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APTS Monthly



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NEW Office

Hours:

Monday - 8:00am -
5:30pm

Tuesday - 8:00am -
7:00pm

Wednesday - 8:00am
- 6:00pm

Thursday - 8:00am -
7:00pm

Friday - 8:00am -
5:00pm

Saturday - 8:00am -
1:00pm

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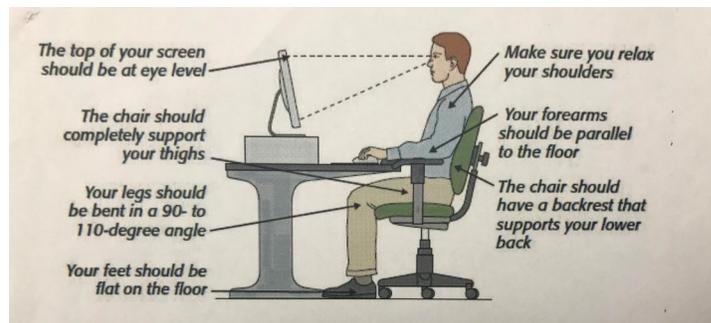
The Physical Therapist's Role in Ergonomics

What exactly is “ergonomics” and how do physical therapists play a role in this area? To understand this role, we must first define **ergonomics**: *an applied science concerned with designing and arranging things that people use so that the people and things interact most efficiently and safely.* This can be anything from your computer workstation to your snow shovel or gardening tools to cooking, playing a sport or an instrument, or even knitting! With proper ergonomics, one can greatly reduce the rate of repetitive strain injuries, whether it is from work or from hobbies.

Understanding the complexity of the human movement system within a specified environment takes unique skills. The education and experience of physical therapists make them ideal candidates to address ergonomic issues. Here are a few reasons why physical therapists are experts in

ergonomic evaluation and treatment:

- they have the ability to evaluate specific risk factors of the movement patterns of individuals in everyday activities.
- they are trained to design a customized program that can be tailored to an individual's physical ability and the unique environments in which they live, work, and play.



- they take into consideration the goals and motivation unique to the individual when designing ergonomic programs. For example, “I'd like to make it through my 8-hour work shift without pain in my shoulder” or “I'd like to be able to garden for 30 minutes without knee pain”.

- they are trained to re-evaluate progress of the individual and make changes to the plan to achieve success.

A physical therapist can do a basic ergonomic assessment of specific daily motions or activities at an initial evaluation in their office. They try to mimic the painful environment as best they can with the information that the patient provides, and then they can come up with a solution to decrease the pain. With more training, they can also do on-site visits at one's place of work, especially if any kind of repetitive motion is the source of an individual's pain and it only occurs using a specific piece of equipment. At an on-site visit, they could make recommendations on workstation modifications so that the employee can work in a pain-free environment.

Article by Tom Zirilli, PT



Seated scapular retraction, start position (left), end position (right)



Exercise of the Month: Seated Scapular Retractions

In today's technology-driven society, many of us are stooped over a computer or smart phone for long periods at a time. This "flexed-forward" posture takes a toll on our bodies, especially when sustained for hours most days of the week. The following exercise is the most basic postural exercise to start firing those upper back muscles that have been weakened by this forward flexed posture. It can be done anywhere you can sit down, so there are no excuses

to not try it!

Begin seated with feet on the floor, hands resting on thighs. Slowly and gently squeeze your shoulder blades (scapulas) down and together (towards your waist) as hands slide back on thighs. Hold chin gently tucked to limit forward head posture. Hold this squeeze for 2-5 seconds then relax back to starting position. Perform 10 repetitions 2-3 times throughout the day to start. As you get stronger and start tolerating it more, increase your fre-

quency of the exercise to 4-5 times per day at 10 repetitions, and then *gradually* build your repetitions up to 30 by reps of 5. You'll start to notice your posture improving!

As with any new exercise, stop when you feel increased pain, numbness, or tingling during or after performing the exercise. If your symptoms become worse or more intense, call your health care provider for an evaluation.



Here at APTS, we provide on-site First Aid using Active Release Techniques once a week to a local manufacturing company. In their first year on the program, we potentially saved them \$750,000 in workers compensation costs!

