



# THERAPEUTIC GARDENING

Home Garden Series

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FS299E

# Therapeutic Gardening

## Introduction

### What is Therapeutic Gardening?

Therapeutic gardening is the cultivation of plants to promote a healing environment, receive mental and physical health benefits, and increase well-being (AHTA 2017; Simson and Straus 1998). Gardening has many different purposes for individuals, ranging from increased access to fresh fruits and vegetables for health benefits, to providing an attractive habitat for beneficial wildlife and increased ecosystem diversity, to creating a peaceful and beautiful sanctuary. Whatever the primary purpose for gardening, many gardeners will attest to the unexpected benefits they enjoy, from increased endurance to decreased stress and anxiety. With therapeutic gardening, the primary intent is increased well-being, achieved through the gardeners’ active and passive participation with the garden (AHTA 2017; Simson and Straus 1998).

The American Horticultural Therapy Association (AHTA) defines a therapeutic garden as “a plant-dominated environment purposefully designed to facilitate interaction with the healing elements of nature.

Interactions can be passive or active depending on the garden design and users’ needs. The basic features of a therapeutic garden can include wide and gently graded accessible entrances and paths, raised planting beds and containers, and a sensory-oriented plant selection focused on color, texture, and fragrance” (2017). Table 1 summarizes common therapeutic garden settings, professionals, and beneficiaries.

Horticultural therapy is differentiated from therapeutic gardening by the presence of a trained professional carrying out a plan of care with measurable goals. Defined by the American Horticultural Therapy Association, horticultural therapy is “the engagement of a person in gardening and plant-based activities, facilitated by a trained therapist, to achieve specific therapeutic treatment goals” (2017). Horticultural therapy is practiced by a variety of professionals and is also in the process of developing its own professional standards; those who complete these standards are known as Registered Horticultural Therapists.

**Table 1:** Benefits, Settings, and Professionals Involved with Therapeutic Gardening.

<b><i>Therapeutic gardening can benefit people affected by:</i></b>	<b><i>Therapeutic garden settings:</i></b>	<b><i>Professionals involved with therapeutic gardening:</i></b>
<ul style="list-style-type: none"> <li>• Developmental disabilities</li> <li>• Physical disabilities</li> <li>• Mental illness</li> <li>• Incarceration</li> <li>• Brain injury</li> <li>• Stroke</li> <li>• Cancer</li> <li>• Homelessness</li> <li>• Domestic violence</li> <li>• Stress and anxiety</li> <li>• Dementia</li> <li>• PTSD</li> <li>• Autism</li> <li>• Eating disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Private and public schools</li> <li>• Hospitals</li> <li>• Long-term care facilities</li> <li>• Prisons</li> <li>• Mental health care facilities</li> <li>• Community gardens</li> <li>• Vocational rehabilitation programs</li> </ul>	<ul style="list-style-type: none"> <li>• Horticultural therapists</li> <li>• Occupational therapists</li> <li>• Master Gardeners</li> <li>• Social workers</li> <li>• Program coordinators</li> <li>• Counselors</li> <li>• Teachers and school staff</li> <li>• Other health care workers</li> </ul>

(Data sources: AHTA 2017; Flahive-DiNardo et al. 2013; Page 2008; Simson and Straus 1998)

## History of Therapeutic Gardening

The therapeutic benefits of humans' interaction with plants and gardens has been acknowledged for centuries. The first recorded use of horticulture for therapy occurred in ancient Egypt, when walking in palace gardens was prescribed for mentally disturbed royalty (Simson and Straus 1998). In the 1100s, the therapeutic benefits of gardening were noted at a hospice garden at a monastery in France (Flahive-DiNardo et al. 2013). Next, in the late 1700s through early 1800s, the people-plant-nature connection became accepted as treatment in mental health clinical settings. During this period, the idea of therapeutic farm labor to help mentally ill patients increased in popularity in Europe. Similar connections between positive mental health outcomes and gardening were being made in the United States during that time. In 1812 Dr. Benjamin Rush, a father of American psychology, published findings on the positive therapeutic relationship between gardening and better recovery rates in patients diagnosed with mania (Simson and Straus 1998).

Between 1914 and 1944, World Wars I and II greatly increased rehabilitation demand and propelled the expansion of therapeutic gardening from the realm of mental health to physical rehabilitation (Simson and Straus 1998). Currently, there is a renewed interest in developing gardens in a wide variety of therapeutic environments (Page 2008). The first *Journal of Therapeutic Horticulture* was Published in 1986 to create a compilation of scientifically-based articles surrounding horticulture therapy (AHTA 2017).

