

ACTIVE P.T. SOLUTIONS  
...BECAUSE LIFE  
SHOULD BE ACTIVE

# APTS Monthly



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MARCH 2018

## 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

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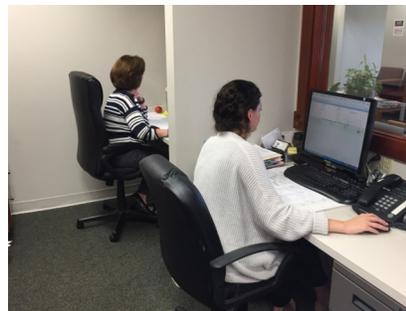
## Why Sitting is Killing You

Modern conveniences, technologies, chairs, remotes, etc., are designed to make our life easier but all of them encourage sitting. Chronic sitting steals our opportunities of habitual movements we used to make before we lived without modern conveniences. Workplace office design, recreational activities, and entertainment devices with remote controls are all designed to minimize moving. This is why the average American spends 9.5 hours sitting in a given day. Research dating back to the Apollo Space Projects has shown that the human body declines rapidly when sitting for long periods of time. Society is on diverging pathways. Technological efficiency causes us to sit for excessive periods of time while the "fitness craze" has us performing P90X, Insanity, and Cross-fit programs promising weight loss and a muscular body. The reality and science clearly show that exercising one time per day does not prevent the effects of sitting. How many people do you know that "exercise" and are still overweight? You simply cannot neutralize 9.5 hours of sitting by going to the gym for 60 minutes 3 or 4 days per week.

The human body was designed to be a perpetual motion machine moving all day, every day, including weekends. Gravity can keep the body tuned with daily movements used in activities of daily living. Move with purpose, go somewhere, do something, not on a machine that has you spinning in place. The concept of chronic movement is now referred to as NEAT, or *nonexercise activity thermogenesis*. Simply put: move often for as long as possible. Instead of chronically sitting we should be chronically moving.

As kids growing up in a pre-technology world, NEAT was part of our daily life. Examples of NEAT from my own upbringing are walking 1.7 miles each way to school, riding my bike 4.5 miles each

way to the Babe Ruth field for games, and walking 1.2 miles to the cinema or shopping mall. We walked or rode our bike everywhere we could. We stayed outside until dark running, walking, or playing basketball. We were in constant motion. Then came cable television and the genesis of the sedentary society. Some have said that sitting is the new smoking. In the '70's we were moving 8-9 hours per day. In 2016 we are sitting 9



-10 hours per day. It is estimated that, currently, 2 out of 3 people in the United States are unhealthy. Sitting contributes to this statistic.

Dr. Joan Vernikos, a former NASA researcher and author of the book *Sitting Kills, Moving Heals*, has shown that sitting produces similar aging affects to being in space. Sitting accelerates the aging process, while moving reverses the process. The effects of an anti-gravity environment that the astronauts were exposed to reversed once they returned to the gravity of earth.

Introducing NEAT back into your day without formal exercise can also reverse the effects of aging such as high blood pressure, excessive weight gain, type-II diabetes, etc. A 2004 study of an Amish society revealed that Amish women walked ~14,000 steps per day and the men took ~18,000 steps per day or roughly 7-8 miles per day of walking. This population had lower levels of cancer and obesity. The funny thing was

that they didn't have one treadmill or a gymnasium chain available to them.

There are simple ways to fit NEAT into your day without giving up your automobile. If you conduct meetings in a conference room, move the meeting outside and have a walking meeting. If you can't move outside, have a standing meeting with higher tables and a footrest. Standing meetings are healthier, faster, and more efficient. If you talk on your cell phone, why sit at a desk? After all it is a "mobile" phone, right? Get mobile and go for a walk down the hall or on the grounds. Take a 1-2 minute micro-break every 20-30 minutes to either, stand, stretch, walk, or perform a task that doesn't require sitting. When you go grocery shopping or to work, park at the space furthest from the door instead of closest to the door. Use the stairs instead of the escalator or elevator. Look for opportunities to walk. These opportunities are available to us every day but we pass them up for the sake of convenience.

Lastly, the national average for television watching is 5 hours per day. This can be time for stretching, abdominal "core" work, or performing the Tibetan rites; *anything* but sitting on the couch. There are virtually unlimited opportunities for movement throughout the day, from housework to gardening to cooking to even just standing up every 10-20 minutes during the course of the day. I highly recommend the book *Sitting Kills, Moving Heals* by Dr. Vernikos. It will give you a different perspective on the need to get up and move and the difference it can make in your life.

