ACTIVE P.T. SOLUTIONS
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Office Hours:

Monday -
8:00am - 5:30pm
Tuesday -
8:00am - 7:00pm
Wednesday -
8:00am - 5:30pm
Thursday -
8:00am - 5:30pm
Friday -
8:00am - 4:00pm

Location:
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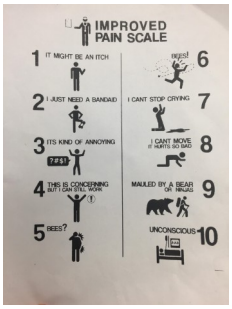
Differentiating Pain vs. Soreness

You would be hard pressed to enter a healthcare office and be able to exit without being asked, "On a scale from 0-10 please rate your pain; 10 is the worst pain and 0 is no pain at all." It is important for the patient to rate their pain correctly on the first visit since this will be used to measure progress throughout their treatment. As a healthcare provider it is intriguing how many people respond with, "I don't like that scale" or "I never really understood that scale" or "That scale confuses me". Patients are also confused about the difference between sore, achy muscles and joints versus a painful condition. When mixed together, these two areas can not only lengthen an office visit but also prevent the provider from getting a patient the help they need.

The American Physical Therapy Association (APTA) differentiates soreness from pain as follows: "Soreness is a healthy and expected result of exercise (or activity). Pain is an unhealthy and abnormal response that may be indicative of an injury." These definitions take into account several criteria: the character of the sensation, onset, duration (how long it lasts), particular location on your body, what makes it better or worse, and how you should treat it.

Muscle soreness is usually associated with an act such as recent exercise, yard work, or even cleaning the house. The affected area is tender to the touch, fatigues easily, and feels tight with movements that lengthen the affected muscles or tissues. The onset of the soreness is generally between 24 and 72 hours of the insulting activity. This is termed *delayed onset muscle soreness* (DOMS) and commonly lasts between 2-5 days, depending on the intensity of the activity that caused it. Originally thought to be the result of lactic acid accumulation, delayed onset muscle soreness is actually the result of micro-damage to the muscle fibers. When the soreness follows an activity that requires use of the entire body, the aches are "everywhere". If the activity is specific, such as running a marathon, then the legs usually hurt the most. The soreness reduces with low level movement, such as walking and light stretching exercises. It may worsen with sitting still or trying to exercise heavily. Ultimately, time is what heals delayed onset muscle soreness the best. Increasing your water intake, gentle movements, stretching, and use of a foam roller can help get you through the 2-5 days it takes to heal.

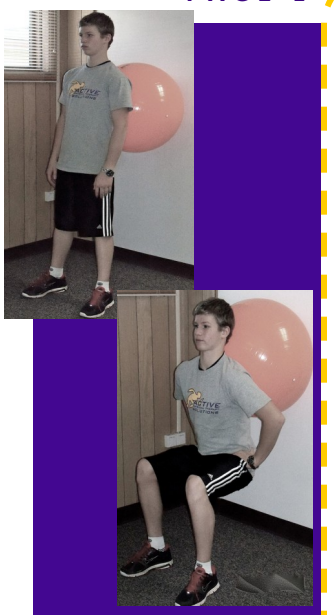


Pain is associated with a specific act, like exercising excessively or lifting something heavy, and it prevents you from continuing the activity. The character of the pain is sharp or a deep boring ache. The sensation usually comes on during the activity and will often prevent the continuance of the activity. It may also linger longer than 7-10 days. It may involve the joints as well as the muscles, tendons, or ligaments. It feels better with rest, ice, and immobilization. Attempts at activity worsen the pain. If the pain lasts longer than 10-14 days or if it is greater than 5/10 on the *Numerical Pain Scale* (NPS), you should seek an opinion from a healthcare provider. Generally speaking, pain that is between a 1-4/10 does not prevent you from performing your chosen activities. Pain of 5-6/10 will alter how you perform your activities. For example, if you are running, you would run with a limp. If the pain is over a 6/10 it will prevent you from performing the chosen activity. Pain in the 9-10/10 range limits mobility, prevents you from going to school or work, and in many cases, may make you nauseous or even lose consciousness.

