



Food growing for
health and wellbeing

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Growing Health

- Project run by Garden Organic and Sustain, funded by The Tudor Trust
- Vision - community food growing to be a natural part of the health service and routinely used to deliver health improvement
- Identify barriers & solutions
- Finding ways to make it happen

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Why isn't food growing commissioned?

NHS & Public Health

- Lack of awareness of food growing and the benefits
- Unsettled times and new structures
- Need evidence of outcomes and impact

Food Growing Groups

- Don't have the contacts or awareness of routes to commissioning
- Not always set up to make commissioning easy – define the service, work in partnerships and provide evidence of impact



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Finding ways to make it happen

- Supporting community groups to get commissioned
- Raising awareness amongst commissioners and health professionals
- Collating and sharing evidence of the benefits of community food growing on health
- Growing Health Network and communication



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Community growing groups

- **Share and learn events**
 - Routes to commissioning
 - Building partnerships
 - Measuring outcomes
- **Case studies**
- **On-line tool kit**
- **Evidence of the benefits of food growing for health**
- **Guide to tools for measuring outcomes**



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Evidence for health and wellbeing



The benefits of gardening and food growing for health and wellbeing

By Garden Organic and Sustain
Ulrich Schmutz, Margi Lennartsson, Sarah Williams, Maria Devereaux and Gareth Davies
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Gardening and food growing for healthy weight



Gardening and food growing help to achieve and maintain healthy weights by influencing:

- Fruit and vegetable consumption; Nelson *et al.*, 2007; Alaimo *et al.*, 2008; Nelson *et al.*, 2011
- Physical activity Hawking *et al.*, 2013; Park *et al.*, 2008
- Body mass index Zick *et al.*, 2013

Background

The Government's obesity strategy 'Healthy Lives, Healthy People' a call to action on obesity in England has identified that 'overweight and obesity represent probably the most widespread threat to health and wellbeing' (Department of Health, 2011). 61% of adults are overweight or obese, and 23% of 4-5 year olds and 33% of 10-11 year old. The level of obesity in England, along with the rest of the UK, ranks as one of the most obese nations in Europe. It is the consequence of overweight and obesity that makes these statistics so serious, as excess weight is a major risk factor for diseases such as type 2 diabetes, cancer and heart disease. Alongside the serious ill-health it provokes, overweight can reduce people's prospects in life affecting self-esteem and mental health (Department of Health, 2011).

Excess weight gain is the result of eating more calories than needed and/or undertaking insufficient levels of physical activity to match the calorie intake. Although this energy imbalance is driven by complex environmental, physiological and behavioural factors, changes in diet to reduce energy intake along with increasing physical activity are key to achieving and maintaining a healthy body weight. The National Institute for Health and Clinical Excellence (NICE) clinical guideline on obesity includes advice for people to eat at least five portions of fruit and vegetables each day in place of foods higher in fat and calories, and to make enjoyable physical activities part of everyday life. Engagement in gardening and food growing can address both of these recommendations and gardening is indeed recognised as moderate-intensity physical activity that adults are advised to undertake 30 minutes or more of on five or more days of the week (NICE, 2006).

Evidence of impact of gardening and food growing on:

i) Fruit and vegetables consumption

Reviews of academic studies from the UK and abroad, concluded that food growing programmes in schools can have positive impacts on pupil nutrition and attitudes towards healthy eating, specifically related to willingness to try new foods and taste preferences (Nelson *et al.*, 2011; Draper and Freedman, 2010). For example, a study carried out in the USA 11-12 year old students involved in food growing over a four month period found that students were more willing to taste, and ate, a greater variety of vegetables than those in the control group (Ratcliffe *et al.*, 2011). Lineberger and Zajicek (2000), also in the USA, reported more positive attitudes towards vegetables and increased snack preference for fruit and vegetables amongst 8-11 year old students involved in hands-on school gardening programmes. Evaluation of Food for Life Partnership (FFLP) in the UK showed significant associations between healthy eating and FFLP related behaviours (including participation in cooking and growing at school or at home); following their participation in FFLP the proportion of primary school-age children eating five or more portions of fruit and vegetables increased by 28% (Orme *et al.*, 2011). Nelson *et al.* (2011) reported details of a number of studies demonstrating that pupils engagement in food growing activities resulted in increased consumption of vegetables, but also noted that most of the studies only considered whether pupils consumption habits had changed as an immediate effect of their involvement in growing and highlighted the lack of longitudinal evidence research confirming whether such programmes can change eating habits long term.

For adults, Alaimo *et al.* (2008), reported that household members who participated in community gardening consumed fruits and vegetables 1.4 more times per day than those that did not and that they were 5.5 times more likely to consume the recommended 5 portions a day of fruits and vegetables. In the UK, the low-income diet and nutrition survey (Nelson *et al.*, 2007) showed that men and women living in households that grew food consumed more fruit and vegetables than other men and women.