Article by Dale Buchberger,  
DC, PT, CSCS

## Exercise of the Month: Standing Hip Flexor Stretch



Standing hip flexor stretch for the right hip; start position (left), stretch position (right)

Your hip flexor musculature is located in the front of your hip and actually connects to the anterior side of your lower back. These are the muscles that bend your hip to 90 degrees or more (as in marching in place), and they are also the muscles that get tight when sitting for long periods of time (because they are staying in a contracted position). When these muscles are tight, not only do they tighten the front of the leg, but they also pull on your lower back. Keeping this muscle group limber helps with a lot of lower back problems, and it's very easy to do

this stretch anywhere!

Start with foot flat on a table, step, or stool with the knee bent. If your balance is not great, you will want to perform near or hold onto a counter, table, or other sturdy piece of furniture. The leg that is on the floor should remain straight and the knee and the foot should be pointing straight forward. While keeping an upright posture, lunge forward with your hips (don't lean forward with your shoulders) further bending your knee on the table, step, or stool. To increase this stretch, tighten your abdominals by "tipping" your

pelvis upward. You can also intensify the stretch further by reaching your arm (on the same side as the foot on the floor) towards the ceiling. Do not lean too far forward or backward during this stretch.

Hold this stretch for 30 seconds on each leg and perform 2-3 different times per day to keep your hip flexors flexible. Your back will thank you!

*The concept of chronic movement is now referred to as NEAT, or nonexercise activity thermogenesis. Simply put: move often for as long as possible.*

## March is Multiple Sclerosis Awareness Month

Multiple sclerosis, or MS, is central nervous system disorder in which damage to the myelin (the fatty substance that surrounds and insulates nerve fibers) and the nerve fibers themselves interferes with the transmission of nerve signals between the brain and spinal cord and other parts of the body. It is considered an immune-mediated disease in which the body's immune system attacks the myelin. The disease is thought to be triggered in a genetically sus-

ceptible individual by a combination of one or more environmental factors.

The result of nerve impulses being distorted or interrupted causes a wide array of symptoms, including, but not limited to, fatigue, walking difficulty, spasticity, numbness or tingling, weakness, vision problems, dizziness or vertigo, and pain. Symptoms are variable and unpredictable, and no two people have exactly the same symptoms.

If symptoms begin to interfere with daily activities, physical therapy can help an individual with MS feel and function at his or her best, staying mobile, active, and safe. Some things a physical therapist will work on are walking, mobility, strength, balance, posture, fatigue, and pain. This will include an exercise program, gait training, and training in the use of an assistive device (such as a cane, walker, or wheelchair). To learn more about MS visit

[www.nationalmssociety.org](http://www.nationalmssociety.org)



## APTS is 9 Years Old!

Active Physical Therapy Solutions first opened its doors on March 23, 2009, at its first location on Westlake Ave in Auburn. Now, 9 years later, we've enjoyed our new location on Columbus Street for the past 3 years. Thanks to all

of you for your patronage, support, and referrals! It is mostly word-of-mouth that gives us business, as well as patients that return year after year for treatment of various conditions. Please don't hesitate to contact us for anything, whether it be

physical therapy or chiropractic care, speaking events, community service events, sponsorship, or student shadowing. We look forward to serving the Auburn community for years to come!

# Lower Back Pain? Look to the Hips!



If you have had an episode of lower back pain no matter how short in duration you are among 80% of the

population. That's right: 80% of the population will experience an episode of lower back pain at some time in their life! Lower back pain does not discriminate; it affects males and females equally. However, if you are between the ages of 30-50, you have a greater chance of experiencing lower back pain.

Between the ages of 30-50 our life style typically changes and there is a reduction in activity level. With this reduction in activity we see a weight gain and a corresponding weakness of the trunk, back, and hip muscles. This, combined with our growing sedentary technological society, and we are all setup for the beginning of chronic lower back pain. As the trunk, back, and hip muscles get weaker they have to work harder to handle the growing weight. This results in greater fatigue occurring much quicker. Once the muscle support has been exhausted, the body relies on passive structures to hold the spine together. Once the passive structures (such as the ligaments and intervertebral discs) become the main support structures, two things happen very rapidly: (1) these structures wear out and degenerate at an accelerated rate, and (2) they become tighter in an attempt to create more support. The

longer these processes are given to proliferate the more likely it is that pain will follow. Pain of a chronic nature is also like the "idiot" or warning light in your car. Once the light goes on, it is too late. The damage is done and it is in need of repair.

