



Food growing for  
health and wellbeing

**Margi Lennartsson**

**Garden Organic**

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**How can we best deliver health and wellbeing through food growing/healthy eating in Greater Manchester?**



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# Benefits of gardening and food growing for health and wellbeing

- Access to fresh healthy food - improved diet
- Learning and connecting with food production & healthy eating
- Increased levels of physical activity
- Promote mental wellbeing through meaningful, worthwhile and enjoyable activity
- Support recovery, rehabilitation and coping with physical and mental health challenges
- Reduce anxiety, stress and stress related illness
- Improved social interaction and cohesion, sense of connection and belonging
- Improve quality of life for people with dementia
- Make the lives of people struggling with substance misuse more meaningful, provide purpose and a feeling of being needed



# Benefits for health and wellbeing – the evidence



**Growing Health**  
Food growing 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 (Hoban et al., 2007; Adams et al., 2006; Nelson et al., 2011)  
• Physical activity (Hewling et al., 2013; Park et al., 2008)  
• Body mass index (Dow, 2010)

#### 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). 64% of adults are overweight or obese, and 20% of 4-5 year olds are 20% 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 those 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 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) (NICE guidelines 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. Gardening is indeed recognised as moderate-intensity physical activity that adults are advised to undertake 30 minutes or more on five or more days of the week (NICE, 2006).

#### Evidence of impact of gardening and food growing on:

##### i) Fruit and vegetable 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; Dreaper and Freedman, 2005). For example, a study carried out in the USA 11-17 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 (Bastille et al., 2011). Lemberger and Zepher (2009), also in the USA, reported more positive attitudes towards vegetables and increased snack preferences for fruit and vegetables amongst 8-11 year old students involved in a horticulture school gardening programme. 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 39% (Dow 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 that most of the studies only considered whether pupils consumption habits had changed at an immediate effect of involvement in growing and highlighted the lack of longitudinal evidence research confirming whether such programmes can change eating habits longer term.

For adults, Adams et al. (2006), reported that household members who participated in community gardening consumed five and vegetables 1.4 more times per day than those that did not and that they were 3.5 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., 2005) showed that men and women living in households that grew food consumed more fruit and vegetables than their non-gardeners.



### Which tool to use?

A guide for evaluating health and wellbeing outcomes for community growing programmes



### Gardening and food growing to reduce stress and stress related illness



Evidence shows that this garden tool has the capacity to gardening, and other related activities can be effective in reducing stress and stress related illness.  
Effects of being in a garden or nature space: Taylor, 2001; Green and Goleman, 2001; van der Stoep et al., 2001; van der Stoep et al., 2011 and 2012  
Benefits of the activity of gardening and food growing: Lennartsson et al., 2012; Nelson et al., 2014

#### Background

Nearly one in three people are regularly stressed, mostly a consequence for mental health. In a survey of 2001 adults showed that significant numbers of people are often feeling stressed (29%, anxious and depressed) (The Mental Health Foundation, 2010). Stress, the feeling of being under too much mental or emotional pressure and inability to cope, can affect the way you feel, think, behave and how the body works. Stress is not an illness per se, rather a natural reaction and response triggered by a perceived threat. This is expressed physically through signs of anxiety, muscle tension, sweating, increased blood pressure, sleeping problems, loss of appetite and difficulty concentrating. Long term stress without the possibility of recovery can cause and aggravate many illnesses, including cardiovascular diseases, gastrointestinal diseases, depression, reduced immune function, increased risk of infection, chronic fatigue and exhaustion disorder.

#### The impact of gardens, nature spaces, and the activity of gardening on stress

Research has shown that gardens and green nature spaces can reduce stress in several ways.

**The view of a green space or the natural scene:** Numerous studies have shown that simply viewing a green space through a window can reduce stress and reduce stress levels and this is expressed by, for instance, decreased recovery times from stress and lower stress related illnesses. Studies of these effects are provided by research authors including Ulrich (1984) and Kaplan (2001) and are reviewed by Miller et al. (2008).

**Immersion in a natural scene:** Studies have shown that when people immerse themselves in a natural setting this can reduce stress, increase relaxation and improve recovery (Deane Marcus and Barnes, 1999; Ulrich, 1989). Being in a garden or a natural space can stimulate a range of senses, including but not only vision, and allow full immersion to reduce the risk of nonattendance to reduce as Miller et al. (2008) showed it.

