

CATEGORY: LANDSCAPES FOR HEALTH: DESIGNED LANDSCAPES

Enabling Gardens & Adaptive Gardening

“Enabling gardens seek to reduce physical barriers and increase physical activity as a means of promoting physical health; Diehl’s three models - demonstration, eldercare and Alzheimer care gardens are used for diverse populations” (Fleming, 2021; Diehl, 2013). Enabling gardens can be found at all types of gardens where physical barriers are minimized including home gardens, school gardens, community gardens, defiant gardens, botanical and therapeutic gardens. More recent research is investigating people with disabilities and their perceptions and use of urban parks, green spaces and rehabilitation camps (Wojnowska-Heciak et al., 2022; Perry, 2021; Wilhelmsen et al., 2023). While the research literature is less robust than other landscapes for health areas, online information about enabling gardens and adaptive gardening is expanding - USA Botanical Garden site identifies wheelchair accessible gardens; NYBG *Beyond Barriers* video explores navigating gardens; and [From the Ground Up](#) video has information on adaptive tools from Virginia Farm Bureau.

More literature is appearing on scent and sensory gardens, these often part of, or an adjunct to enabling gardens (Palsdottir et al., 2021; Krzeptowska-Moszkowicz et al., 2022; Pouya et al., 2024).

For related resources refer to Landscapes for Health category: designed landscape elements; therapeutic gardens; and Horticultural Therapy & Health Services category: horticultural therapy.

Key Organizations

[AgrAbility](#)

[American Horticultural Therapy Association](#)

[American Society of Landscape Architects – Professional Practice Universal Design](#)

[Centers of Disability Services](#) (local organizations)

[The Eden Alternative](#)

[National Center on Accessibility](#)

[USA Botanical Gardens list of accessible gardens](#)

Books, journals & epublications on enabling gardens & adaptive gardening

AgrAbility & Arthritis Foundation. (2004). [Arthritis and gardening](#).

AgrAbility (2021). [The toolbox assistive technology database](#).

[Americans with Disabilities Act](#)

Carman, J. (2021). [Design for generations](#). (case studies).

Cassidy, P. (2011). *The illustrated practical guide to gardening for seniors*. Lorenz Books.

Cooper Marcus, C. & Sachs, N. (2014). *Therapeutic landscapes: An evidence-based approach to designing healing gardens and restorative outdoor spaces*. John Wiley and Sons. Inc.

Helphand, K. (2006). *Defiant gardens: Making gardens in wartime*. Trinity University Press.

Rothert, G. (1994). *The enabling garden: Creating barrier-free gardens*. Taylor Trade Publishing.

Tai, L., Haque, M.T., McLellan, G.K., & Knight, E.J. (2006). *Designing outdoor environments for children: Landscaping schoolyards, gardens, and playgrounds*. McGraw Hill.

Research & articles on enabling gardens & adaptive gardening

Recently published selected research & articles:

American Society of Landscape Architects. (2021). [Universal design: Gardens](#).

