

around the HOUSE

The Universal Design Garden

Spring is just around the corner, so let's look outside the house and discuss the many ways to make outside gardening enjoyable for everyone.

Gardening is not only America's most popular outdoor activity but also therapeutic, and 84% of households are involved in it in some form. Gardening provides a way to relieve stress, exercise, and casually burn calories while helping us be creative at the same time. It naturally brings people together, and watching plants grow gives every gardener something to look forward to.

The therapeutic benefits of gardening have been documented for years. Programs known as Horticultural Therapy recognize and use the physical, mental, and spiritual benefits of gardening to help their patients. A study at Virginia Tech showed 40% of Americans find being around plants and flowers made them feel calm and more relaxed. They also found the view of trees alone might reduce recovery time in a hospital by up to a full day, and a well-maintained landscape adds 7–14% to the value of a residential property.

Something for Everyone

Gardening is an activity that can be designed and adapted for people with all sorts of special needs. With thoughtful consideration of users' abilities and

thoughtful garden design, people with various disabilities—arthritis, limited vision, etc.—will enjoy the many benefits. Ironic is the fact that people with health issues are the ones who can benefit the most from working leisurely in a garden.



Several gardening styles are popular alternatives to traditional landscape and ground-level planting. The various types include:

- Planting in pots and hanging containers
- Window boxes
- Raised permanent and rolling planter boxes
- Vertical gardens using lattice

These all have advantages in that they are equally adaptable to a small backyard, an upper-level patio or roof space, or

lower-level common grounds. Seated users can easily cultivate each type. Bending over is not a requirement to cultivate the plants with any of these choices.

Some of the advantages of these types of gardens include the ability to start seedlings indoors and bring them outside when appropriate, planters produce early crops, and problems with poor soil or soil-borne disease can be easily overcome. Planters also offer opportunities for innovative landscape ideas and creative plant structures.

Use Careful Selection

One of the first things to consider is the size of each planter and the garden's overall scale and design. Take into consideration the abilities of the users. In order to accommodate all, select plants and features that also have sensory interest. For example, people who are

blind or have visual impairments will enjoy the scents of plants such as fragrant roses, herbs, and scented geraniums, to name just a few aromatic plants. Ornamental grasses and a simple bubbling fountain will add soothing sounds to the garden. A pond may be nice but will require significant maintenance.

Put hanging baskets on pulleys so they can be easily lowered and raised for plant care. If possible use lightweight plastic pots as opposed to heavy clay ones. Consider putting them on rolling platforms for easy moving. If you live in a temperate climate, remember pots will

need to be emptied before freezing or the soil will expand and break them.

Rolling raised planters with open bottoms can be purchased or built. They should be no longer than six feet and have 4x4 corner posts at the ends and in the center and on wheels. This will provide four 3-foot-wide sitting positions. Make sure the bottom of the bed height is no lower than 30" to allow knee space and a wheelchair to roll under.

Raised planters should not be wider than 4 feet for a dual-sided planter and 2 feet for a one-sided planter to allow adequate reach. Limit the length of each raised bed to 10–20 feet to prevent overexertion while circling the bed. It should be 28–30" high and allow a sitting surface if it is wide enough. Plastic timbers and keystone walls are good choices. Railroad timbers may cause creosote stains and are not environmentally friendly.

Use mulch in raised beds, as it slows evaporation of water. Use drip irrigation hoses for watering. You may want to relocate a water source close to the beds. Remember, hoses can always be a tripping hazard and should *never* cross access paths.

Resolve Access Issues

Easy access is essential in order to reach the garden with minimum difficulty and maximum safety. If sloping paths are required, they should not be steeper than a 1:15 gradient; 1:20 is even better (1 foot rise for every 20 feet long).

Grass alone is uneven and difficult for a person to navigate. Never create a path with bare dirt, as it may become slippery and dangerous when wet. A path designed for wheelchair use should be a minimum four feet wide. Five feet will accommodate two people



walking side by side and a wheelchair turning around.

All kinds of great products provide accessible and safe pathways. Plastic-mesh products known as “grass pave” have an open area that allows grass to grow in between the mesh but still provides a solid, level, walking and rolling surface.

Helpful Resources

A few **good books** are:

Accessible Gardening for People with Disabilities by Janeen Adil

Enabling Garden by Gene Rothert

The Able Gardener by Kathleen Yeomans

Able to Garden by Peter Please

Horticulture as Therapy by Mitchel Hewson

The **best website** for accessible gardening we found is www.Thrive.org.uk.

A **great resource** for all kinds of outdoor recreation surfaces is the National Center on Accessibility, NCAonline.org.

Note: If you tried to order the *Universal Design “Smart” Homes for the 21st Century* plan book by Schwab, you may have received a “parameter error” and were unable to order. We apologize for the technical error. Visit www.UniversalDesignOnline.com/bookintroorder.html and try again, using coupon code *vethomes* for the \$5 discount.

Another similar product is long-life lattice. It is plastic, also allows growth, and is available at local homebuilder stores in 4x8 panels. Recycled rubber mats combine textured surfaces and provide cushioned comfort. Roll-out path systems are also available and are used on beaches and sandy soil areas. A hard no-skid surface such as exposed aggregate concrete or broom finished concrete or asphalt will also work. Don’t use wood, as it will be slippery when wet. “Brick dust” and crushed limestone are also good choices.

So, enjoy the planting and the harvest—and don’t ever stop being a “green thumber.”

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