So what are the key areas that are problematic and what can be done to prevent the cycle from proliferating? First of all, strengthening your back is a game of endurance. It is not how much you can lift once, it is how many times you can perform a perfect task. Fixing these problem areas is more a game of finesse and control, not brut force. There are a couple of key problematic areas. Key weaknesses commonly occur in the hip flexors (front of the hip and thigh), hamstring (back of the thigh), gluteal (buttock), and lower back muscles. Tightness commonly occurs in the calf, hamstrings, hip rotators, and hip flexors.

These areas have become fairly predictable because of the postural regression that has occurred in our society. We spend an increasing amount of time sitting, either at home, at work, or in the car. This chronic seated posture combined with decreasing activity levels produces the patterns previously mentioned. When the strength and flexibility of the hips and legs is gradually reduced, the lower back takes up the slack and eventually gives out.

Here are a few simple ways to test your risk of developing lower back pain. From a seated position, see if you can cross one leg over the other. Grab your knee with both hands and pull

your knee towards your chest. If you can't do this, your hip rotators have gotten too tight. Next, stand on one leg and bend your knee slightly. See if you can stand on that leg for greater than 20 seconds. Do this on the other leg as well. If you can't perform this task, then your hips and legs have weakened to the point that your body has found other ways to compensate. Lastly, if you feel the need to use a handrail to get up and down stairs, then you have lost the ability to balance well on one foot. Since walking takes place on one foot at any given time, this is an important asset in preventing lower back pain.

Walking is the best exercise for most conditions. In order to get both an aerobic and weight loss benefit to a walking program, it needs to be at least 4-5 days per week for 30-45 minutes at a time. It also needs to be continuous. You can't stop in the middle to chat with the neighbors. Just wave and keep walking!

There are several good resources for stretching and strengthening exercises for the lower back and hips. The book I recommend is *Muscle Medicine* by Rob DeStefano, DC, and Bryan Kelly, MD. This book does a nice job explaining various muscle related injuries and has a good selection of simple exercises for both strength and flexibility. If you are interested a simple resource for home based injury prevention and self-treatment, then this book would be a great choice.

Article by Dale Buchberger, DC, PT, CSCS

**Key weaknesses commonly occur in the hip flexors (front of the hip and thigh), hamstring (back of the thigh), gluteal (buttock), and lower back muscles. Tightness commonly occurs in the calf, hamstrings, hip rotators, and hip flexors.**

## APTS Recipe Box: Shamrock Shake

Celebrate St. Patrick's Day with a healthy version of your favorite shake! Naturally green, ultra-creamy, and full of healthy fats, this shake is sure to become a year-round favorite. It's like a detox smoothie filled with vitamins and nutrients, and it's so easy to make.

**Ingredients:** 1 avocado, 1.5 cups ice, 1 cup spinach, a few drops of peppermint oil or extract, stevia to taste, cacao nibs (optional).

**Instructions:** Add all ingredients to blender and mix until smooth. Additional liquid, such as water or almond milk, may be required to allow for easier blending. Serve

chilled in a tall glass, with or without ice.

Makes 1 shake.

Source: [www.drhardick.com/shamrock-shake](http://www.drhardick.com/shamrock-shake)



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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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**ACTIVE!**

## Nutrition 101: Chocolate, Coffee, and Alcohol

With St. Patrick's Day and Easter on the horizon comes the temptation for alcohol and chocolate. And our society tends to live on coffee. But are these indulgences really "paleo"?

**Chocolate** is the product of fermented and processed cocoa beans, which are the seeds of the cacao tree. Cocoa solids and cocoa butter are the two main ingredients taken from the fatty cocoa bean. Cocoa solids on their own are quite bitter, so varying amounts of sugar and flavorings are often added to improve its palatability. Milk chocolate is a cheap preparation loaded with chocolate, sugar, and milk solids and is not the best choice.

**Pros of chocolate consumption:** Dark chocolate is a good source of iron, magnesium, copper, and manganese. Dark chocolate is usually low or very low in sugar. It can be used to effectively fill a craving for sweet foods. It is a source of antioxidants and can help repair free radical damage. Cocoa butter on its own is a healthy fat as it's highly saturated and low in polyunsaturated fat. It features a mild chocolate taste and is great for preparing healthy desserts.

**Cons of chocolate consumption:** Chocolate is high in phytic acid, which binds to minerals like calcium, iron, and magnesium and makes them unavailable to the body. Even very dark chocolate usually contains some sugar, which is a toxin if consumed in high amount. Many chocolate preparations contain soy lecithin as an emulsifying agent (which can cause bloating, diarrhea, skin rashes, nausea, and stomach pain), though the amounts are usually very low. Some people can't control themselves when eating sweet foods and chocolate can be a trigger for an unhealthy sugar binge. Chocolate contains oxalates, which inhibit calcium absorption and can contribute to the formation of kidney stones. (Though spinach, beets, and parsley all have higher concentrations of oxalates than cocoa nibs.)

