Partnership has demonstrated that older people can benefit from being invited into schools to eat alongside pupils, who in turn can benefit from the skills of older people volunteering in their cooking and growing clubs, working alongside trained teachers. For older people these experiences can reduce social

Community gardening: fit for the future



Roberta Emmott is communications officer at the Brighton and Hove Food Partnership.

The physical and mental health benefits of gardening are becoming increasingly clear and community gardens are often seen as a way to promote wellbeing. In Brighton & Hove, there are over 60 community gardens around the city run by local people.

One such is run by a group of older people in Hangleton & Knoll, a built up neighbourhood in Brighton & Hove. They have been co-working a community plot since 2009 and get together weekly to garden and socialise.

They grow a huge variety of fruit and vegetables, and some of the produce finds its way onto the plates of the Thursday Lunch Club which caters for elderly local residents. Other fruit and vegetables

grown on the plot offered (in return for a small donation) to residents of a local retirement Sheltered Housing Group.

The group's current task is a wholesale revamp of three planters outside the local pub and shopping parade and are actively encouraging volunteers from their local neighbourhood. Despite being run by older people, they are keen to work with volunteers of any age, and in the past have had young families help them out at the plot. This is a great way for communities to get together across the generations.

Ron Hodgton, aged 81, who co-ordinates the gardening group says that gardening keeps him younger. He and his wife live in a block of flats with no garden. He regularly attends the shared plot and has a regular supply of fresh fruit and vegetables all year round. Since his wife was diagnosed with dementia, Ron has taken over the cooking, so having access to the garden means they eat seasonal home-grown veg every day.



isolation, provide healthy eating messages, and have a positive impact on physical and mental health. Now the Food for Life Partnership is joining forces with Age UK in Bath and North East Somerset (BaNES) in a two-year Lottery-funded project to pilot a structured approach to engaging older people in school food culture. FFLP is already commissioned by BaNES local authority to work with schools to develop healthier eating habits among pupils and their families. A key dimension of the programme is the transfer of the skills needed to lead cooking, food growing and farm links activities to volunteer ‘ambassadors’ from the community. This pilot project is also a great fit with Age UK’s nationwide ‘Fit as a Fiddle’ programme, which supports older people with physical activity, healthy

eating and mental well-being. Both Fit as a Fiddle and the Food for Life Partnership have benefitted from generous funding from the Big Lottery Fund well-being programme.

If successful, the pilot has the potential to be rolled out nationally, to the benefit of time-poor schools and time-rich but potentially isolated older people everywhere. Dr Barbara Burke, the elderly but indefatigable lady who now runs two growing club sessions a week at Tranmere Park primary, is clear what the chief ‘learning outcome’ should be: “It’s about us all having fun.”

Joanna Lewis is head of food policy for the Soil Association.



Hospital food

A failure set to get worse

Alex Jackson laments the dire quality of hospital meals and calls for legislation to mandate hospitals to serve up a menu that is fit for people and planet.

Hospital food in England is failing patients and their families, and is contributing to the failure of our global food system. It is unhealthy and unpleasant to eat. On top of that, it is produced, packaged and served in a way that is unethical and does damage to the environment. Hospital meals are unpopular and are so lacking in nutrition that they are actually contributing to malnutrition amongst patients, rather than helping to tackle it.

It is estimated that malnutrition is contributing to 50,000 deaths in NHS hospitals in England each year. For those that survive, malnutrition results in longer periods of illness, slower recovery from surgery, infection and increased mortality rates. Without changes to the way that hospital food is prepared and served, and with an ageing population, we can only expect to see more vulnerable, malnourished elderly patients in our hospital wards in the years to come. As well as being unhealthy, hospital food is grown, transported and packaged in a way that damages the environment and biodiversity – endangering our ability to feed ourselves in the future. It is also cheap, and of such poor quality, that it squeezes farmers who are producing it, both in the UK and in poor countries abroad.