- Bravo, M. (2015). [A guide for making community gardens accessible for all members](#). *Grassroots Gardens of Buffalo*. Highroad Fellowship Reports.
- Cheeseman, K., Goh, K., Hatt, K. et al. (2020). *Evaluation of the Guelph Enabling Garden*. Guelph, ON: Community Engaged Scholarship Institute.
- Diehl, L. (2013). A framework for categorizing healing gardens. *AHTA News Magazine*, 41(2), 4-6.
- Diehl, R.M. (2019). Perspective: Psychological accessibility—A perspective on therapeutic garden design. In R. Haller, K. Kennedy & C. Capra (Eds.), *The Profession and Practice of Horticultural Therapy*. CRC Press.
- Dillon, I., & Green, J. (2021). [Universal design](#). American Society of Landscape Architects.
- Fleming, L., & Carroll, K. (2016). [The accessible children's rainforest garden at Marie Selby Botanical Gardens](#). *Eatbreathegarden*.
- Fleming, L. (2013). Recent trends in adaptive gardening tool use in HT settings. *AHTA News Magazine*, 41(1), 12-13.
- Fleming, L. (2011). The Buehler Family Foundation Enabling Garden, Naples Florida. *AHTA News Magazine*, 39(3), 13-14.
- Gendall, J. (2010). Senior circuit (A playground in London's Hyde Park is designed for older exercisers). *Landscape Architecture*, 100(9), 110-114.
- Hussein, H., Omar, Z., Amano, J. et al. (2022). Therapeutic sensory stimulation garden for a residential care facility, Nozomi-No-Sato, JAPAN. *Journal of Architecture, Planning and Construction Management (JAPCM)*, 12(2), 27-39.
- Krzepitowska-Moszkowicz, I., Moszkowicz, Ł., & Porada, K. (2022). Urban sensory gardens with aromatic herbs in the light of climate change: Therapeutic potential and memory-dependent smell impact on human wellbeing. *Land*, 11(5), 760.
- Marcaccio, A. (2020). Ramps and garden accessibility. *Digging In*, 6(1), 9.
- Marina, P.C., Ángeles, R.M., & Yazıcı, A. (2024). Exploring areas for improvement through inclusive design: Taking gardening as a worthy topic. *The International Journal of Design Education*, 18(2), 213-229.
- Morgan, S.C. (2019). Considerations and adaptations to safely accommodate program participants. In R. Haller, K. Kennedy & C. Capra (Eds.), *The Profession and Practice of Horticultural Therapy*. CRC Press.
- Palsdottir, AM., Spendrup, S., Martensson, L., & Wendin, K. (2021). Garden smellscape: Exploring plant scents for human wellbeing. *ISHS Acta Horticulturae 1330: XV International People Plant Symposium and II International Symposium on Horticultural Therapies: The Role of Horticulture in Human Well-being and Social Development*.
- Perry, M., Cotes, L., Horton, B. et al. (2021). "Enticing" but not necessarily a "Space Designed for Me": Experiences of urban park use by older adults with disability. *Int J Environ Res Public Health*, 18(2).
- Piskin, B.A., & Akdeniz, N.S. (2023). How can people with disabilities use the outdoors? An assessment within the framework of disability standards. *Soc Indic Res*, 167, 153-174
- Pollin, S., & Retzlaff-Furst, C. (2021). The school garden: A social and emotional place. *Frontiers in Psychology*, 12, 567720.
- Pouya, S., Bayindir, E., & Pouya, S. (2024) Sensory garden design proposal for children with autism spectrum disorder. *Support for Learning*, 39, 44-57.
- Raske, M. (2010) Nursing home quality of life: Study of an enabling garden. *Journal of Gerontological Social Work*, 53(4), 336-351,
- Tigere, B., & Moyo, T. (2022). Disability-inclusive community development: A case of a community garden in Limpopo province in South Africa. *African Journal of Disabilities*, 11.

Wang, X. (2024). Translating gardens into accessible multisensory tours for blind and partially sighted visitors: An exploratory case study. *Univ Access Inf Soc*.

Wilhelmsen, T., Lannem, AM., Sørensen, M. et al. (2023). Experiences of participants with spinal cord injury at an active rehabilitation camp. *J Funct Morphol Kinesiol*, 9(1), 7.

Examples of enabling gardens & adaptive gardening

Brandermill Woods Alzheimer's Garden is a contained garden for people living with dementia and their families, with non-toxic plants, seating areas and water features in this safe secured garden.

<https://designforgenerations.com/case-studies/brandermill-alzheimers-garden/>

Bryn Mawr Rehab Hospital has an enabling garden as part of its rehab services in Malvern, PA.

<https://healinglandscapes.org/the-enabling-garden-at-bryn-mawr-rehab-hospital/>

Buehler Enabling Garden at Chicago Botanic Garden in Illinois features raised beds, container gardens, adaptive tool display, water elements along with teaching sessions, and a walking tour app.

<https://www.chicagobotanic.org/gardens/enabling>

Center for Disability Services and Adult Wellness Programs' enabling garden and its Five Senses garden is located onsite at Western Michigan University in Kalamazoo.

<https://wmich.edu/disabilitycenter/garden>

Guelph Enabling Garden is a garden for use by anyone, but especially for community members with physical and cognitive challenges. Scheduled workshops are available and horticultural therapy is delivered onsite.

<http://www.enablinggarden.org/>

Jerusalem Botanical Garden, Israel video shares information on [sustainable environments, gardens and access for people with disabilities at their garden](#).

