Adaptive Gardening Tips and Techniques

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**Workshop Goals**

- Identify how various physical abilities relate to gardening tasks, and how to accommodate for age related changes (person)
- Identify aspects of the garden that can be modified to support changes in physical abilities (environment)
- Identify tools and strategies that can help gardeners adapt to changing physical abilities (occupation)
Good Body Mechanics

- don’t carry if you can push - use wheels (i.e. rolling carts, wheelbarrow etc.)
- slide rather than lift
- push rather than pull
- use levers - long handled attachments
- use lightweight tools and objects
- maintain good posture in all positions
- bend at the knees, not waist

Joint Protection Techniques

for people with arthritis or other joint conditions

1. Distribute load over stronger joints and/or larger surfaces
   - use palm of hand rather than fingers to squeeze, open/close, push/pull whenever possible; avoid forceful pinching and gripping
   - use straps or large open handles to open doors/drawers with palm or forearm; use hip to close drawers/doors
   - use both hands/palms to lift and move objects

2. Respect pain and STOP the activity
   - understand the difference between the general discomfort of arthritis and the pain from overusing a joint
   - pain lasting 1 hour or more after activity is a sign that the activity needs to be modified or eliminated

3. Maintain muscle strength and joint range of motion
   - move all joints through complete range of motion daily
   - use full range of motion when completing daily tasks: full arm stretch when raking, sweeping, reaching, etc.
4. Use joints in most stable and functional plane; good alignment
   o stand directly in front of doors/drawers/shelves; don’t stand to the side and twist spine
   o keep wrists and fingers in good alignment when doing tasks
   o good body mechanics

5. Avoid positions of deformity or deforming stress
   o Avoid twisting wrist toward little finger; switch hands during twisting tasks to twist in direction of thumb, for example - open jar with palm of right hand & close with palm of left hand
   o squeeze water from folded cloth or sponge with flat hands; don’t wring
   o keep wrists in neutral

6. Use strongest joints available
   o carry bags on shoulder, or forearm, rather than grasping handles in your fist
   o use palms rather than fingers to lift, push, or take weight
   o use hip to close doors and drawers

7. Avoid holding joints in one position for lengths of time
   o alternate sitting, kneeling and standing
   o switch from kneeling on one knee to the other

8. Don’t start an activity that cannot be stopped if it’s too taxing
   o benches or seats along walkways
   o bench or small table outside front door to place items on while opening door

9. Balance rest and activity
   o Take frequent breaks
   o Alternate heavy and light tasks

10. Reduce force and effort
    o use leverage - hold objects close to the body to carry; use longer tools that provide leverage
    o use larger handled tools, or build up handles with foam grips
    o put a strap on tool handles to help with grip
The Accessible Garden

Planning and layout - Think efficiency

- Most frequently visited areas or those that need most care grouped together; closest to house
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- Tools and supplies close to where they will be used
- Close source of water

Paths

- Smooth & level
- Provide good traction
- Width - at least 30” for wheelchair or walker user, with wider turn-around spaces at ends – at least 4’x4’ (measure)
- Direct routes through garden
- Texture or contrast at edge
- Surface – consider glare, heat absorption, “give”
- Ramps and steps
- Steps – wide and shallow
- Ramp or incline: shallow rise is best (1:20 or 1:25 feet – one foot of rise for every 20 – 25 feet of path); steeper incline needs level resting place every 10 feet or so
- Grab bars or railings:
  - strong enough to support at least 250 pounds
  - about 3½ inches from wall to prevent knuckle scraping
  - about 34” high on flat surfaces; 32” on ramps; 30” on stairs

Raised beds

*Approximate height* (depends on height of gardener)

- Standing, and can bend down: 10 – 12” high
- Seated on the edge of the bed: 18” high
- Seated in a chair or wheelchair: 24” high
- Standing, but cannot bend down: 30” high
**Approximate width** (may vary based on abilities of gardener)
  - Accessible from only one side: 30"
  - Accessible from all sides: 60"
  - Seated gardening – use side reach measurement
  - Can extend distances by use of extended tools

