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Life Long Muscle

"You can't help getting older, but you don't have to get old."—George Burns

As a young physical therapist, I read a detailed article written by an expert in rehabilitation named Dr. Janda. Dr. Janda stated that as we age, certain muscles tended to become weaker at a far faster rate. He offered no reason, either physiological or anatomical for these muscles to succumb to early failure, so I did not give Dr. Janda's ideas much thought. Fast-forward twenty seven years and Dr. Janda was a genius. In my own personal experience with aging and interactions with physical therapy patients, I have found that these muscles really do become weaker at a far faster rate. Preferentially training movement patterns that activate these muscles can diminish the effects of aging and restore functional mobility.

Muscles That Get Weaker As We Age

Dr. Janda identified seven muscles that tend to become weaker as we age. The muscles and a rudimentary description of their function are listed below.

Rhomboids: pull the shoulders back and stabilize the shoulder
Mid Back Extensors: hold your thoracic spine up tall.
Triceps: extend the elbow and stabilize the shoulder.
Gluteus Maximus: major hip strength/power supply and pelvic stability.
Deep Abdominal Muscles: stabilize your spine/pelvis and connect hip to shoulder.
External Oblique: stabilizes your spine and powers connection from hip to shoulder.
Deltoid: major shoulder strength/power supply.

When this series of muscles becomes weaker, the body assumes a posture of old age. The shoulders slouch forward and the neck and upper back round over. The belly protrudes as the rear end flattens. You have greater difficulty assuming a tall upright posture. The stride shortens, and the pace of your walk slows. Transferring out of a chair or car is difficult. When working with the arms overhead, you fatigue quickly. You are less proficient at activities that require power production, such as hitting a golf ball or swinging a tennis racquet. You become more susceptible to pain problems related to shoulder, spine, and pelvic girdle instability.

The good news is that you now know what muscles get weaker and what patterns of movement they control. You are able to preferentially train these muscles and prevent many of the effects of aging. On the next page are a series of progressive resistance exercises that I have found to be very beneficial in strengthening this specific set of Dr. Janda muscles. They are not your typical body building isolation exercises, so they will take some dedicated practice to reach a level of competence. Do not perform all of the exercises on the same day. They are set up in terms of difficulty, so start with the first exercise and work your way to the next. Work on your technique for one or two weeks and then add another.

Michael S. O'Hara, P.T., O.C.S., C.S.C.S.

Anti-Old Age Exercises

The following exercises are presented in order of difficulty. As you move through the exercises, they become more demanding in terms of coordination, balance, and core stability. The amount of weight is not as important as is the fluidity of motion and mastery of technique. It is not uncommon to be much more accomplished with one side of your body. Work toward eliminating the performance asymmetry.

1, Heart Pumper Walks

Hold a kettlebell, medicine ball, or iron grip plate at chest level. Walk, and at the same time, move the weighted implement forward and backward as you travel across the floor. Use a weight that permits you to stay tall and maintain a normal stride. Perform two or three walks of sixty feet.

2. Anterior Step Ups With Medicine Ball Overhead

Find a step up box with a height that is not too challenging—eight to ten inches is usually a good start. Hold a four or five pound medicine ball at your stomach. Do not substitute a dumbbell or weight plate as you will be lifting the implement over your head and any fumble could be painful. Place your right foot up on the box and step up while simultaneously bringing the ball overhead. Pause while standing on the right leg—only for two counts. Step back down with the left leg and repeat for five to ten repetitions. Reverse the foot position and perform the exercise with the left leg.

3. Single Arm Overhead Press With Opposite Anterior Lunge

Stand and hold a dumbbell or kettlebell at shoulder level in your right hand. Step forward with the left leg and at the same time, push the weight overhead. Return to the starting position and repeat for five to ten repetitions. Switch to the left hand and repeat with a right leg lunge.

4. Thruster

Use two kettlebells, two dumbbells, or a barbell. A barbell is usually the easiest tool for this drill. Stand with weight in the rack position—feet shoulder width, shoulders back, neck relaxed, and spine tall. Squat down to just below parallel, and then as you rise out of the squat, simultaneously press the weight overhead. Lower the weight and immediately perform another repetition of the drill. Perform five to ten repetitions.

C'Mon Man—Catch Up!

Staying On The Cutting Edge And Ahead Of The Pros—In Fenton, MI

The December 25, 2011 edition of the New York Times had an article on a new and innovative training method that had drastically lowered the number of injuries on the Atlanta Falcons Football team. For the last three years, the Falcons have been using this program of evaluation and restorative exercise under the guidance of Mr. Jeff Fish, the team's fitness coordinator. The team's general manager was quoted saying the Atlanta franchise was an early adopter of this system, and since that time eight other NFL teams have added this training method to their strength and conditioning programs.