Kernan Rehabilitation Center in Baltimore, MD. a Sacred Place enabling garden uses different paving materials on its path to be inclusive of people working to regain their mobility in this clinical setting.

https://naturesacred.org/sacred_place/umms-rehabilitation-orthopedic-institute-2/

Lewis Ginter Botanical Garden, Richmond, VA promotes accessibility with various elements: info on pathways, free admission for personal care attendants, low-sensory areas and accessible grounds.

<https://wheelchairtraveling.com/richmond-virginia-botanical-garden-wheelchair-access/>

Michigan State University's Enabling Gardens was inspired by Gene Rothert's book *The Enabling Garden* featuring elements like lower and higher container gardens for seated or standing gardening. A brochure about the garden can be downloaded.

https://www.canr.msu.edu/tollgate/gardens/the_enabling_gardens

Naples Botanical Garden Buehler Family Foundation Enabling Garden in Naples, FL. is an example of a public garden designed specifically with enabling features, reducing physical barriers to gardening.

<https://www.naplesgarden.org/calendar/member-insider-tour-whats-in-an-enabling-garden/>

Portland Memory Garden in Oregon is a collaborative effort designed to meet the needs of people with memory disorders and care partners; open to the public and free of charge.

<https://www.portlandmemorygarden.org/>

Sacred Place at the League for People with Disabilities, Baltimore, MD incorporates a babbling brook, rain curtain and adaptive tools as multi-sensory design features in the garden in addition to experiences for gardening.

https://naturesacred.org/sacred_place/the-league-for-people-with-disabilities-inc/

Spalding Rehabilitation Hospital in Charlestown, MA has a therapeutic walking trail, activity spaces, and uses a performance benefits metric for identifying outcomes for staff, patients and public.

<https://www.landscapeperformance.org/case-study-briefs/spalding-rehabilitation-hospital#:~:text=A%20therapeutic%20garden%20with%20a,bands%20oserving%20as%20distance%20markers.>

St Peter's Hospital courtyard and enabling garden in Hamilton Ontario has shade and seating areas, and raised beds for staff and patients to tend to communal garden, pick fresh raspberries and relax.

<https://www.hamiltonhealthsciences.ca/share/outdoor-spaces/>

[Tarrant County Master Gardener Enabling Beds Tour video](#) shares tips for gardening, raised beds, plants, highlighting accessibility features.

The Angie Fowler Adolescent and Young Adult Rooftop Garden at University Hospital's Rainbow Babies and Children's Hospital in Ohio encourages children, families and visitors to play and enjoy hands-on exploration and moveable play structures.

<https://vburtdesigns.com/projects/healing-gardens/the-angie-fowler-adolescent-and-young-adult-rooftop-garden-for-university-hospital-rainbow-babies/>

The Activities Garden at Arbor Terrace –Middleton, NJ. independent living, assisted living and dementia care residence provides outdoor plant filled space for range of activities for residents, families and programming.

<https://designforgenerations.com/case-studies/the-activities-garden-at-arbor-terrace-middleton-nj/>

[The Universal Garden at the Arboretum, in Bolestraszyce](#) in Poland has six parts – Sensory Garden Tyfloplanetarium etc. where universal design has guided the outdoor space.

[The Riverwood Conservancy Enabling Garden](#) in Mississauga Ontario uses its 150-acre parcel of land with meadow, creeks, wetlands, trails and gardens to provide connections to nature, experiential environmental education and curriculum linked school programming.

Toronto Botanical Garden and its outdoor wheelchair accessible activities are designed as inclusive, especially for people with spinal cord injuries; video highlights options and opportunities.

<https://www.youtube.com/watch?v=5IFL-7RughI&list=PLRqQz3pL4HQLsudc4AOIZN2rrIHsfqYLB&index=5>

Tower Hill Botanic Garden, Boylston MA offers special hours for low sensory, less crowded visit to the garden, paved pathways, garden designed for visually impaired and mobility challenged guests, partnering with HMEA'S Autism Resource Central for Sensory-Friendly Evenings.

<https://nebg.org/youth-family-programs/>

Vera A. Scherer Garden at a high school for special needs students has accessible features.

