

FOREVER ACTIVE

PERSONALIZED FITNESS AND WELLNESS FOR MEN 50 +



New Ideas on Muscular Resistance Training for the Older Adult

Introduction

Physiologically we reach our peak in muscular strength in our late 20's after which our muscles begin to atrophy (shrink) at a rate of 1- 2% per year. For the older adult, the rate of muscle atrophy accelerates after the age 60. This is very significant because a lack of muscle strength significantly affects an older adult's ability to function actively and prevent the advancement of osteoarthritis in their joints'. As a consequence, if the older adult does not exercise properly to maintain their muscular strength or at least to slow down this rate of muscular atrophy, their quality of life can be severely compromised.

For over seventy years, guidelines for building muscular strength have not changed. The guidelines recommend lifting 60 to 80% of the heaviest weight you can lift, typically for 3 sets of 8 to 12 repetitions. This approach was popularized by Thomas DeLorme, a U.S military doctor who developed this approach to accelerate the postoperative rehabilitation of soldiers in the second world war. Unfortunately for the de-conditioned older adult, these guidelines or protocols are not useful. Lifting 60 to 80% of their maximum load leaves them vulnerable to physical injury and emotional burn-out. Too much too soon.

Fortunately, in recent years, new research has proven that there is another way, and for the older adult, a safer way, to do muscular resistance training. This newsletter will examine this new research and present a complete muscle resistance program that older adults can do with minimum exercise equipment. The old saying "use it or lose it" applies when we discuss maintaining muscle strength. The goal of this newsletter is to inform the older adult on how to do muscle resistant exercises safely and effectively with these new protocols.

New Research on Muscular Resistance Training

Research published by Dr. Stuart Phillips from McMaster University is proving that lifting relatively light weights (30 -50% maximum lift for 20-25 reps for 3 sets) can produce similar gains in strength compared to traditional heavier load workouts (60-80% of maximum lift for 8-12 reps for 3 sets) as long as you lift to near failure or complete fatigue, the point where you can't complete another repetition of the exercise. It should be emphasised that though this light weight approach should reduce the risk of injury for the older adult, it is not an "easier way" of weight training.

Why it Works

Dr. Phillips states that to maintain or develop muscular strength you need to stress both the muscles and the neuromuscular signalling pathway between the brain and the muscle. He says it does not matter if you do this by lifting heavy weights fewer times or lighter weight many times, the **key is that the individual must go to failure by the end of the 3rd set.**

Caution

Safety first. Don't try to push beyond failure, "I can do just one more." For the older adult, doing muscular resistant training twice a week is sufficient. Remember as you get older you need additional time to recover from your exercise session. This is even more important for those that are de-conditioned and just starting out. As well, it is recommended that you consult a personal trainer to start to make sure you select the proper amount of weight for each exercise and that you perform each exercise biomechanically properly and consult your doctor to rule out any medical contra-indications to the exercises that you want to participate in.

Your Muscular Resistance Training Program

Guidelines:

1. Always warm-up for 5-10 minutes before you start your resistance training by walking and active stretching.
2. While exercising, if you feel pain or discomfort stop immediately. If the pain does not subside shortly after stopping you should consult your doctor to determine if an injury has occurred. Always err on the side of caution when trying to decide if you should stop exercising and seek consultation.
3. Breathe normally while performing an exercise. NEVER hold your breath.
4. Do each exercise slowly (1,2 up , pause for 1 sec, and 1, 2 down) and always under control. Never do fast jerky movements.

Light Weight Resistance Protocol for the Older Adult

(FIIT)

1. **F- Frequency** - 2 per week (two to three days of recovery between exercise sessions)
2. **I - Intensity** - lift 30% to 50% of maximum 1 repetition load, for 20-30 repetitions for 3 sets.
- **Must achieve failure (can't lift anymore) by end of 3rd set**
3. **T - Time** - Lift on a 1,2 up , pause for 1 sec, 1, 2 down rhythm. Rest for 2 minutes between sets.

Upper Body

Lower Limb

Core

Chest, Back and Shoulders

Chest:

1. Press
2. Flys
3. Push-ups

Back:

1. Upper back extensions
2. Pull downs
3. Rows
4. Lawnmowers
5. Reverse flys

Shoulders:

1. Shrugs
2. Overhead press
3. Lateral raises
4. Circles
5. Anterior raises
6. Internal and external rotations

Arms

Upper Arms:

Biceps:

1. Regular curls (single/double)
2. Hammer curls (single/double)
3. Open arm curls (single/double)

Triceps:

1. Two arm kick backs (single/double)
2. Seated/lying overhead extensions (single/double)

Forearms:

1. Wrist extension/flexion
2. Wrist supination/pronation

Hands:

1. Finger extensions (elastic band)
2. Ball squeeze

Upper Leg & Hip:

1. Knee extensions (single/double)
2. Knee flexions (single/double)
3. Leg press (single/double)
4. Wall Squat
5. Sit & Stand squat
6. Lunges (forward/sideways)
7. Leg abductions
8. Hip kickbacks (45°, straight back)

Lower Leg:

1. Ankle plantarflexion/dorsiflexion
2. Heel raises
3. Toe raises
4. Foot eversion/inversion

Core:

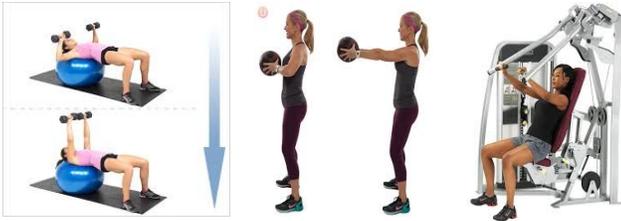
1. Pelvic tilts
2. Abdominal crunch
3. Full sit-up
4. Pilates 100's
5. Bicycles
6. Oblique crunch
7. Standing side bends
8. Side lying oblique crunch
9. "v" twists
10. Supermans
11. Lower back extensions
12. Planks (front & side)

Your Muscular Resistance Training Program Illustrated

Upper Body

Chest:

1. Chest Press



2. Chest Flies



3. Push-ups



Upper Back

1. Reverse Flies



2. Rows



Shoulders

1. Overhead Press



2. Lateral Raises



3. Internal and External Rotations



Upper Arms

1. Biceps



2. Triceps



Lower Body and Core

Hips

1. Squats



2. Wall Squats



3. Lunges



4. Side Lunges



5. Hip Abductions



6. Hip Extensions



Upper Legs

1. Knee Extensions (Quadriceps)



2. Knee Curls (Hamstrings)



Lower Legs

1. Heel and Toe Raises



Core

1. Pelvic Tilts



2. Abdominal Crunch



3. Lateral Oblique Crunch



4. Planks