Practicing Good Ergonomics at Home

A great deal of effort has been made to make the workplace safer for employees, but are they using the lessons learned at work in the home?

When performing tasks such as gardening, cleaning, or cooking, be sure that you have the right tool for the job. Find tools that have a comfortable grip and limit the amount of bending required to complete the job. Using the wrong tools for the job causes undue stress on the body as well as prolonging the task, which further fatigues muscles.

Avoid lifting objects that are too heavy for your and ask for help when the load is heavier than one person should lift. Always keep the load close to your body when lifting. You should also remember to keep the back in a neutral posture, avoiding excessive flexion of the spine when bending. With activities like vacuuming or picking up objects off the floor, be sure to bend at the hips and knees and maintain good body mechanics.

When working in areas where you will be spending long periods of time, such as the kitchen, make

sure that your work surface is adjusted correctly to avoid overreaching or bending. A height below your elbows will accommodate most activities. Take frequent breaks and vary the tasks to avoid overloading muscles. A shock-absorbing mat can help reduce stress on the body with tasks that require static standing for long periods.

We don't always think about using proper body mechanics with everyday activities, but consistent use of ergonomic principles learned at work will become habit-forming and carry through with all activities in any setting.

Article by Tom Zirilli, PT

Does Your Workplace Have an Ergonomic Plan?

The news today is full of stories about companies needing to downsize to cut costs. These cuts often affect employees' job security and benefits. One cost many people don't always think about is expenses related to workers compensation. Much of this money is spent on musculoskeletal disorders (MSD's). These include injuries to muscle, nerves, tendons, ligaments, joints, cartilage, and spinal discs, and often occur from excessive and/or repetitive motions. It is estimated that workers compensation expenses cost U.S. industry up to \$60 billion in total cost. It is estimated that

each incidence of a MSD costs \$12,000, and if surgery is required, this cost can increase to \$43,000.

A number of factors contribute to the increase in MSD's, including an aging workforce, a sedentary lifestyle, computer work, stress, and the increased diversity of the work force. In general, we have an older workforce with a long history of performing repetitive work who are becoming less active at and outside of work. Employees come in a variety of shapes and sizes that makes designing a workstation for the "average" person difficult.

Decreasing the cost associated with MSD's must start with a comprehensive ergonomics program addressing the risk factors for these injuries. The Occupational Safety and Health Administration estimates that an effective ergonomics program will result in 3 million MSD's prevented over 10 years, or \$300,000 per year. That's a savings of \$22,000 for each MSD prevented and \$9 billion saved each year by U.S. industry. Any company willing to prioritize employing injury prevention will ultimately benefit financially from their efforts.

Article by Tom Zirilli, PT



Posture at Your Workstation



Does your job require you to sit for prolonged periods of time? Have you noticed increased pain in your low back after sitting all day? Your workstation setup and

poor sitting posture may be the cause of your pain. Preventing back pain from the start is much easier than dealing with the symptoms after you begin feeling them. There are several strategies to help limit the stress on your spine while sitting at work.

A good place to start is the chair you sit in every day. Be sure that you have an ergonomic chair that fits your body type. There are several styles on the market with multiple features. You want to find a chair that has a seat cushion that is 1-inch wider than your hips on each side. The cushion should allow you to tolerate sitting for approximately 60-120 minutes comfortably. Other features to look for are the ability to adjust the height of the backrest and adequate lumbar support. Find a chair that allows you to recline backwards slightly to help shift your weight throughout and distribute the load over different parts of your spine. You don't want a chair that locks you into one position all day. This will become uncomfortable as the day goes on.

Other parts of the body also need to be aligned to maintain a neutral body position. Good overall body alignment will

help to further reduce stress on the body and decrease the risk of developing a repetitive strain injury.