<https://www.youtube.com/watch?v=qMMKgYsIO6g>

Videos, webinars & websites on enabling gardens & adaptive gardening

Adaptive Gardening Tools short video from Christopher and Dana Reeve Foundation introduces tools useful for adaptive gardening.

<https://www.youtube.com/watch?v=valM2cyImd4>

AgriAbility Publication Database provides numerous online publications on topics related to disabilities and gardening/horticulture/agriculture, assistive technologies and accessible tools.

http://www.agrability.org/pub-database/?_paged=2

Beyond Barriers: Accessing Nature for People with Disabilities video from NY Botanical Garden expands beyond physical barriers and accessibility to include navigating sites, therapeutic horticulture and nature interactions.

Enabling garden – Altoona, Iowa video shares photos of its garden, as a joint initiative with master gardeners and the City of Altoona.

<https://polkcountymastergardeners.org/Enabling-Garden>

<https://www.youtube.com/watch?v=3wpr5e9XEC&list=PLRqQz3pL4HQIsudc4AOIZN2rrlH5FqYLB>

Enabling Garden, part of the Discovery Garden Skagit County Washington State location, has raised beds, low espalier apple trees, sitting ledges and special garden for people with visual impairments.

<https://www.skagitmg.org/home/discovery-garden/enabling-garden/>

Enabling Gardens: The Practical Side of Horticultural Therapy webpage from Rutgers New Jersey Agriculture Experiment Station offers historical information and design considerations.

<https://njaes.rutgers.edu/fs1208/>

From the Ground Up video provides information on tools for disabled gardeners, from the Virginia Farm Bureau.

GardenTech: How to Create a More Accessible Garden. Discussion on three methods that make gardening accessible to people with physical limitations.

<https://www.gardentech.com/blog/gardening-and-healthy-living/gardening-for-everyone-creating-accessible-gardens>

Guide to Wheelchair Accessible Raised Garden Beds video shows how this can be done, suggested materials, and reasons why this is so important.

Interview by D. Bell with geriatric physician Dr. Bill Thomas on The Eden Alternative as “the reinterpretation of the environment elders live in” and respect for their agency.

<https://www.pbs.org/thoushalthonor/eden/index.html>

[Invention Makes Gardening Possible for Disabled People](#) video demonstrates ideas for improving and adapting gardening methods, tools and beds, with transcript available.

[Is Your Garden Accessible to Everyone](#) video presents design ideas from paths to garden beds, with a focus on improving accessibility.

[National Center on Accessibility](#) is a program at the Epley Center for Parks and Public Lands, with training, assessments, and technical assistance on accessibility design, infrastructure and best practices for parks, meant to enhance park experiences for people with disabilities.

<https://ncaonline.org/>

THAD (Therapeutic Horticulture Activity Database) offers 200+TH activities across populations, tested by practitioners with a range of populations. (activities: [adaptive gardening for repetitive motion disorders](#), [daily gardening tasks](#), [hardwood stem cuttings](#), [lettuce us be different](#)).

<https://hort.ifas.ufl.edu/therapeutic-horticulture-activities-database/>

The University of Maine bulletin #2754 *Building an Accessible V-Bed Garden*.

<https://extension.umaine.edu/publications/2754e/>

Tools and Strategies for adaptive Gardening video from horticultural therapist Teresia Hazen at Stenzel Therapeutic Garden at Legacy Good Samaritan Hospital (2019).

<https://www.youtube.com/watch?v=xAU9w4K5P-Y>

University of Florida: IFAS Extension Gardening in the Panhandle: *Enabling Technique for Raised Bed Gardens*. Information on advantages of raised beds and instructions for building them.

<https://nwdistrict.ifas.ufl.edu/hort/tag/enabling-gardening/>

USA Botanical Gardens’ list of accessible gardens across the U.S. also includes links to the gardens, where additional information is available.

<https://wheelchairtraveling.com/usa-botanical-gardens-wheelchair-accessible-travel-tips/>

[Useful Gardening Tools for People with Physical Limitations](#) video presented by master gardeners in Baltimore County.

Related organizations

[Center of Design for an Aging Society](#)

[Defiant Gardens](#)

Easter Seals <https://www.easterseals.com/explore-resources/living-with-disability/why-we-are-gardening.html>

Population specific organizations like *American Liver Foundation*, *Mental Health America* etc.

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