## Benefits of Therapeutic Gardens

The benefits of therapeutic gardening are wide-ranging. Table 2 provides some psychosocial, cognitive, and physical benefits associated with humans cultivating plants. These benefits can often occur simultaneously. For example, the benefits of physical fitness, improved concentration, and reduced stress and anxiety can result from participation in therapeutic gardening. Decreased stress and an increased sense of well-being are among the most commonly reported benefits of therapeutic gardening (AHTA 2017; Simson and Straus 1998). Figure 1 shows a garden at a free clinic that allows patients to interact while they wait for their medical appointment. Figure 2 shows a produce garden at a tribal diabetes center.



Figure 1. Produce harvested and strategically placed flowers in raised beds at a free medical clinic for uninsured/underinsured individuals. Individuals who are waiting in the clinic waiting room are invited to take part in garden activities prior to their appointments, and all produce is distributed to patients to take home.



Figure 2. Harvesting some of the first produce from a garden at a tribal diabetes center. The goal of this garden is to increase physical activity and access to fresh produce for the prevention and management of type II diabetes.

**Table 2:** Psychosocial Cognitive, and Physical Benefits of Therapeutic Gardening.***Psychosocial benefits can include***

- Reduced stress and anxiety (Lidén et al. 2016)
- Increased self-esteem (Lidén et al. 2016, Joyce and Warren 2016)
- Decreased social isolation (Joyce and Warren 2016)
- Increased social engagement and participation (Flahive-DiNardo et al. 2013)
- Sense of pride in work (Lidén et al. 2016)
- Improved overall sense of well-being (Flahive-DiNardo et al. 2013, Lidén et al. 2016, Joyce and Warren 2016)
- Increased overall mood (Lidén et al. 2016)
- Decreased feelings of depression (Lidén et al. 2016)
- Increased coping (Joyce and Warren 2016)

***Cognitive benefits can include***

- Improved concentration (Lidén et al. 2016)
- Memory activation (Lidén et al. 2016; Cooper Marcus and Sachs 2014)
- Increased attention span (Lidén et al. 2016)

***Physical benefits can include***

- Physical fitness and health (Cooper Marcus and Sachs 2014)
- Reduced pain (Cooper Marcus and Sachs 2014)
- Prevention of fractures and increased bone density (Cooper Marcus and Sachs 2014)
- Improved immune response (Cooper Marcus and Sachs 2014)

(Data sources: Cooper Marcus and Sachs 2014; Joyce and Warren 2016; Lidén et al. 2016; Flahive-DiNardo et al. 2013; Simson and Straus 1998)

## Therapeutic Garden Types and Design Considerations

There are many different therapeutic garden types, designs, environments, and purposes. Some therapeutic gardens might have overlapping purposes. For example, a therapeutic garden at a hospital might be utilized by patients with a wide variety of health diagnoses and conditions.

Therefore, the same space might be considered a memory garden, sensory garden, meditation garden, or cancer garden, depending on the person using it and the purpose. Table 3 provides examples of the wide variety of therapeutic garden types, settings, and purposes.

**Table 3.** Therapeutic Garden Types, Settings, and Purposes.

<b>Garden type</b>	<b>Site examples</b>	<b>Purpose/Therapeutic benefit</b>
Memory gardens	Adult day centers Memory care units Dementia residences	Calming; memory stimulation and stress management; creates friendships; core strength and flexibility; decreased agitation and anxiety; participation in an activity that engages the senses.
Healing gardens	Hospitals Skilled nursing facilities Health care facilities Chemotherapy facilities	Reduced anxiety, stress, and pain; increased relaxation and restoration from mental and emotional fatigue; core strength, balance, and flexibility.
Restorative gardens	Psychiatric hospital	Enhanced mood; reduced agitation; improved concentration; increased cooperation; focus placed on skills and aspirations rather than diagnoses.
Senior community gardens	Independent and assisted living facilities Community garden space	Provides exercise for increased strength, balance, and flexibility; increased social interaction; increased responsibility.
Enabling gardens	Vocational schools and programs Outpatient clinics	Stress reduction; increased self-esteem; increased problem-solving; increased independence; nurtures relationship building; social interaction.
Sensory gardens	Outpatient clinics Schools Dementia residences	Stimulates or calms senses; garden features can be seen, touched, smelled, and heard.
Meditation gardens	Spiritual institutions Hospitals Hospice care	Decreased stress; reduced negative emotions; evocation of positive feelings; improved attention

(Information compiled from: Gigliotti and Jarrott 2005; Joyce and Warren 2016; Lidén et al. 2016; Page 2008; Simson and Straus 1998)

When considering the design of a therapeutic garden, primary considerations include identifying the target audience or primary users of the garden, space restrictions, and budget. Many therapeutic garden plans include the concept of universal design.