**Engagement in gardening activity:** One of the most effective ways to alleviate stress is to combine the effects of being in a nature setting with the effects of the physical activity of gardening. The natural growing cycle in the garden provides opportunities of year-round for activities that connects with natural rhythms as well as providing physical exercise. Research has shown that for people recovering from stress, nurturing plants from seed to maturity evoked feelings of curiosity and desire to follow their progress (Lennartsson et al., 2011). Gardening and other creative activities during rehabilitation facilitates feelings of competence and enjoyment and created positive goals for the future (Lennartsson et al., 2011). Furthermore, physical activities in a nature setting appears to have a greater effect than exercises in a 'neutral' setting (Pruitt et al., 2007).

#### Effects of being in a garden or a nature space

Research in Sweden found that people with access to a garden had significantly lower stress reactions per year (Stigter and Gustav, 2004; Stigter, 2005). They suggested that people being in lush without a balcony had the most stress occasions per year, with the number of stress occasions per year decreasing in order for those being in lush with a balcony, a house with a small garden and those being in houses with a large lush garden. In comparing gardens with other urban green spaces they found that while both were important for health, but having a private garden was more important (Stigter, 2005). Gustav and

### 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 horticulture gardening activities having a positive impact on mood, wellbeing, cognitive abilities, communication and engagement. (Dowler 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 these skills needed to carry out daily activities. Although this decline, individuals may develop behavioural and psychological symptoms such as depression, psychosis and aggression and wandering, which complicate care.

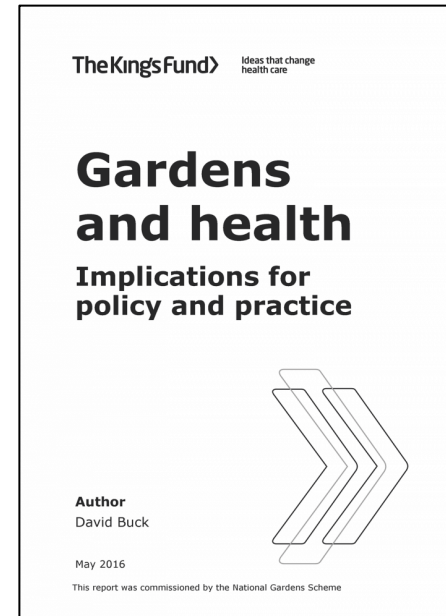
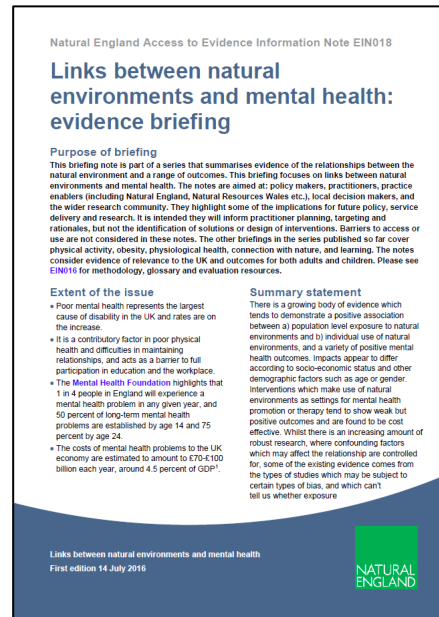
The UK National Institute for Health and Care Excellence (NICE) recommends that care plans should address activities of daily living that maximise independent activity, adapt and enhance function, and minimise need for support (NICE, 2011). The garden and the activity of gardening provides a non-pharmaceutical approach to address these goals and horticultural therapy can be utilized to improve the quality of life for the aging population and provide high level patient care satisfaction, possibly reducing costs of long term, assisted living and dementia unit residences (Dowler et al., 2012; Gillet et al., 2013).



People taking part in a garden and growing group.