Communicating the NPS accurately to the best of your ability is extremely important if you want to give the provider the best opportunity to help you. The NPS is specific to each individual patient and is used to track each patient individually. It is not used to compare different patients in similar situations. Giving specific answers to the provider's questions is also helpful. There is a tendency for patients to avoid the NPS. Using phrases like, "I have a high pain threshold", "I'm not bad today", or "I don't know, it's hard to give it a number", etc. This only prolongs the visit and prevents the provider from doing their job, which is to help you. We still need a number, whether you give it to us immediately or we have to pry it out of you. Remember if you are vague with your responses, the provider will have a difficult time trying to assess your problem, formulating a diagnosis, and developing a treatment plan to resolve your issue. Help your provider help you: have your pain scale number ready when they call you in for treatment.

Article by Dale Buchberger, DC, PT, CSCS

Exercise of the Month: Ball Squats



Ball squats, start position (top), exercise position (bottom)

Ball squats are a good, general lower body exercise, focusing on working the quadriceps (thigh) muscles and gluteal (buttock) muscles, as well as other leg muscles and core musculature.

To choose the proper diameter ball for your height, sit on the ball. The one that gives you a 90-degree angle in your legs is the proper height—your thighs should be relatively parallel to the floor. We have exercise balls available for purchase here at APTS if you don't have one.

To perform the exercise, stand with an exercise ball against a wall with the ball positioned at about the height of your shoulder blades (may be placed lower on your back as needed if it is too difficult). Place feet approximately hip distance apart pointing straight forward and place your hands on your hips or thighs. Stand up straight—the ball should feel as if it is pushing you slightly forward. Start by bending at the hips and bring your hips and buttocks under the ball as if you were to sit in a chair placed under the ball, continuously pushing back into the ball. Make sure your knees don't go ahead of your toes. Stop the squat where you are comfortable enough to return to starting position. Hold the squat for 1-2 seconds to start, and then return to the standing position, keeping your weight through your heels.

Start with 2 sets of 10 repetitions one time per day, or 1 set of 10 repetitions 2 times per day if it is too difficult to perform all at once. Gradually increase repetitions by 5 until you reach 30 repetitions. You can also increase the hold time to up to 5 seconds as you get stronger and more balanced. Finally, you can deepen the squat with your thighs being parallel to the floor.

As always, if you experience any pain, discomfort, or dizziness, discontinue the exercise and consult your health care professional!

What's Going on at APTS?

Kyle Brunnell, a second year PT student from Utica College, will be starting his first clinical internship with us on July 10 and will be with us through August 18. Please help us help him learn about the real world of physical therapy!

Active PT Solutions is sponsoring its 4th Annual Doubledays Buyout Night on Thursday, August 3. The game starts at 7:05 PM and the staff of APTS will be there when the gates open at 6:00 PM. Stop by the office to get your FREE tickets prior to the game, and then stop by our table at the game to get some FREE goodies! Jason Stanford, former Cleveland Indians pitcher and Buffalo Bisons all time strikeout king, will also be there. Come get an autograph or a picture taken with this former MLB pitcher!

Then on August 25, Active PT Solutions is once again sponsoring the Downtown Auburn Mile for competitive and recreational runners and walkers. The race begins at 7:00 PM at Pettigrass Funeral Home on Genesee Street and ends at Prison City Pub and Brewery on the corner of State and Dill Streets. The Auburn B.I.D. is sponsoring Music on the Mall featuring Mere Mortals after the race, and A.T. Walley's will be serving beverages and hot dogs. Sign up online only at ***www.lightboxreg.com/downtown-auburn-mile_2017*** $12 in advance, $20 on race day. This event is family friendly and all ages are welcome!

Dr. Buchberger Prepares for Taiwan

Dr. Dale Buchberger has been busy getting ready for his 3-week trip to Taipei, Taiwan, for the Summer World University Games. And Taiwan has been getting ready for the Summer World University Games! The Taiwan airport photo, left, depicts a track and various sports balls hanging from the ceiling in the concourse! Dale departs on August 13, with a flight to JFK Airport, New York City, and then a direct flight to Taiwan from JFK. Since Taiwan is an island, the biggest problem he will encounter is mosquitos, so he is packing a lot of bug spray and bug bracelets!

Age-Related Muscle Loss

Sarcopenia is increasingly recognized as a serious health problem that afflicts millions of aging adults and places and continues to strain our health care system. Since the 1960's the growth of the U.S. population over the age of 65 has doubled in size when compared to the general population. In the year 2000, the number of men and women over the age of 65 in the United States was projected to increase to 32 million people, which was approximately 20% of the population. The geriatric population, those over the age of 75, is increasing at an even faster rate.