Gardening and growing for people with dementia



Being in a garden and taking part in horticultural activities has been shown to be of benefit for people with dementia, with structured therapeutic gardening activities having a positive impact on senses of wellbeing, cognitive abilities, communication and engagement. Dehewer *et al.*, 2012 and Hewitt *et al.*, 2013.

Background

Dementia is a long term condition with a high impact on a person's health, personal circumstances and family life. Alzheimer's disease is the most common form of dementia and is generally diagnosed in people over 70 years of age. Early-onset dementia refers to the onset of symptoms before the age of 65. As well as having profound impact on the individual, dementia can also have high impact on family members and friends. Dementia results in a progressive decline in multiple areas of function including memory, reasoning, communication skills and those skills needed to carry out daily activities. Alongside this decline, individuals may develop behavioural and psychological symptoms such as depression, psychosis, aggression and wandering, which complicate care.

The National Dementia Strategy (2009), aims to ensure that improvements are made to dementia services across three areas: improved awareness, earlier diagnosis and intervention, and a higher quality of care (Department of Health, 2009). The Alzheimer's Society statistics show that there are currently 800,000 people living with dementia in the UK, and it is predicted that this number will rise to over

one million people by 2021. It is estimated that dementia currently costs the NHS, local authorities and families £22 billion a year and this will grow to £27 billion by 2018 (Kane and Cook 2013). The Alzheimer's Society notes that the Welsh Assembly in its framework action recognises that low-level support services such as gardening clubs are vital, and reduce the need for more intrusive and costly care solutions (Kane and Cook, 2013).

Evidence of benefits of horticultural therapy for people with dementia

The UK National Institute for Health and Care Excellence (NICE) recommends that care plans should address activities of daily living that maximize independent activity, adapt and enhance function, and minimize need for support (NICE, 2011). The garden and the activity of gardening provides a non-pharmacological approach to address these goals and horticultural therapy can be utilized to improve the quality of life for the aging population and yielded high level patient/carer satisfaction, possibly reducing costs of long-term, assisted living and dementia unit residents (Dehewer *et al.* 2012; Gilin *et al.* 2012).



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Health Professionals / Commissioners

- Raise awareness
- Seminars – food growing groups/commissioners
- Evidence of the benefits of food growing for health

Growing Health: Using community food growing to deliver public health outcomes



Maria Devereaux (Growing Health, Sutton), Sue Croome (Public Health Tower Hamlets), Margi Lennartsson (Growing Health, Garden Organic), Ulrich Schmutz (Centre for Agroecology, Water and Resilience, Coventry University)

Introduction It is widely recognised that gardening and food growing has a positive impact on people's health and wellbeing and there is a growing body of evidence to support this (Schmutz et al., 2014). Regular contact with plants and the natural environment can improve mental wellbeing and combined with the activity of growing food it can help improve physical health for wide range of abilities and ages.

Summary of evidence

- Regular involvement in gardening can:**
- Improve psychological health, by reducing stress, the severity of stress and associated depression
 - Increase physical activity, burn calories and contribute to maintaining a healthy weight and reduce the risk of obesity
 - Help with rehabilitation or recovery from surgery or other medical interventions
 - Improve the quality of life for people with dementia and Alzheimer's disease and help alleviate symptoms such as agitation and aggressive behaviour
 - Contribute to improved social interactions and community cohesion
 - Provide access to locally grown, fresh produce and help increase the consumption of fruit and vegetables, as well as improving attitudes to healthy eating
 - Introduce people to a way of life that can help them to improve their wellbeing in the longer term.

Public health commissioning

The project 'Growing Health' (www.growinghealth.info) identified examples of public health commissioning and supporting community food growing to deliver health and wellbeing outcomes. Many projects have links with public health and five of the selected outcomes case studies of community food growing projects, documented to be, or supported by public health.

Table 1. Public Health Commissioning of Community Food

Project	Public Health Commissioning	Outcomes
Adrenaline	Commissioned by the local authority to provide a space for community food growing and to support the health and wellbeing of the community.	Improved mental health and wellbeing, increased physical activity, improved social cohesion, improved access to fresh produce.
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Food growing and the wider determinants of health

As the wider determinants of health, model shows there are many social, economic and environmental factors that impact on health.

Figure 1. The Wider Determinants of Health (Stanton and Grant, 2002)



Community food growing projects can have positive benefits on these:

- Individual/physical: growing a healthy lifestyle with regular outdoor activity and contact with nature which helps improve physical and mental health. Provides access to healthy, affordable, locally grown food
- Social and community: engage the community and enhance inclusion for bringing people involved in things that matter to them

Activities: promote health and wellbeing as well as an opportunity for learning new skills

Safe environment: physical exercise is designed into the local area

Natural environmental factors: enhance the natural environment and engage people with nature

Growing Health

Growing Health is a joint project between Garden Organic and Sustain funded by the Tudor Trust. It has created an active industry advisory board and network of healthcare professionals, commissioners and representatives of community growing initiatives. It is developing a comprehensive UK network to show how community food growing can be effectively used by the health service as a way of promoting health and wellbeing.

