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APTS Monthly



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Monday -

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Thursday -

8:00am - 5:30pm

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8:00am - 4:00pm

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Top Injuries at the Gym

As the summer comes to an end, many of us will turn our exercise endeavors to indoor facilities like our basement or a local gym such as the Auburn YMCA or Planet Fitness. When this happens, our exercise routine usually changes and we introduce new exercises or exercise classes. While altering our exercise pattern can be good it can also expose us to gym related injuries. The good news is that with a little thought most of these injuries can be prevented.

First, we need to identify the culprits that usually cause the injuries. We are at the top of that list! More often than not, you and I are our own worst enemies. If you haven't been in the gym for some time, start easy. Don't get into a competition with your friend or the person next to you. Formulate a plan to get into shape and stick with it! If you need help putting a plan together, recruit help. Even professional athletes have coaches. For instance, the Auburn-Y has several personal trainers that can help put a plan together for you.

Warming up before exercising is critical. Take 10-12 minutes to ride an exercise bike, walk on a treadmill, or use an elliptical. This should be done easily and gradually. The idea is that by the time you hit 12 minutes, you should just be starting to sweat and your heart rate should be elevated above baseline.

Changing the intensity of your exercise before you are ready is one of the more common reasons for injuries. It takes 4 weeks of exercise for your nervous system to learn how to perform the task at hand correctly. Many people confuse this with getting stronger. The human response is to increase the weight or intensity. This will most surely lead to injury. It takes approximately 8 weeks for you to actually build muscle. When training, think about working in 8-week cycles.

The number one area of the body that gets injured in the gym is the shoulder. Because of its advanced range of motion it is exposed to many different injuries. The strength requirements for the shoulder are also higher because of its inherent instability. Unfortunately, most of us don't think about strengthening our rotator cuff as we walk into the gym.

Gym activities that put our shoulders at risk include overhead shoulder press, dips, barbell bench press, machine chest press, lat pulls behind the neck, pec deck with too much weight, upright rows, etc. Avoiding these movements or having



your personal trainer modify them for you can greatly reduce the risk of injury. If you are using machines, keep the weight at a level that allows you to perform 12-15 repetitions. Machines direct the force to the joint, and over-loading with heavy weight will ultimately damage the shoulder. Keeping the weight below maximum and concentrating on good technique will help you accomplish your goal and preserve the shoulder. If you are using free weights, avoid using a heavy weight that requires the use of momentum and induces poor form; instead, perform the exercise using a controlled motion and concentrate on good form. Two or three simple rotator cuff exercises performed before your

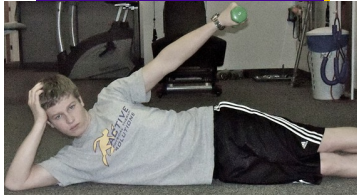
workout can pay a great dividend in injury prevention down the road.

Lower back pain is another frequent complaint in the gym. Injuries can range from muscle strains to more severe injuries such as lumbar disc herniation. The reason this injury is so prevalent is due to the fact that so many exercises can put the lower back at risk. The second and most prominent reason is that most of us go into the gym with lower back weakness, poor flexibility, and/or some underlying problem like pre-existing degenerative disc disease or degenerative joint disease. After all, that's why we are in the gym: to get stronger and more flexible! Some would call this the illusive obvious. Instead of starting your exercise routine with lifting weights, shift the focus to your weaknesses and deficiencies. Build some general flexibility and core and lower back strength. This will give you a better foundation from which to exercise. If you have an existing back issue, you should let your personal trainer know and you should speak to your healthcare provider about any potential risks before undertaking a stressful exercise routine.

The lower back and the shoulders are tied together through their specific muscle attachments. This is why they frequently act up together. It is also why they are the two most common injuries in the gym. Both are affected by inactivity and sedentary lifestyle. So if you start back to the gym after a long layoff, start slow and get some professional advice. Work on your deficiencies first and progress from there. No one gets in shape overnight! Be in it for the long haul.

Article by Dale Buchberger,
DC, PT, CSCS

Exercise of the Month: Sidelying Shoulder Abduction



Sidelying shoulder abduction, start and end position (top), exercise position (bottom)

This exercise is one of the first exercises we give patients who come in with shoulder problems. It is part of the "Buchberger-12" series of 12 exercises for the shoulder and is an important exercise in strengthening the rotator cuff muscles. "Abduction" means a type of movement that draws a limb away from the body. There are several variations to this exercise; this is the most basic form for beginners.

Lie on your side with the af-

ected arm up and your unaffected arm supporting your head. Keeping the elbow fully extended, raise the arm about 30-40 degrees off of your hip with your palm facing the floor. Slowly lower. The movement should be slow and controlled throughout; there is no need to hold at the top of the movement. Be sure not to lift your arm past 90 degrees. Perform 2 sets of 10-15 repetitions to start, gradually working up to 30 repetitions.

When 2 sets of 30 repetitions no longer fatigues you, you can add a 1-pound weight and drop the repetitions to 12, working your way back up to 30. You may continue this progression with 2 or 3 pounds as well, but do not use a weight heavier than that until you consult your health care provider.

It takes 4 weeks of exercise for your nervous system to learn how to perform the task at hand correctly. Many people confuse this with getting stronger. But it takes approximately 8 weeks for you to actually build muscle.