For the last twenty years, the government has launched numerous initiatives to improve hospital food, at a cost of more than £54 million to the taxpayer. Every one of these initiatives failed because they relied on hospitals to make



voluntary improvements to the food they serve, rather than mandating them to do so. The initiatives were also weakened by the government’s sporadic interest in hospital food, and its refusal to pay more for better patient meals. It’s now time for the government to set mandatory nutritional, environmental and ethical standards for hospital food to improve all patient meals without exception. Lady Cumberlege recently introduced the Health and Social Care (Amendment) (Food Standards Bill) to the House of Lords which would achieve this. We should all give it our backing so that it has the best possible chance of success.

Alex Jackson is Project Officer on Sustain’s campaign for better hospital food.

Care home nutrition: providing the best food possible



Naina Mandleker is Director of Business Development and **Louise Chambers** is head of Eldercare at Milestones Trust, a charity supporting people in the Bristol area with dementia, learning disabilities and mental health needs.

The importance of food cannot be underestimated. It is after all a basic necessity. As people get older and are afflicted by a host of ailments, good and healthy food assumes an even bigger importance. In our care homes we witness this day in and out. At the Milestones Trust we provide specialist residential and nursing care, supported living and elder dementia care to over 1,000 people living in and around Bristol. We have found that as one gets older the problem is not about excessive eating; rather it is of not eating enough. We are well aware that an unhealthy diet leads to osteoporosis, constipation and dehydration amongst the healthiest.

No wonder then that this is exacerbated in older people – particularly those with dementia. People with dementia may simply forget how to eat, lose their sense of taste and smell, and be struggling with a host of mental health issues triggered by loss of memory. Added to this may be physical issues such as difficulty chewing or swallowing, and the side effects of medication. As we head towards a truly multi-cultural society, cultural needs and preferences must be built into all aspects of our services. Recognising, respecting and providing for the personal needs of individuals is also, after all, what personalisation is about. How is it possible to work within the tight budgets, further cuts by the state, and yet not allow them to have an impact on the diet and nutrition of people with complex issues? A question we at Milestones Trust are committed to answering...

Products and packaging

Catering to an older audience



Jonathan Thomas explains some of the ways that food businesses are growing their products that cater to the older consumer.

The ageing population has been identified as one of the most important challenges facing the world as the twenty-first century progresses. Official projections from the United Nations (UN) suggest that the percentage of the global population aged 60 and over will increase from 11% in 2000 to 22% by 2050, during which time the number of people falling into this age category is expected to grow from 605 million to around 2 billion. According to the same source, the number of people aged 80 and over will quadruple to nearly 400 million by 2050, while the global median age is forecast to rise to almost 38 during this time.

Many of the people in these age groups have an increased risk from adverse and degenerative health conditions such as coronary heart disease (CHD), osteoporosis and dementia. For example, CHD accounts for up to 15% of all UK deaths amongst those aged 65 and over, while approximately one in three women aged 50 and upwards experience some kind of bone fracture caused by osteoporosis. Meanwhile, incidence of dementia in the developed world doubles every five years between the ages of 65 and 90. As such, the over 65s account for a disproportionately high percentage of the 24 million people worldwide suffering from some kind of dementia. These trends carry numerous implications for the global food industry, as this increasingly affluent demographic group is becoming ever more inclined to seek out products that promote health and longevity, as well as food and drinks which assist in maintaining a healthy and active lifestyle past middle age. The wellness trend continues to shape the direction of the global food industry to a significant extent, with more people now seeking out products offering ‘preventative’ health solutions.

Functional Foods

Many of the existing food and drinks launched with the nutritional requirements of older consumers in mind overlap with the functional foods industry. As can be seen from Table 1, global sales of functional food and drinks reached