Proper setup of your work station does not always have to involve major changes to your desk. Cornell University Ergonomics Department gives several simple changes you can make to your workstation:

- Positioning your computer monitor directly in front of you
- Keeping a document holder in front of or next to your monitor to limit eye and neck strain
- Place frequently used objects close to your reach to avoid excessive motion to access

In addition, the Occupational Safety and Health Administration (OSHA) lists several suggestions for ideal body alignment from head to toe:

- Hands, wrists, and forearms are straight, in-line, and roughly parallel to the floor.
- Head is level or bent slightly forward, forward-facing, and balanced. Generally it is in line with the torso.
- Shoulders are relaxed and upper arms hang normally at the side of the body.
- Elbows stay close to the body and are bent between 90 and 120 degrees.
- Feet are fully supported by the floor or a footrest maybe used if

the desk height is not adjustable.

- Back is fully supported with appropriate lumbar support when sitting vertically or leaning back slightly.
- Thighs and hips are supported by a well-padded seat and generally parallel to the floor.
- Knees are about the same height as the hips with the feet slightly forward.

Following these recommendations can help to limit stress on the body. Even with a good ergonomic chair, sitting all day will increase pressure on the discs in your low back. Frequent breaks to unload the spine are a must for back health. The time it takes to do this is less than you would think; short breaks of 10-20 seconds are enough to relieve some of the stress on the discs. This can be done once every hour and will have a cumulative effect on the back. Frequent breaks to perform simple stretches to your fingers, hands, arms, and torso are also beneficial.

Sitting all day at work does not have to lead to a future of body or back problems. Following a few simple strategies will go far in saving your body from injury. Be sure to communicate with your employer if there are any questions or concerns you have regarding your workstation. Most employers will be willing to make accommodations for you in order to make sure you are comfortable and productive throughout the day.

Article by Tom Zirilli, PT

Not only do you want to protect your back throughout your work day, but other parts of the body also need to be aligned properly to maintain a neutral position to reduce stress on the body.

APTS Recipe Box: AIP Grain-Free Crispy Fried Chicken

AIP stands for Autoimmune Paleo Protocol, and it is designed to avoid even the Paleo-friendly foods that could contribute to inflammatory issues. (See page 4 for more info) This chicken is golden brown, perfectly crispy, and decadently tender. And you can't really tell the difference from other fried chicken!

Ingredients: 4-6 pieces of chicken, 1 cup tapioca flour/starch, 1 3/4 tsp sea salt, 1/4 tsp dried sage, 1/8 tsp turmeric, 1/8 tsp garlic powder, 1/2 cup lard (or oil), leaves from 3 sprigs of fresh thyme for sprinkling. *Can also use 1/4 tsp ground black pepper, and paprika in place of turmeric if you're not AIP/nightshade free.*

Instructions: Preheat the oven to 350 F. Dry all of the moisture off of the chicken pieces and set aside. Add the tapioca starch, sea salt, sage, turmeric, and garlic powder to a Ziploc bag. Seal and shake until all the ingredients are well combined. Add 2 pieces of chicken to the flour mixture in the bag. Seal and shake until the chicken is evenly coated. Gently shake the chicken as you remove it from the bag to shake off any excess flour. Repeat with remaining chicken, two pieces at a time. In a large cast iron skillet, heat the lard (or oil) over medium-high heat until it spatters when a drop of water is added to the pan. One by one, using tongs, add the

chicken to the hot oil. Do not crowd the skillet! Do this in batches if you're using larger pieces of chicken. Fry them until the breading is crispy and golden brown, about 3 minutes each side. Remove the chicken to a wire rack placed on a baking sheet. Place the baking sheet in the oven and bake the chicken until it's cooked through, about 20-30 minutes. Sprinkle the chicken with fresh thyme leaves if desired. *Make this recipe into buttermilk fried chicken by marinating the chicken overnight in enough buttermilk to cover the meat before following the rest of the recipe.*

Source: <http://www.strictlydelicious.com/amazingly-crispy-paleo-fried-chicken-grain-free/>





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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!

...BECAUSE LIFE SHOULD BE

ACTIVE!

Nutrition 101: The Anti-Inflammatory Diet, Part II

Last month, I gave you the background and foundation of the anti-inflammatory diet. This month, I will go into more detail on the 15 best anti-inflammatory foods you can add to your diet and why they are considered good for you.

Green leafy vegetables. Fruits and vegetables are rich in antioxidants* that restore cellular health, as well as anti-inflammatory flavonoids.