From birth until you turn 30, your muscles continue to grow bigger and stronger. But at some point in your 30s, you will lose muscle mass, strength and function, a condition known as age-related *sarcopenia*. People who are sedentary or physically inactive can lose approximately 3% to 5% of their muscle mass per decade after the age of 30. Normally, adults who are sedentary beyond the age of 50 can expect a loss of muscle mass of up to 0.4 pounds a year. Unfortunately, even if you live an active lifestyle, the human body continues to lose muscle mass as we age.

Although there is no generally accepted test or specific level of muscle mass that leads to a diagnosis of sarcopenia, any loss of muscle mass is ultimately a problem, because lost muscle mass means a loss of strength and mobility. While sarcopenia typically begins after the age of 30 it picks up steam after age 50 and accelerates around the age of 75. Sarcopenia is also a factor in the occurrence of age related deterioration and an increase in the rate of falls and fractures in aging adults.

Symptoms of muscle loss include musculoskeletal weakness and loss of endurance, which can interfere with the ability to be physically active. Reduced physical activity then creates a cycle of deconditioning that further reduces muscle mass. Therefore, while engaging in regular physical activity is essential to avoiding sarcopenia, inactivity is not the only contributing factor to this condition. Although sarcopenia is commonly seen in people who are sedentary or inactive, the fact that it also occurs in people who stay physically active throughout life suggests there are other factors involved in the development of sarcopenia. Like osteoporosis, sarcopenia is a multifactorial disease process that may result from dropping hormone levels, an inadequate amount of dietary protein, coexisting nutritional imbalances, lack of exercise, oxidative stress, age-related reduction in nerve cells responsible for sending signals from the brain to the muscles to initiate movement and chronic inflammation. Although sarcopenia is commonly seen in people who are sedentary or inactive, the fact that it also occurs in people who stay physically active throughout life suggests there are other factors involved in the development of sarcopenia.

The question remains, "what can we do to slow the onset or progression of sarcopenia". Through resistance training exercise, adults can improve their ability to stand up from a seated position, walk household and community distances, safely climb a flight of stairs, or anything that requires moving their own body weight through a range of motion during activities of daily living.

Current research shows that the most important factor in a person's function is their strength capacity. Regardless of a person's age, they can experience significant strength improvement with a progressive resistance exercise program even into their eighth and ninth decades of life. Progressive resistance training means that the amount of weight used and the frequency and duration of training sessions is altered at various points in the program to accommodate for an individual's improvements. An article published in *The American Journal of Medicine*, shows that after approximately 18-20 weeks of progressive resistance training, an adult can add 2.42 pounds of lean muscle to their body mass and increases their overall strength by 25-30 percent. Anyone over the age of 50 should strongly consider participating in progressive resistance exercise.

A good way for people to start on a progressive resistance training program, especially for people who are relatively sedentary, is to use their body mass as a source of resistance for a variety of exercises. Exercises you can do using your own body weight include squats, standing up out of a chair, modified push-ups performed on your knees or against a wall, lying hip bridges, as well as non-traditional exercises that progress through a full range of motion, such as Tai Chi, Pilates, or Yoga. The simplest exercise is to go for a long walk with one or two pound weights in each hand. This is a form of weight bearing exercise combined with resistance. As we age, it is natural to want to reduce our activity, but it is important to resist the urge to become sedentary and do the opposite: get active!

Article by Dale Buchberger, DC, PT, CSCS

As we age, it is natural to want to reduce our activity, but it is important to resist the urge to become sedentary and do the opposite: get active!

APTS Recipe Box: Fishermen's Eggs

As stated in the Nutrition 101 article on the back page of this newsletter, it is very difficult to get all the vitamin D you need from food alone. But I came across this recipe that contains sardines and eggs, both of which are unusually pretty high in vitamin D. So, if you like both, you're in luck!

Ingredients: 125g can of sardines; 4 large eggs; 2 tsp fresh parsley leaves, finely chopped; 1/4 small white onion; 2 cloves garlic, minced.