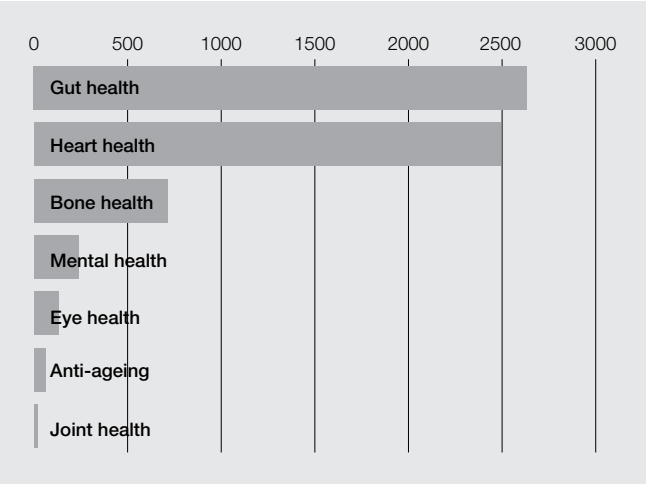
USD25.3bn in 2011, up by 31.5% compared with 2007. This figure is limited to the world’s most developed markets, namely Japan, the US, Europe and Australia. If the rest of the world is included, total global market value may reach as high as USD35bn.

This value figure uses a very strict industry definition and is limited to products making specific functional health claims – for example, food and drinks positioned on a general ‘wellness’ platform are excluded, as are sports and energy drinks. It should be pointed out that relatively few of the functional foods on the global market are as yet actively marketed at any specific age groups, although some products enjoy considerable appeal amongst the older and more senior age groups – for example, research from Scandinavia suggests that penetration of cholesterol-lowering dairy spreads is particularly high amongst those aged between 64 and 75.

Table 1: Global Functional Foods Market by Region, 2007-2011				
	2007 [USD, millions]	2011 [USD, millions]	% change 2007-2011	% share 2011
Japan	7,125	9,750	36.8	38.6
US	6,215	7,850	26.3	31.0
Europe	5,590	7,290	30.4	28.8
Australia	310	410	32.3	1.6
Total	19,240	25,300	31.5	100.0

Source: Leatherhead Food Research
Not including energy and mood enhancing foods and beverages

Figure 1: Functional NPD for Seniors by Health Conditions, 2011 (number of launches)



Source: Leatherhead Food Research/Foodlineweb

Nevertheless, the strong overlap which exists between functional foods and the health and nutritional requirements of ageing consumers can be illustrated by the new product activity which took place during 2011. Data regarding NPD activity within the global food and drinks industry indicates that 5,770 products were launched during 2011 which made a health claim geared towards older people (Figure 1).

As can be seen, most functional food and drink launches targeted at ageing consumers were positioned as either digestive or heart health products. In both instances, the number of launches was well over 2,000, and is perhaps a reflection of the concerns which exist over conditions such as heart disease. Elsewhere, 715 new products were launched on a bone health platform during this time – of these, a number were specifically marketed as helping to prevent and treat osteoporosis. Activity levels have also been fairly high for the mental and eye health sectors.

One of the major sectors of the market for functional foods targeted at ageing consumers as it stands is dairy foods – notably milk, yellow fats, yoghurt and yoghurt drinks. One such example is Actimel 50+, which was launched in 2011 by Danone’s Polish subsidiary. This probiotic yoghurt drink, which contained additional magnesium and vitamin B6, was targeted at people aged 50 and over. Another dairy multinational present in the market is Groupe Lactalis, whose range includes Jeunesse yoghurt in Italy (which is fortified with CoQ10 and therefore has anti-ageing benefits), as well as Puleva milk in Spain, one variety of which is enriched with calcium and soya isoflavones and aimed at women aged 40 and over.

It is thought that more products are being launched in the bakery and cereals sectors with the requirements of ageing consumers in mind. More bread fortified with ingredients such as omega-3 fatty acids, calcium and fibre is now appearing in many parts of the world. In the cereal sector, some brands now carry a heart health link, on account of their whole grain content. As an example, PepsiCo’s LIFE product – which forms

part of the Quaker range – was targeted at older people when it was launched in France during 2012.

Another sector which is showing considerable promise is soft drinks. Beverages such as fruit juice, bottled water and tea have already proved to be successful carriers for functional health ingredients, and also benefit from an overall perception as being healthier alternatives to carbonated drinks such as cola. Of particular significance is green tea – besides its antioxidant properties, it has been shown to deliver health benefits such as increasing fat metabolism (which aids weight loss), as well as helping to reduce cholesterol levels and prevent eye disease developing. For these reasons, its popularity amongst older consumers is expected to grow.

