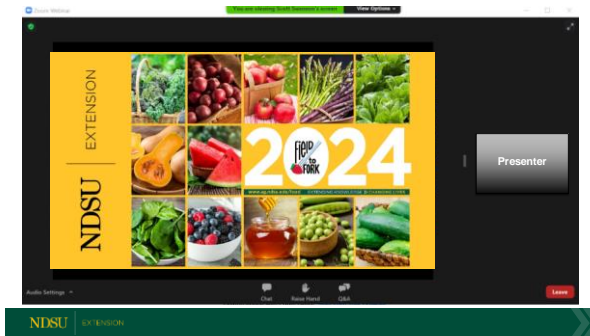




Upcoming Webinars

- March 6 - Understanding Product Dating: Food Safety vs. Food Quality**
 - Byron Chaves-Elizondo, Assistant Professor and Extension Food Safety Specialist, University of Nebraska - Lincoln
- March 13 - Spuddles, Vader Tots and Small Fries: Let's Talk Potatoes!**
 - Susie Thompson, Plant Sciences Associate Professor, NDSU



- Please complete the short online survey** that will be emailed to you after today's webinar. It will take just a couple minutes!
- Be sure to sign up for an opportunity to win a prize in the drawing. After submitting the survey, a form to fill out with your name/address will appear.



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Feb. 28

Gardening With Arthritis and Pain

Esther McGinnis, Associate Professor and Horticulturist, NDSU



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Gardening Is Good For Our Health

- Gardeners score higher in health indices (Van den Berg et al., 2010)
- Gardeners have more hand strength (Park et al. 2009)
- Nursing home residents are more engaged than those that don't garden (Powell et al. 1979)
- Increased functioning in dementia patients



Potential Barriers to Gardening

- Arthritis: collective term for over 100 conditions that involve inflammation of a joint and surrounding tissue
 - 50 million people
- Beyond arthritis, anyone that has pain with the following
 - Bending over
 - Kneeling
 - Pushing/pulling
 - Lifting/carrying
 - Using tools



Goals of Adaptive Gardening

- Remove barriers
- Work smarter, not harder
- Minimize pain/strain

Outline

- Customizing a garden space to work for you
- Warm-up exercises and stretches for all abilities
- Finding ergonomic tools that minimize strain



Is this your garden?

- In-ground garden may no longer work for you
 - What type of garden will work for you as you age?
 - What is the right size?
 - Is the garden location convenient?
 - Proximity to water/automation



Knee Cutout for Wheelchairs



Different Heights



Gardening While Sitting



Sit on the wide ledge





Standing or Sitting

- Build a raised bed to fit the gardener
- Will the gardener be standing or sitting?
- Add a bench or sit on a bucket
- No more than 2 to 4 feet across



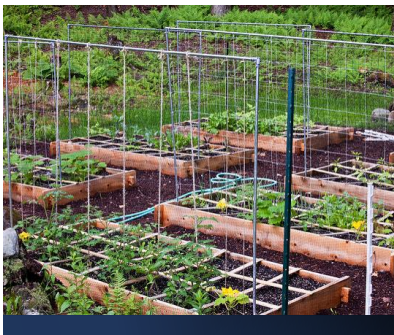
Courtesy of Hans Kandel



Go Vertical!



Grow Vining Crops



Trellis

• Patrick, Flickr, CC by SA 2.0



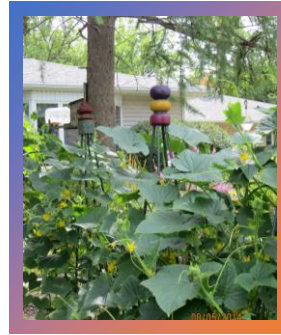
Tunnels





Pole Beans

• Larry, CC by-NC-ND 2.0
DEED



Cucumbers

Have your garden come to you!



Containers



Hydroponic Salad Tables

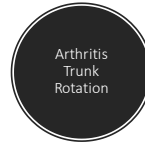


Dr. Tom Michaels, UMN

Warm-ups and Exercises: Check with your doctor before instituting an exercise program



Arthritis Hand Warmups



Two Arthritis Shoulder Warmups

Exercise 1: Keep arms on shoulders; make circles with elbows going forward, reverse and go backward

Exercise 2: Extend your arms, do forward and backward circles; do different size circles

Arthritis Hip Walk

- Sit in a straight-backed chair; walk forward by lifting one hip at a time; reverse and walk back



Arthritis Ankle Circle



- Exercise can be done from either a sitting or standing position; do slow circles with just the foot (not the leg); do the other foot
- Preceding exercises from Arthritis and Gardening: A Guide for Home Gardeners and Small-Scale Producers, AgrAbility and Arthritis Foundation

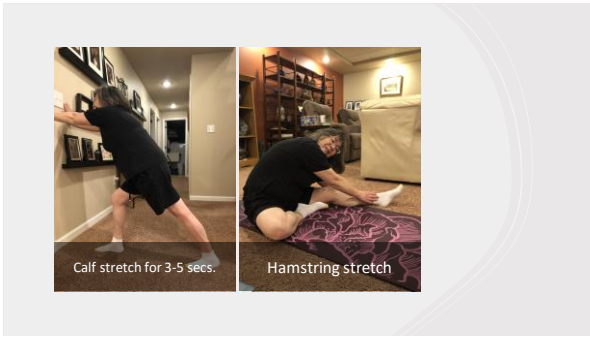
My Own Exercises



Exercise 1: Hug knees to your chest for 3-5 seconds; can modify by doing one knee at a time



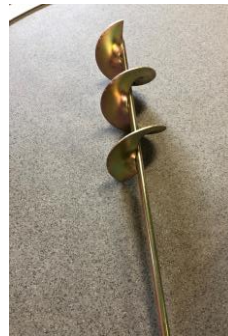
Exercise 2: Lie flat on the floor with your knees; gently lift your pelvis off the floor (10-30 secs.)



Side Stretches



Ergonomic Tools: designed for efficiency and comfort; minimize physical stress

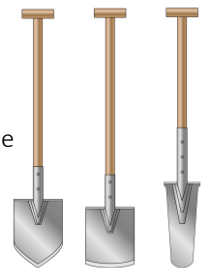


Planting Bulbs or Transplanting



Shared Legacy Farms, YouTube

Long Handled Tools: Leverage



Shovels

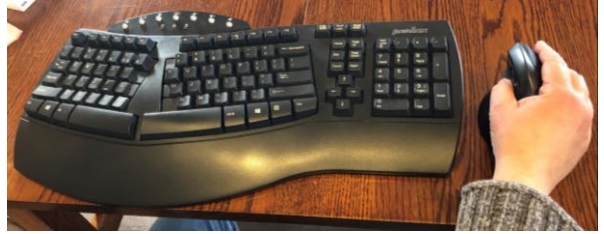


Root Slayer

vs.



Well sharpened shovel



D-Handles



Weeding

Stirrup/Hula Hoe



Hand Hoe



Pruning



My old Felco 5 pruners

- Felco has numerous pruner models
 - Based on hand size
 - Right/left handed
 - Weight
 - Branch thickness
 - Revolving handle which reduces the necessary force

Ergonomic Handles for Wrist Problems





From Radius Garden

Pistol Grip Tools (The Wright Stuff)



Arm Support



Long Reach Tools
The Wright Stuff

Garden While Kneeling/Sitting



Garden While Sitting



Handy Cart



Questions?



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