# Benefits for health and wellbeing – the evidence



# Models of partnership working



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# Growing Health – Recipe for Success

## Key factors for success

- The service provided
- Routes to commissioning
- Working in partnership
- Evaluating outcomes and impact
- Other



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# Models of community growing partnerships to deliver health and wellbeing

- **Why partnerships?**
  - **Sharing knowledge and experience**
  - **Provide a joined-up service and work to common standards**
  - **Provide a commissionable service at scale**
  - **Increase capacity; number of service users, range of services and geographical coverage**
  - **Provide commissioning bodies with a single point of access**
  - **Speak with one voice**

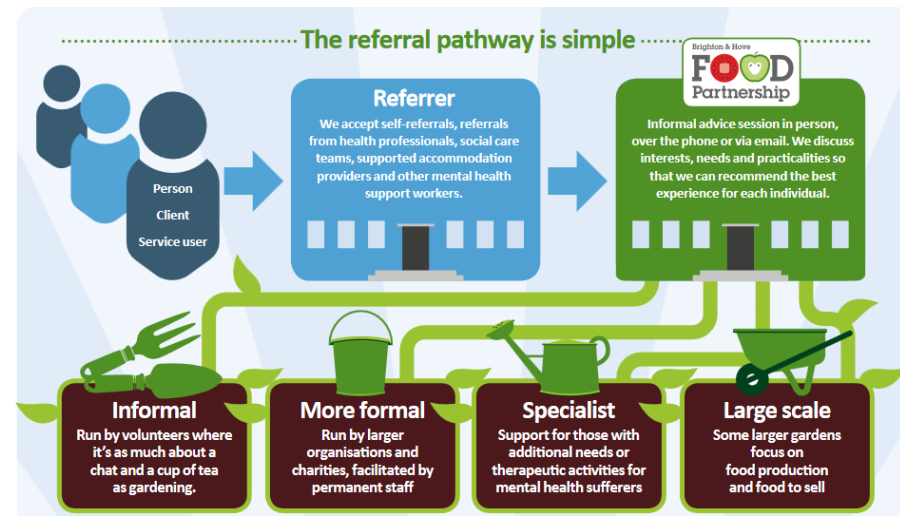




# Case study:



- **Network** of community gardens; over 70 spaces.
- People of all ages and abilities involved in supervised horticultural activities.
- Specialist gardens with green care services for people with additional needs, mental health issues, vulnerable or disadvantaged groups.
- Healthy weight services commissioned by Public Health
- Dementia friendly food project commissioned by B&H CCG





# Case study:



- Uses the natural environment to improve the health and wellbeing of individuals and communities across Merseyside and North Cheshire.
- A **consortium** of providers support people to become healthier and access the outdoor environment.
- Providing a commissionable service at scale, working to common standards.
- Members of the consortium include landowners, delivery organisations, policy and academic partners and strategic partners co-ordinating activity and investing in the long term development of the Natural Health Service.



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The Mersey Forest  
1,370 km<sup>2</sup>  
1.7 million people



## OUR FIVE EVIDENCE BASED PRODUCTS



HEALTH WALKS



HORTICULTURAL THERAPY



MINDFUL CONTACT WITH NATURE



FOREST SCHOOL



HEALTHY CONSERVATION

## Product sheets

### Product Sheet

#### Horticultural therapy

Horticultural Therapy is a client-centred treatment that utilises horticulture activities to meet the specific therapeutic or rehabilitative goals of its participants. The focus is to maximise social, cognitive, physical and/or psychological functioning and enhance general health and wellbeing.

Activities encourage people with to work alongside our staff and volunteers, encouraging new friendships and growing horticultural skills. Activities are based within local communities, and the plants grown from these activities are planted out on sites for local councils, housing associations, community groups and other organisations – helping to improve the environment by supplying locally sourced plants to the local community areas.

#### Target Client Groups and outcomes

Client Group	Outcomes
Children	<ul style="list-style-type: none"> <li>Effective as supplemental therapy for children with behavioural disorders</li> </ul>
Older People	<ul style="list-style-type: none"> <li>Increased engagement from people with dementia</li> </ul>
People with Disabilities	<ul style="list-style-type: none"> <li>Physical and mental fitness, well-being and sensory stimulation</li> </ul>
Local Community Groups	<ul style="list-style-type: none"> <li>Enabling a move into employment</li> </ul>
Socially Isolated	<ul style="list-style-type: none"> <li>Reducing social isolation</li> </ul>
People with mild to moderate mental health issues	<ul style="list-style-type: none"> <li>Improved mental capital, mental wellbeing, emotional wellbeing,</li> </ul>
People with mobility issues	<ul style="list-style-type: none"> <li>Improved fitness &amp; mobility</li> </ul>

### Evidence

There are a number of published studies mostly linking horticultural therapy projects to mental health outcomes:

**Eco therapy: The green agenda for mental health**

This survey report from MIND includes a review of the evidence  
[http://www.mind.org.uk/assets/2000/2138/ecotherapy\\_report1.pdf](http://www.mind.org.uk/assets/2000/2138/ecotherapy_report1.pdf)

**Gardening as a therapeutic intervention in mental health**

Page, M. (2008) Gardening as a therapeutic intervention in mental health. *Nursing Times*; 104: 45, 28–30.