This means the garden is designed so that it can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, ability, or disability (Fahey 2005). Temporary or permanent display boards might describe the intent/purpose to participants and guide them in their therapeutic program. Figure 3 shows one such display board.



Figure 3. Example of a display board used in conjunction with a therapeutic garden at a women's drug and alcohol rehabilitation center. Participants come for physical activity, relaxation, and to learn how to grow fresh produce. Posted yoga poses and breathing techniques assist women and their children to pursue self-directed stress management activities while at the garden.

Other common design elements include:

- Barrier-free, smooth pathways for individuals with limited mobility
- Wide pathways and spaces between garden beds to accommodate wheelchairs
- Raised garden beds for increased accessibility
- Provision of shaded places
- Plenty of benches to sit, rest, and passively enjoy the garden
- Engaging multiple senses by including elements that can be touched and smelled as well as heard and seen

(Data sources: AHTA 2017; Hazen 2012)

When utilizing raised beds as part of a therapeutic garden design, it is important to consider the potential benefits and drawbacks. Raised beds can offer more accessibility/enhanced accessibility for those who have difficulty bending or need to garden from a stool or wheelchair. Although the soil in raised beds typically drains better and can extend the growing season, drawbacks include increased watering, the need for topsoil and soil supplementation, and increased maintenance (Cogger 2017). Further Extension fact sheets related to the technical aspects and design of therapeutic gardens are provided in the resources section of this document.

## Conclusion

The therapeutic relationship between humans and nature has increased relevance in our modern world. While significant benefits have been gained from increased technology use, urbanization and industrialization are accompanied by increasing rates of anxiety, depression, and feelings of social isolation as well as increased prevalence of chronic illnesses (Hidaka 2012). The demands of navigating a fast-paced life, with large amounts of time spent in man-made environments, can lead to a disconnect from the natural world. Spending time cultivating plants can provide an inexpensive dose of nature therapy with positive impacts for a wide variety of mental and physical health conditions. As Page writes about the importance of therapeutic gardening, “There appears to be an intrinsic relationship between gardening and hope. The very action of planting a seed in the soil requires hope; by encouraging and in some senses almost imposing a sense of hope onto someone, a personal journey may begin” (2008).

# Therapeutic Gardening Resources

[American Horticultural Therapy Association](#)  
2150 N 107<sup>th</sup> St., Ste 205, Seattle, WA 98133  
888-294-8527  
[info@ahta.org](mailto:info@ahta.org)

[American Society of Landscape Architects](#)  
Healthcare and Therapeutic Design Professional Practice Network  
636 Eye St NW, Washington, D.C. 20001  
1-888-999-2752  
[info@asla.org](mailto:info@asla.org)

[Therapeutic Landscapes Network](#)  
[info@healinglandscapes.org](mailto:info@healinglandscapes.org)

[Washington State University Home Garden Series Fact Sheets](#)

## Extension Fact Sheets Related to Therapeutic Gardens

[Accessible Gardening for Therapeutic Horticulture.](#)  
2008. University of Minnesota Extension

[Enabling Gardens: The Practical Side of Horticultural Therapy.](#)  
2013. Rutgers University Extension

WSU Extension. 2017. [Raised Beds: Will they Benefit your Vegetable Garden?](#) Washington State University

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Joyce, J., and A. Warren. 2016. [A case study exploring the influence of a gardening therapy group on well-being.](#) *Occupational Therapy in Mental Health, 32*(2), 203-215.

Lidén, E., K. Alstersjö, F.L. Gurné, S. Fransson, and I. Bergbom. 2016. Combining garden therapy and supported employment – a method for preparing women on long-term sick leave for working life. *Scandinavian Journal of Caring Sciences, 30*, 411-416. doi: 10.1111/scs.12263.

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