

Core Training for Seniors

EXERCISE ETC. INC.

Please Note

- *These activities are designed for active, functional seniors who are living independently.*
- *They are not designed for frail elders, those suffering from a chronic, disabling disease or those who are in a pain management program.*
- *They are especially not suitable for seniors who are a fall risk.*
- *Always use caution with this population: a fall can be life altering ... or life threatening.*

Strength & Conditioning for Seniors: Stalling the Aging Process

- The physiological changes we used to think were inevitable parts of the aging process are now known to be the result of deconditioning, not age.
- Strength & conditioning programs for seniors challenge the body to maintain independence and function with age-appropriate modifications.

Your Target Demographic: 76 Million Baby Boomers

- Born between 1945 & 1965, Boomers are from 50 - 70 years old.
- Many of the Boomers have been working out since the 1980's and enjoy an active lifestyle.
- They need age-appropriate modifications, but are not ready for chair exercise.

Aerobics, 1982

How Old is "Old"?

According to the American Society of Gerontologists

- 45 – 64: Middle age
- 65 – 74: Young old
- 75 – 84: Old
- 85 – 94: Old old
- 95 +: Oldest old*

**The fastest growing age demographic in the country!*

Start by Assessing/Screening

- Determine need for physician release
- Assess heart health
- Understand orthopedic history
- Determine baselines
- Tells trainer extremely valuable information for program design
- Tells trainer who is ready for more intense training
- Determine progress and resistance

Pre-Exercise Interview

- Health history & risk assessment
- Recommend pre-participation physical
- Collect baseline measures
 - Measured walk
 - 1 legged stand
 - Pain free range of motion
- 5 Basic Questions:
 - “How’s your health?”
 - “Have you ever fallen?”
 - “Why are you here?”
 - “What gives you trouble?”
 - “What meds are you on?”

The 10 Most Commonly Prescribed Meds for Seniors

Includes brand names & generic equivalents

- | | |
|---|-------------------------------------|
| • Hydrocodone
– Narcotic pain reliever | • Prilosec
– Antacid |
| • Zocor
– Anti-cholesterol | • Azithromycin
– Antibiotic |
| • Lisinopril
– Lowers blood pressure | • Amoxicillin
– Antibiotic |
| • Synthroid
– For hypothyroidism | • Glucophage
– Oral hypoglycemic |
| • Norvasc
– Heart disease | • Hydrochlorothiazide
– Diuretic |

6 Common Medications That Impair Balance

- Antidepressants
- Anti-anxiety drugs
- Antihistamines prescribed to relieve allergy symptoms
- Blood pressure and other heart medications
- Pain relievers, both prescription and nonprescription, especially narcotics
- Sleep aids (over-the-counter and prescription forms)

10 Meds That Impair Memory

AARP: May, 2013

- | | |
|---------------------------|---------------------|
| • Statin drugs | • Anti-anxiety meds |
| • Blood pressure meds | • Parkinson drugs |
| • Anti-depressants | • Incontinence meds |
| • Anti-seizure meds | • Sleeping aids |
| • Narcotic pain relievers | • Antihistamines |

10-Minute Baseline Assessments

Consider doing pre- and post-testing

Measured walk

How far can he walk in 5 minutes?

1 legged stand

How long can she balance on each leg?

Bend & pick up

Can he bend over and pick up six objects in a row?

Sit to stand

How many can she do in a minute?

Pain free range of motion

Assess ROM at shoulder and hip



Functions of the Core

- Stability
- Movement
- Posture
- Breathing
- Joint Stabilization
- Energy Transfer

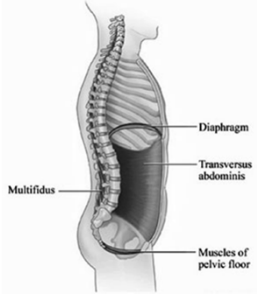


**Core on the floor?
Why?**

Creating a Functional Core Program

- Function will mean different things to different people, but improving movement is the ultimate goal.
- Assess client's level of functional competency.
- Build a foundation. Without this, compensations develop and limit proper adaptations.
- Seniors don't need to be stable on the floor -- they need to be stable while upright.


Function Starts With The Core




- Local Muscles (Inner Unit):
 - Directly attach to spine
 - Provide stability and segmental control
- Global Muscle (Outer Unit):
 - Large torque producing muscles
 - Provide general stability

Goal of Core Training

- Create stability in the presence of movement
 - Integrity, Alignment, Control
- Watch for fatigue
 - Holding breath; Compensation with prime movers




Progressing The Core



- Understand neutral spine
- Starting w/ proper breathing strategies
- Improve firing sequence of the core muscles
- Progress through developmental stages, adding resistance, exercise in all 3 planes

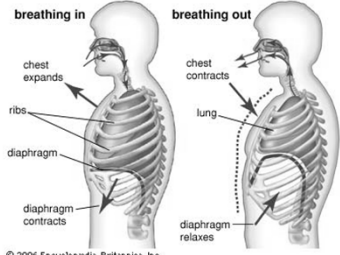
It Starts With Breathing

- Without proper breathing patterns the core cannot activate properly.
- Stabilizers activate first centering joints and provide postural stabilization.
- Protects ligaments, tendons, and joint structures



Core Stability & The Diaphragm

- True Core Stability MUST start with the diaphragm
- Stability from the inside out.



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Breathing Drill

- Inhale deeply through the nose to expand the lungs fully.
- Pucker your lips and exhale with control until lungs are emptied.
- Try this drill with respiratory resistance (straw)
 - No more than 15 seconds to start, and observe reaction
- Advanced variation: Try this drill with light exertion



Core Muscle Firing Sequence

- Inner unit must fire first then outer unit.
- When larger global muscle fires first, stability is decreased.
- Torque and other forces placed on the joints and connective tissue increases.
- Improve firing sequence with RNT and primitive patterns, such as rolling.

Reactive Neuromuscular Training

- Forces individual to fire muscles appropriately.
- Exaggerate the mistake the individual is making.
- Creates greater proprioceptive awareness of poor timing.
- Results in accelerated motor learning.



Core Stabilization: Ball Squeeze

- Using any kind of soft ball, squeeze it for a count of 5.
- Do NOT hold your breath
- Keep your chin up
- Start seated, and progress to standing if you can

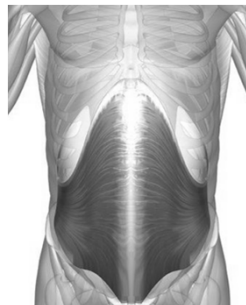


Core Stabilization: Towel Pull

- Using any kind of soft towel pull it apart for a count of 5.
- Do NOT hold your breath
- Keep your chin up
- Start seated, and progress to standing if you can



Transverse Abdominus: TVA Activator



Seated, Standing Pallof Presses



Stability Ball Bounce

- Pair people up & have them roll, bounce or throw ball to each other.
- Put participants in a circle and have them roll or bounce (but not throw) the ball to each other.
- They can call out a name of roll/bounce the ball randomly.



Band Resisted Slams



Band Resisted Squat Toss



Band Resisted Chest Pass



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