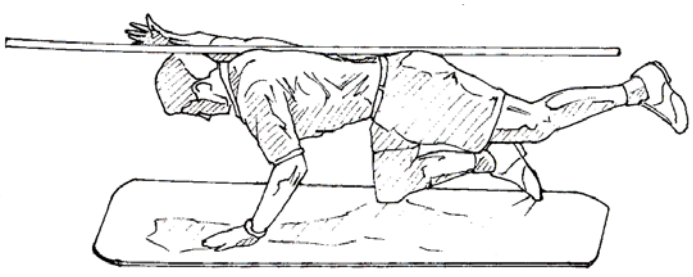
The system is the Functional Movement Screen (FMS), a tool we have been using in our physical therapy clinics and fitness center for the last eight years—five years ahead of the Atlanta Falcons. The Functional Movement Screen is a series of seven movement tests. The entire process can be performed in ten to twelve minutes. It evaluates your ability to move and screens for the presence of movement restrictions, asymmetries, and pain. From ongoing studies, we know that low scores on the FMS make you more prone to injury. The FMS enables the physical therapist or strength and conditioning coach to prescribe exercise that is specific to each and every athlete. Training away the movement restriction and improving the FMS score decreases injury rates and improves on the field performance.

The Functional Movement Screen was developed by Physical Therapist Gray Cook and Athletic Trainer Lee Burton. I heard Mr. Burton give a talk at a seminar in 2000 and was hooked on the idea of a standardized movement assessment tool. Since that time, we have sent Trainers and all of our Physical Therapists to the Functional Movement Screen and its clinical counterpart, the Select Functional Movement Assessment. As with any new training method, the old guard has been slow to adopt this superior method of assessment and exercise prescription. I am happy that the NFL is beginning to pick up on the FMS, and hopefully it will trickle down to the level that really needs it—high school and college athletes.

What Is The Plural Of Multifidus?

The multifidus is the name of a series of muscles that travel the length of your lumbar spine. They run from vertebrae to vertebrae and function to control the segmental motion of your five lumbar segments. They guide the spinal joints during motion and hold the spine stable when under compression. Recent advances in ultrasound imaging enable us to measure the size and health of the multifidus muscle at each vertebral segment. These studies have revealed atrophy of the multifidus muscles in patients with recurrent lower back pain. Tissue tests of the atrophied multifidus muscles show changes in the cell types and density. These changes occur fairly quickly after back pain onset and the multifidus muscles do not return to normal after back pain has resolved unless stimulated with proper rehabilitation exercises.

A simple exercise to stimulate recovery of the multifidus muscle is the horse stance horizontal drill. Position yourself on all fours with the hands under the shoulders and knees under the hip. Keep the lower back in a slight lordosis and try not to let the lumbar spine move during the exercise. Lift the opposite arm and leg, and hold the lumbar spine stationary for five seconds. Lower and repeat on the other side. Perform five times on each side. As you get better, increase the duration from a five second hold to a ten second hold. If you have a history of lower back pain, this exercise should be part of your regular fitness regimen. You multifiduses will thank you.



404 Rounds Drive
Fenton, MI 48430
810-750-0351

Fenton
FITNESS & ATHLETIC CENTER

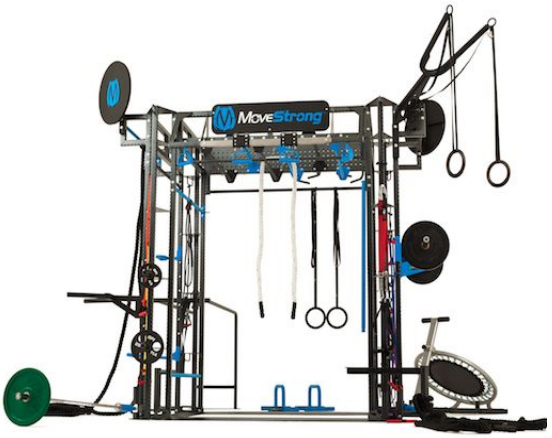
Hours
Mon-Thur: 5:30am-10pm
Friday: 5:30am-9:00pm
Saturday 8am-5pm
Sunday 8am-2pm

Room To Move

Bringing The Best Training Methods To Fenton

In order to permit greater use of the most progressive and beneficial training techniques, a major remodel is currently underway at Fenton Fitness and Athletic Center. The construction will be ongoing through the end of January. Please excuse the dust as alterations are made in the walls, flooring, and lighting. We will make every effort to minimize disturbances to gym hours and equipment access.

We will be laying down a 25 yard indoor turf area for plyometric training, movement preparation, and mobility drills. The padded turf is designed to reduce impact and replicates the feel and grip of modern outdoor athletic fields. Carpeted areas will be reduced and a resilient rubber sports flooring installed. The rubber flooring is easier on the joints and far more tolerant of dropped weights. A Move Strong Fitness Unit will be the newest piece of training equipment. Move Strong is a pioneer in the development of functional training, and their products are best described as adult exercise playgrounds. Multiple concrete block, plyometric walls will be added for core stability and speed development training.



The new floor plan will allow greater access to movement based exercise methods. Athletes train to minimize injury and become as efficient as possible in all movement patterns and in all directions. Improving your ability to accelerate, decelerate, lunge, squat, reach, push and pull should be the focus of everyone's fitness program. Some of the new training tools are listed below.

- Interval training with battling ropes.
- Plyometric activities on padded jump boxes, hurdles, and agility ladders.
- Medicine ball power production drills off a wall.
- Push and pull conditioning with drag sleds.
- Suspension training with TRX units, rings, and tubing.

A bigger room permits our trainers to more readily work with members in groups. Group fitness programming will permit more members to reach their fitness goals. Look for further information on these programming changes in early February.

Michael S. O'Hara, P.T., O.C.S., C.S.C.S.

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