<http://www.nursingtimes.net/gardening-as-a-therapeutic-intervention-in-mental-health/1921378.article>

**An evaluation of the gardening leave project for ex-military personnel with PTSD and other combat related mental health problems**

<http://www.gardeningleave.org/wp-content/uploads/2009/06/completedsummary.pdf>

### Case Study links

For video testimonials see

[Groundwork Gazeau](#)

For case study details see

[Ecominds TCV Growing On](#)

[Ecominds Feelgood Factory](#)

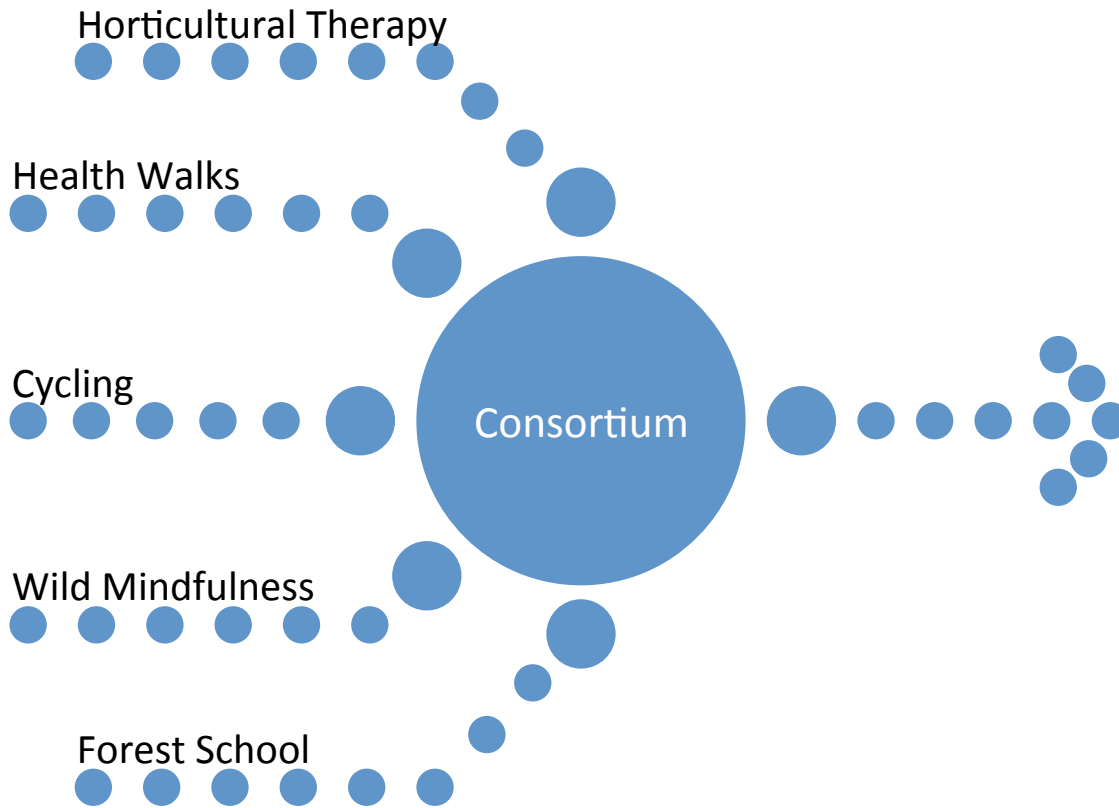
**About The Natural Health Service**

Contact:

**Natural Health Service**

01925 816217 | Paul Nolan [info@naturalhealthservice.org.uk](mailto:info@naturalhealthservice.org.uk)

[www.naturalhealthservice.org.uk](http://www.naturalhealthservice.org.uk)



# Thank you

[mlennartsson@gardenorganic.org.uk](mailto:mlennartsson@gardenorganic.org.uk)

[www.growinghealth.info](http://www.growinghealth.info)

Twitter - [@growing\\_health](https://twitter.com/growing_health)



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