Instructions: Preheat oven to 375 and place an ovenproof dish inside while you assemble the ingredients. Flake the sardines together with the parsley, garlic, and onion. Season generously with black pepper and tip into the heated ovenproof dish. Put in oven for 5 minutes. Gently crack the eggs into a bowl. Remove the sardines from the oven and carefully pour the eggs on top. Season generously and return to oven for 15 minutes until the eggs are cooked but "jiggly". Let sit for a few minute before serving so that they congeal further.

APTS Challenge: The first person to come to the office with a photo of themselves eating this recipe will get a free T-shirt!

Source: blog.paleohacks.com/fishermens-eggs-recipe

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Get Well...Get Active...Be Active

Newsletter Edited by Carolyn B. Collier, PTA

At Active Physical Therapy Solutions, we utilize the most cutting edge treatment and management techniques available. Our goal is to deliver the best possible healthcare in a friendly, caring, and well-organized environment. Our staff is here to provide active solutions to achieving your personal goals!

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Nutrition 101: How Much Vitamin D Do You Need?

Vitamin D plays an important role in protecting your bones and your body needs it to absorb calcium. It is essential to building strong, dense bones in children and keeping them strong and healthy as you age. If you don't get enough vitamin D, you may suffer bone loss, low bone density,

Women and me under the age of 50 require 400-800 international units (IU) daily, and those over age 50 need 800-1000 IU daily. Some people need more vitamin D. The safe upper limit of vitamin D is 4000 IU per day for most adults. There are 3 ways to get vitamin D: from sunlight, from food, and from supplements.

Your skin makes vitamin D from ultraviolet (UVB) rays in sunlight. Your body is able to store the vitamin and use it later. The amount of vitamin D your skin makes depends on the time of day, season, latitude, skin pigmentation, et al. Depending on where you live, vitamin D production may decrease or be completely absent during the winter. (This is us here in central NY!)

Many people tend to stay out of the sun because of concerns about skin cancer, and therefore cover up with clothing and use sunscreen or sunblock to protect their skin. The use of sunscreen or sunblock is probably the most important factor that limits the ability of the skin to make vitamin D. Even an SPF (sun protection factor) of 8 reduces the production of vitamin D by 95%! Because of the cancer risk from the sun, most people need to get vitamin D from other sources, including eating foods rich in vitamin D and taking vitamin D supplements.

Vitamin D is naturally available in only a few foods, including fatty fish like wild-caught mackerel, salmon, and tuna. Vitamin D is also added to milk and to some brands of other dairy products, orange juice, soymilk, and cereals. Check the food label to see if vitamin D has been added to a particular product, and how much. One eight ounce serving of milk usually has 25% of the daily value (DV) of vitamin D. The DV is based on a total daily intake of 400 IU of vitamin D. So a serving of milk with 25% of the DV of vitamin D contains 100 IU of the vitamin.

It is very difficult to get all the vitamin D you need from food alone. Most people need to take supplements to get enough of the nutrient needed for bone health. Before adding a vitamin D supplement, check to see if any other supplements, multivitamins, or medications you're taking contain vitamin D. Many calcium supplements also contain vitamin D.

There are two types of vitamin D supplements: vitamin D2 (ergocalciferol) and vitamin D3 (cholecalciferol). Both are good for bone health.

Vitamin D supplements can be taken with or without food. While your body needs vitamin D to absorb calcium, you do not need to take vitamin D at the same time as a calcium supplement.

To figure out how much vitamin D you need from a supplement, subtract the total amount of vitamin D you get each day from the recommended total daily amount for your age. For example, a 55 year old woman who gets 400 IU of vitamin D from her calcium supplement should take between 400-600 additional IU of vitamin D to meet the 800-1000 IU recommended for her age.

Vitamin D deficiency occurs when you are not getting the recommended level of vitamin D over time. Certain people are at higher risk for vitamin D deficiency, including:

- People who spend little time in the sun or those who regularly cover up when outdoors
- People living in nursing homes, institutions, or are homebound
- People with Celiac disease and inflammatory bowel disease
- People taking medicines that affect vitamin D levels such as certain anti-seizure medicines
- People with very dark skin
- Obese or very overweight people
- Older adults with certain risk factors

Talk to your healthcare provider if you have any of these risk factors or think you might be at risk of vitamin D deficiency.

Article by Carolyn Collier, PTA

Source: https://www.nof.org/patients/treatment/calciumvitamin-d/