Food Packaging

In addition to food and drinks themselves, the industry is also starting to view packaging from the perspective of older consumers. A recent study conducted amongst the over-55s on behalf of BAGSO (Federal German Association of Senior Organizations) found that almost two-thirds (64%) of respondents described hard-to-open food packaging as “a big nuisance”, while a quarter (25%) claimed to struggle with packages at least once a week. Over a third (34%) said they would switch to a different product or brand in future as a result of encountering packaging problems.

To address perceptions such as these, packaging for some of the foods being targeted at older people is being designed with their needs and requirements in mind. In the ready meals sector, larger print for food labels is being used (for those with poor eyesight), as well as providing containers which are easier to open. Looking to the future, packaging innovations aimed at improving the shelf-life of perishable foods – such as bakery goods, fresh produce and meat and fish-based products – may also find favour amongst ageing consumers, since they could help to reduce the likelihood of eating unsafe foods.

Conclusions

Given the average age of consumers in developed parts of the world is forecast to continue increasing, the way food and drinks are targeted may undergo some changes. It is likely that manufacturers will come to see older people as a series of diverse niche segments, with distinctive wants, needs and requirements, rather than as a homogenous group with similar tastes. This trend has already become apparent in the functional foods industry (where the products are becoming more specialised). As a result, food manufacturers may start launching their products with a more specific age range in mind. There is also the question of price. Typically, functional foods have commanded a fairly premium price, a factor which has had an adverse effect upon demand during the current economic downturn. However, since disposable income levels generally rank above average for the older age groups, it is highly possible that products aimed at the older age groups will be priced at the upper end of the spectrum. ■

Jonathan Thomas is Principal Market Analyst at Leatherhead Food Research, an organisation that delivers integrated scientific expertise and international regulatory advice to the global food, drink and related industries.



Brazilian Food: Race, Class and Identity in Regional Cuisines

Jane Fajans | 2012 | Berg | | ISBN 978-0-85785-042-3
Food is central to the construction of regional and national identity – in the case of Brazil, coffee and soy are nowadays as strongly associated with the country as ‘sea and sun, samba and soccer’. This book examines the relationship between food, kinship, race and place across the diverse regions of Brazil. In doing so, it vividly portrays how food defines the shared-identity of the nation while being at the same time central to the preservation of the many different cultures that make up the Brazilian population. SR

Cancel the Apocalypse: The new path to prosperity

Andrew Simms | 2013 | Little Brown
ISBN 978-1408702369
A refreshing blast of cold air, this book takes a positive look at the changes that society can make to create a better world. Andrew Simms examines how relentless consumerism is damaging our environment, and how the political and economic systems support and encourage this materialism. He argues that making systemic changes to society are not only necessary but will enrich our lives. EB

Rice and Beans – A Unique Dish in a Hundred Places

Richard Wilk and Livia Barbosa Eds. | 2012
ISBN 9781847889041
Rice and beans – a staple dish – can trace a multitude of historical paths, migratory patterns and relationships with cultures from Brazil to West Africa and beyond. This book uses these two simple food stuffs to tell a story of the diversity and complexity of food. The inclusion of local recipes is a welcome addition. JL

Reclaiming Food Security

Michael Carolan | 2013 | Earthscan from Routledge
ISBN 978-0-415-81696-0
Genuine food security is a process to make people and planet better off, argues the author. After a brief history, he tackles neoliberalism, productivist ideology, and caloric reductionism, before introducing the reader to the food and human security index. This draws together five variables – life expectancy at birth, life satisfaction, total per capita water foot-print as a percentage of total per capita renewable fresh water supply, daily per capita consumption of oils, fats, and sugars, and supermarket concentration. GT

Farming the City: Food as a tool for today’s urbanisation

CITIES ed. | CITIES | 2013 | ISBN 978-9078088639
With an introduction by Carolyn Steel, author of Hungry City, this book investigates the paradox of urban living – as we live ever closer to each other we become even further removed from where our food comes from. The uplifting case studies in this book show how it is possible to live in a city and remain connected to food production. A truly inspirational read. EB