Bok choy. Also known as Chinese cabbage, bok choy is an excellent source of antioxidant vitamins and minerals.

Celery. Benefits of celery include both antioxidant and anti-inflammatory abilities that help improve blood pressure and cholesterol levels, as well as prevent heart disease. Celery seeds also help lower inflammation and fight bacterial infections.

Beets. The antioxidant betalain gives beets their signature color and is an excellent anti-inflammatory.

Broccoli. It's an antioxidant powerhouse with key vitamins, flavonoids, and carotenoids which work together to lower oxidative stress in the body and help battle both chronic inflammation and the risk of developing cancer.

Blueberries. Found in citrus, olive oil, and dark-colored berries, quercetin is a flavonoid (a beneficial substance or phytonutrient that's prevalent in fresh foods) that fights inflammation and even cancer. The presence of quercetin is one of the health benefits of blueberries. One study found that consuming more blueberries slowed cognitive decline and improved memory and motor function.

Pineapple. After being used for years as part of an anti-inflammatory protocol, bromelain—a digestive enzyme from pineapples—is observed to have immune-modulating abilities. Bromelain has been shown to stop blood platelets from sticking together or building up along the walls of blood vessels—both known causes of heart attacks or strokes. Pineapple is filled with phytonutrients

that work as well as many medicines do to reduce symptoms of some of the most common illnesses and conditions we see today.

Salmon. It's an excellent source of essential fatty acids, especially omega-3s, which are some of the most potent anti-inflammatory substances. Research shows that omega-3s reduce inflammation and may help lower risk of chronic diseases such as heart disease, cancer, and arthritis. Omega-3s are some of the most potent anti-inflammatory substances, showing consistent relief of inflammation.



Bone broth. It contains minerals in forms that your body can easily absorb: calcium, magnesium, phosphorus, silicon, sulphur, and others. They contain chondroitin sulphates and glucosamine, compounds that reduce inflammation, arthritis, and joint pain. It also contains collagen and the amino acids proline and glycine that can help heal a leaky gut and the damaged cell walls of the inflamed gut.

Walnuts. The antioxidant and anti-inflammatory benefits of walnuts help protect you against metabolic syndrome, cardiovascular problems, and type 2 diabetes. Some phytonutrients found in walnuts are very rare in any foods, yet valuable. And they are also high in omega-3 fatty acids. Add them to green leafy salads drizzled with olive oil for a satisfying anti-inflammatory meal, or grab a handful for a snack.

Coconut oil. Lipids in coconut oil are full of strong anti-inflammatory compounds. In one study, the high levels of antioxidants present in virgin coconut oil reduced inflammation and healing arthritis more effectively than leading

medications. It can be used for topical preparations as well as being excellent for sautéing anti-inflammatory vegetables.

Chia seeds. These offer both omega-3 and omega-6, which should be consumed in balance with one another. The ability of chia seeds to reverse inflammation, regulate cholesterol, and lower blood pressure make it extremely beneficial to consume for heart health.

Flaxseeds. An excellent source of omega-3s and phytonutrients, flaxseeds are also packed with antioxidants. Lignans are unique fiber-related polyphenols that provide us with antioxidant benefits for anti-aging, hormone balance, and cellular health. Polyphenols support the growth of probiotics in the gut and may also help eliminate yeast and candida in the body.

Turmeric. Its primary compound, curcumin, is its active anti-inflammatory component. A study found that curcumin is far more potent than aspirin and ibuprofen as an anti-inflammatory and anti-proliferative agent. Turmeric is highly effective at helping people manage rheumatoid arthritis.

Ginger. Used fresh, dried, or in supplement form and extracts, ginger is another immune modulator that helps reduce inflammation caused by overactive immune responses. Ayurvedic medicine has praised ginger's ability to boost the immune system before recorded history. It believes that because ginger is so effective at warming the body, it can help break down the accumulation of toxins in your organs. It is also known to cleanse the lymphatic system, our body's sewage system.

**The umbrella category of antioxidants includes a great deal of substances and, in general, they fight to repair the cell damage caused by inflammation.*

Article by Carolyn Collier, PTA

Source: <https://draxe.com/anti-inflammatory-foods/>