References: Stanton, M. and Grant, J. (2002) The wider determinants of health: a model for public health. *Journal of Public Health Medicine and Practice*, 6(1), 20-25. www.growinghealth.info

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Growing Health – making gardening and food growing a natural choice for your patients



Liz Allan-Jones (Growing Health Champion, Leicestershire Master Gardener), Margi Lennartsson, (Growing Health, Garden Organic), Maria Devereaux (Growing Health, Sutton), Sarah Williams (Growing Health, Sutton) and Ulrich Schmutz (Centre for Agroecology, Water and Resilience, Coventry University)

Introduction It is widely recognised that gardening and food growing can have a positive impact on health and wellbeing. Being outdoors and actively engaging with the natural environment is good for both physical and mental health. Here we present the evidence for this, including examples where the many health benefits of gardening and food growing have been used by the health services to improve patient outcomes.

How do gardening and food growing benefit health and wellbeing?

Published evidence of the benefits of gardening and food growing for health and wellbeing was reviewed by Schmutz et al. (2014). Our findings are included in the review, which can be downloaded from www.growinghealth.info

Mental health and wellbeing

- Regular involvement in community gardening contributes to improved social contact and interaction, sense of connection and belonging
- Community gardens report improvement in happiness and life satisfaction
- Meaningful leisure based activities can lead to improved sense of achievement, build confidence and self-esteem, and support development of new skills

Dementia

- Being in a garden and taking part in horticulture activities can improve quality of life for people living with dementia
- Structured therapeutic gardening activities can have a positive impact on sense of wellbeing, cognitive abilities, communication and engagement and help to alleviate symptoms such as agitation and aggressive behaviour

Stress and stress related illness

- Being in the natural setting of the garden can reduce stress, increase relaxation and improve recovery from stress
- Engaging in gardening during rehabilitation from stress can facilitate feelings of calm and relaxation, as well as competence, enjoyment, curiosity and hope
- Gardens with the dimensions of 'relax', 'learn', 'value' and 'specific role' were reported to provide a restorative environment for stressed individuals

Healthy weight

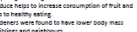
- Gardening tasks provide a mixture of low and moderate intensity physical activity supporting progress to reach physical activity recommendations, burn more calories and contribute to healthy weight management
- Access to home-grown fresh produce helps to increase consumption of fruit and vegetables and improve attitudes to healthy eating
- Laid and those community gardeners were found to have lower body mass index than their non-gardening colleagues and neighbours

Substance misuse

- Gardening has been shown to make the lives of people struggling with substance misuse more meaningful, provide purpose and a feeling of being needed, as well as pleasure, tranquillity, distraction and opportunities for reflection
- The patience required for nurturing plants helps reduce the impulse for instant gratification, one of the dangers for substance abuse
- For prisoners with a history of substance abuse, gardening was shown to reduce difficulty, risk-taking, substance abuse and depression or relapse

Case Study Sydenham Garden

- A charity promoting physical and mental health and wellbeing
- Founded in 2002 by a group of people who were looking for a way of converting a neglected nature reserve into a community garden
- Commissioned by development CCG to provide therapeutic gardening and create an outdoor space for workers
- Heavily accessed for adult mental health group therapy on recovery and rehabilitation, and for people with dementia on improving quality of life and stimulating cognitive function
- Received 2007 award for the year 2004-15
- Average cost per person is £1000 per year
- Typical placement lasts 12 months



Commissioning gardening and food growing

Growing Health has identified many gardening and food growing projects that are currently commissioned by either Clinical Commissioning Groups (CCGs), Local Authority Public Health or Social Services to deliver health and wellbeing outcomes. Many of the initiatives have established links with local GP practices, examples are shown below.

Table 1. Commissioned community food growing projects

Project	Local Authority	GP Practice	Commissioning Body	Outcomes
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How can GP practices work with community gardening?

- Establish partnerships with local community gardening projects and routes for referrals for patients e.g. through social prescribing models
- Encourage the development of community gardening and food growing projects and support CCGs and Public Health to commission them to deliver health outcomes
- Build knowledge and experience in staff teams in using gardening as a tool through promotion, knowledge sharing and training
- Capitalise on the skills of local volunteers e.g. Master Gardeners, to support projects
- Develop action-based research to investigate the cost-effectiveness of food growing programmes compared with other interventions
- Recognise the added value offered by food growing: providing environmentally sustainable solutions, increasing biodiversity and ecosystem value and production of accessible healthy food

Conclusion

The evidence and the outcomes achieved by projects throughout the UK confirm the many benefits to health and wellbeing of gardening and growing your own food. GP can confidently recommend gardening and food growing to patients as an easily accessible form of exercise and social activity, and a realistic cost-effective of food growing.

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Growing Health Network communications

- Growing Health Network
- Growing Health Working Party
- Growing Health Champions
- e-newsletter
- Website – www.growinghealth.info
- Social Media

Twitter- @growing_health

Facebook - Growing Health



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Thank you

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