When it comes to chocolate, the darker the better. Try to go with dark chocolate made with at least 70% cocoa solids or white chocolate that is low in sugar. Raw cocoa nibs can be enjoyed on their own by those that like a bitter taste.

**Coffee** is a brewed drink prepared from roasted coffee beans, which are really the seed of the coffee plant. Coffee contains many psychotropic compounds as a means of protection for the plant. It has a stimulating effect, mainly

from its caffeine content and this is where dependency and withdrawal problems can emerge. Many people rely on coffee for energy to start the day as they lack sleep and are chronically stressed. Many studies have shown benefits from moderate coffee consumption over no coffee at all, but many have shown just about the opposite for other health markers so it's really a mixed bag. The reaction to coffee is different from person to person; some people have no problem with it at all while others will release unhealthy levels of cortisol and become over-stimulated and dependent.

**Pros of coffee consumption:** It improves cognitive performance, reaction time, and short-term recall. Coffee stimulates peristalsis and can help people who suffer from constipation. Moderate coffee consumption seems to be protective against cardiovascular disease, according to the latest studies. Coffee contains beneficial antioxidants like methylpyridinium. Coffee seems to offer protection to the liver and has been found to reduce the incidence of liver cancer.

**Cons of coffee consumption:** Caffeine can trigger the release of unhealthy levels of cortisol in some people. Chronically elevated cortisol levels are bad for a number of reasons, including weight gain, disturbed sleep patterns, and a depressed immune system. Coffee hinders iron absorption, which could further exacerbate iron deficiency. Regular coffee consumption seems to decrease insulin sensitivity, which can translate to weight gain and increased risk of developing type 2 diabetes. Many people believe that coffee is a diuretic, which means it makes you lose free water and can therefore lead to dehydration and electrolyte imbalances. Coffee also irritates the tissues of the gastrointestinal tract and can exacerbate those with GI issues such as ulcers, IBS, or gastritis.

Many people who have problems with regular coffee consumption report that they do better with decaffeinated coffee. Since the main problems associated with coffee come from the caffeine, decaffeinated coffee is a good long-term choice. Though it still contains some amounts of caffeine, it is very limited compared to regular coffee.

**Alcohol** can be divided into 3 categories: beer, wine, and spirits. Beer and wine are the direct product of sugar or starch fermentation from grains like barley or wheat (beer) and plants like grapes (wine). Barley contains gluten. Spirits

are the product of fermentation followed by distillation, which is why their alcohol content is much higher. They are often the product of grain fermentation but the distillation process eliminates any residues or proteins from grains which makes them completely gluten-free.

**Pros of alcohol consumption:** Moderate alcohol consumption is a good way to wind down, relax, and have a good time in a social environment. Alcohol is associated with a lower risk of cardiovascular disease. Moderate alcohol consumption improves insulin sensitivity (the relationship between how much insulin needs to be produced in order to deposit a certain amount of glucose). Many studies have found positive health benefits from moderate alcohol consumption over none at all. Alcohol may reduce the risk of infection with *H. pylori*, the bacteria that causes ulcers.

**Cons to alcohol consumption:** Alcohol, like fructose, is a toxin for the liver. In excess, it causes damage to the liver and can lead to alcoholic liver disease. Studies have shown that alcohol becomes particularly damaging to the liver when a high amount of polyunsaturated fat is consumed. (Paleo is already very low in polyunsaturated fats which makes the diet, to an extent, protective of the damage of alcohol on the liver.) Alcohol is a drug that causes drunkenness to a loss of inhibitions, coordination, and fine motor skills. This can mean all sorts of trouble, from accidents to inappropriate behaviors. Alcohol can be addictive, causing all kinds of health and social problems. Alcohol acts as a diuretic and can cause dehydration and electrolyte imbalances.

Wine is probably the best option to enjoy some alcohol. Not only are our bodies probably adapted to the level of alcohol found in them, red wine is also a source of antioxidants like resveratrol. The second best option would be pure spirits as they don't contain any toxic grains or added sugar. Their alcohol content is usually pretty high so a little goes a long way. Try to stay away from sugared cocktails or spirits and keep your alcohol consumption low and sporadic.

If you enjoy these foods, if you are not allergic to them, if they help you relax, and if you can consume them sporadically without excess, then they can in fact be a part of the modern Paleo diet.

Source: <https://paleoleap.com/chocolate-coffee-alcohol>