Food

Jennifer Clapp | 2012 | Polity Press
ISBN 978-0-7456-4936-8
This book focuses on the interface between the international political and economic dimensions of the world food economy. After tracing the rise of a global industrial food market, the author focuses on the role of uneven agricultural trade rules, transnational corporations and financialisation in shaping the world food economy. Finally, she reflects on whether, in the face of the multiple increasingly concentrated forces influencing the rules of the game, the system can be transformed. GT

Culinary Capital

Peter Naccarato and Kathleen Lebesco | Berg | 2012
ISBN 978-0857853837
Culinary Capital seeks to make sense of food as an economic and cultural commodity; to demonstrate how food choices and shape individual and group identities. It looks beyond economics to examine the influence of celebrity chefs, eating competitions, and social media to engage us in behaviours and relationships with food that reflect personal values and a sense of Self. JL

A Theory of Grocery Shopping: Food, Choice, Conflict

Shelly L. Koch | 2012 | Berg | ISBN 978-0-85785-151-2
Drawing on the day-to-day experiences of grocery shoppers, this fascinating study provides a thorough-going critique of the notion that ‘consumer is king’ (or, ‘consumer is dictator’ as one food retail body has recently updated it). The author unpicks the various discourses that underpin this dogma - the ‘shopping and nutrition’ discourse; the ‘efficient housewife’ discourse; the ‘consumer control’ discourse – to reveal the ‘large social forces’ that actually determine our purchasing decisions. SR

Forthcoming events

2nd July ‘13	National Organic Cereals Organic Farmers and Growers http://www.organicfarmers.org.uk/ Shropshire, UK
3rd - 4th July ‘13	Livestock Event RABDF http://www.livestockevent.co.uk/ Birmingham, UK
15th July - 16th July ‘13	International conference on climate change and global warming WASET https://www.waset.org/conferences/2013/stockholm/iccgcgw/index.php Stockholm, Sweden
18th - 23rd Aug ‘13	Ecology: Into the next 100 years INTECOL http://www.intecol2013.org/ London, UK
2nd - 3rd Sept ‘13	Science and practice for grass-based systems BGS http://www.britishgrassland.com/ Dumfries, UK
10th Sept ‘13	Implementing the Common Fishing Policy Westminster Forum Projects http://www.westminsterforumprojects.co.uk/London, UK
25th - 27th Sept ‘13	Sustainable intensification: the pathway to low carbon farming Scotland's Rural College http://www.sruc.ac.uk/homepage/403/carbon_management_centre_international_conference Edinburgh, UK
29th Sept - 2nd Oct ‘13	First International Conference on Global Food Security Elsevier http://www.european-agronomy.org/frontpage/esa-events/item/first-international-conference-on-global-food-security.html Noordwijkerhout, Netherlands
30th Sept ‘13	International conference on economic and social sustainability GNESS http://www.gness.org/conference.php Tokyo, Japan
10th Oct ‘13	The future of school food and children's nutrition Westminster Forum Projects http://www.westminsterforumprojects.co.uk/ London, UK
16th Oct ‘13	World Food Day United Nations http://www.fao.org/getinvolved/worldfooday/en/
7th Nov ‘13	Implementing the UK strategy for agri-tech Westminster Forum Projects http://www.westminsterforumprojects.co.uk/ London, UK
18th - 19th Dec ‘13	Rethinking agricultural systems in the UK British Ecological Society http://www.aab.org.uk/contentok.php?id=157&basket=wwsshowconfdets Oxford, UK
18th - 21st May ‘14	New science, new practices British Society of Animal Science http://www.bsas.org.uk/ Westport, Ireland
13th- 15th Oct ‘14	18th Organic World congress IFOAM http://www.ifoam.org/en/node Istanbul, Turkey



The Food Ethics Council works towards a food system that is fair and healthy for people and the environment.

Our independent research, and advice to business, government and civil society helps find a way through controversial issues and supports better choices in food and farming.

To keep up to date with our work, register at www.foodethicscouncil.org to receive our free monthly e-newsletter.