**Container gardening**

*Accessibility* – must be high enough; about 24” is usually good

*Stability* – heavy enough or firmly attached so they don’t tip if leaned or pulled on

*Size* – consider amount of work required – smaller required more watering, and may be less stable

*Durability* – pick materials that will withstand freezing & thawing, constant moisture

*Weight* – consider location & safety
  - Will they need to be emptied or moved?
  - On a roof or balcony?
  - Hanging?

**Vertical gardening**

*Types*
  - Walls & fences
  - Trellis
  - Hanging

*Consider*
  - Safety – sturdy support to support weight of plants
  - Watering – use pulley system for hanging plants, and tie a knot to catch cord and prevent cord from slipping though pulley if dropped, or “hi-lo” pulley that allows raising and lowering plant
Tools

**Tool characteristics**

- Lighter weight - aluminum alloy or lighter metal tools; fiberglass, aluminum or composite handles
  - Drawback – may not be as strong
- Longer or extending handles – for both standing and hand tools
  - Drawback – may be heavier
- Smaller blades & tool heads – lighter and need less force to use; easier to use in containers & raised beds
  - Tip: put regular size handles on children’s tools
- Tools that enable use of two hands close to body, such as T or circle handles
- Handles and grips
  - Larger or built up handles – purchase larger handled tools or adapt your own
    - Drawback – too large can be uncomfortable – do the “OK” test
  - Add grip straps to help hold tool
  - Angled or pistol grip – more ergonomic; encourages neutral position of wrist – purchase angled tools, or handles to adapt your own
  - Tools with wrist support provide extra support for weak or arthritic wrists
  - Always try before you buy – make sure it is comfortable for you

**Tools to conserve energy**

Kneeling and sitting: reversible kneeler/sitter, foam kneeling pads, knee pads, wheeled garden seat (most have tool caddies or containers)

Wheeled and lightweight carriers: lightweight wheelbarrow (folding), wheeled tool and supply carriers, wagon
Some Helpful Resources

Books

_The Enabling Garden: Creating Barrier-Free Gardens_ (1994), by Gene Rothert

The author has been the President of the American Horticultural Therapy Association and the manager of urban horticulture at the Chicago Botanic Garden, where he was in charge of their enabling garden for people with disabilities. He lives with a spinal cord injury and gardens from a wheelchair. This book provides lots of tips, tools and techniques for making your garden barrier-free.

_Accessible Gardens: Tips & Techniques for Seniors and the Disabled_ (1997), by Joann Woy

This book includes many aspects of gardening with a physical impairment or disability, including chapters on planning and constructing the accessible garden, gardening basics such as soil prep and composting, and lawn care, in addition to tools and techniques to make gardening more accessible.

_Easy Things to Make…to Make Things Easy: Simple Do-It-Yourself Home Modifications for Older People & Others with Physical Limitations_ (1997), by Doreen Greenstein

This book has suggestions for simple low cost modifications that can be made to the home environment for older people and people with disabilities, including a section on gardening.

A handout with just the gardening tips can be downloaded for free from http://agrability.okstate.edu/Resources/Gardening/HORT-ESY_edited0605.pdf

Websites

_The AgrAbility Project_ - http://www.agrabilityproject.org/ - valuable information about support for all aspects of farming with a disability, limitation or illness, and a searchable database of assistive technology for agricultural tasks. State projects can be located through the national website.

_Gardens for Every Body_ - http://agrability.missouri.edu/GardenWeb/ - lots of tips for all aspects of gardening with physical limitations

_Adaptive Gardening Tools_

Life with Ease - http://lifewithease.com/garden.html

The Wright Stuff/– http://www.arthritissupplies.com/site/371928/page/53736

Gardening With Ease - http://www.gardeningwithease.com/