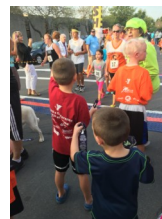
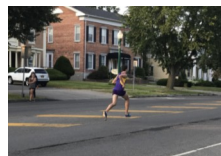


The Downtown Auburn Mile: A Success!

The Downtown Auburn Mile sponsored by Active Physical Therapy Solutions took place on Friday, August 25, beginning at the Pettigrass Funeral home and ending at Prison City Pub and Brewery. It was a beautiful, albeit cooler, summer evening for a race. APTS sponsored Josh

Cuddy, senior at Auburn High School, to run for us, and he won the race with a time of 4:32.07! Carolyn, Linda, and Maggie walked with their families and strollers, coming in dead last! Carolyn's 5-year-old daughter and husband decided to run it at the last minute, and finished with a

time of 9:55! Cara and Tom and their families helped out with handing out ribbons at the finish line. Mere Mortals Band was playing Music on the Mall on Exchange Street after the race, so there was a great turnout for that, too!



The Do's and Don'ts of Weight Training



If you are venturing into the gym after a long hiatus here are a few simple tips to help your return to activity be a safe and injury free one. First, have a goal and a plan. Remember to start slow and expect soreness, not pain. In the first two weeks back to the gym, walk away from the table hungry. That means to leave the workout knowing you could have done more, but don't. Drink plenty of water throughout the day and give yourself a few minutes a day to perform some light stretching. Initially, your muscles and tendons will stiffen in the early weeks of exercise.

Remember you can make all of the changes in the world, but if you continue to lift beyond your weak link and you continue to lift incorrectly, it won't be a matter of if you get hurt, but when. Technique is everything. Do it right or don't do it. Last but not least, always weigh risk versus benefit. If the risk of injury is greater than the benefit, it is an injury waiting to happen.

Lets start with a staple of many weight training programs: the straight bar bench press. The straight bar essentially makes it easier to lift more weight. Therefore you are exercising outside your weakest

link (shoulder) when using the straight bar to bench press. The straight bar bench press weakens the rotator cuff and damages the shoulder and acromioclavicular joint (ACJ). The straight bar bench press motion places unusually high stress to the ACJ. Straight bar bench pressing with excessive weight causes the glenohumeral joint (shoulder) to become a weight bearing joint. This results in premature degeneration, since the shoulder joint is not designed to be a weight bearing joint.

The simple fix here is to replace the straight bar with dumbbells. Remember just replacing the straight bar bench press with dumbbells does not guarantee prevention of a shoulder problem or resolution of your existing shoulder problem. Performing the dumbbell bench press correctly with good technique increases the chance of success in resolving or preventing a shoulder problem.

The "lat pull" machine is another common exercise used in the gym and another exercise that commonly causes shoulder and neck injuries when performed incorrectly. The "lat pull down" should not be performed by pulling the bar behind the head. This compromises the rotator cuff and the neck. Instead the bar should be pulled down to the front and toward the chest. This will accomplish the goal of improved strength while reducing risk of injury.

Another problematic exercise from the past is known as the upright row. It is performed with the hands close together on a bar and the bar is lifted straight up towards the chin. This places the rotator cuff in a position of impingement and increases the load on the AC joint. The increased load and impingement results in

gradual tearing of the rotator cuff and premature degeneration of the AC joint. A combination of exercises will be needed to replace the upright row. Exercises such as shoulder shrugs, seated rows and one arm bent over rows can successfully replace the upright row and the reduce risk of shoulder injury.

The last culprit in the gym is the seated behind the neck press. This exercise places the shoulder at risk of instability and shoulder impingement syndromes. It also places excessive load on the shoulder joint and the AC joint resulting in premature degeneration. It places the neck in a compromising position of forward flexion and may result in neck strain, cervical spine disc herniation, and premature degeneration.

The nuts and bolts of premature degeneration in the shoulder is that total shoulder replacement surgeries are not as perfected as the knee or hip replacement. This means that if you become a total shoulder replacement candidate due to years of excessive and incorrect lifting practices, you are all but guaranteed to lose some degree of function and quality of life as a result of the surgery. Unfortunately, I have seen patients in their mid-forties that were total shoulder replacement candidates because of a life time of not only heavy lifting, but heavy lifting incorrectly. If you make the changes listed above to your weight training program, you can reduce your risk of premature shoulder injury significantly. If you need advice on a strength training program speak to a trusted healthcare provider of your choice.

Article by Dale Buchberger, DC, PT, CSCS

Remember you can make all of the changes in the world, but if you continue to lift beyond your weak link and you continue to lift incorrectly, it won't be a matter of if you get hurt, but when.

APTS Recipe Box: Paleo Apple and Rosemary Pork Burgers

This recipe calls for apples cooked in bacon fat, and then stuffed into ground pork. Enough said.

Ingredients: 1-1.5 lbs ground pork; 6-8 strips of bacon, cut into 1-inch pieces; 1 apple, cored and diced; 1-2 tablespoons rosemary; salt and pepper to taste.

Instructions: Heat up a medium-sized skillet under medium heat. Add chopped bacon to the pan. Let the bacon cook

until some of the fat seeps out and the ends of the bacon begin to turn up. Add the apple and cook down for about 5-7 minutes. While this is happening, mix together the ground pork, rosemary, salt, and pepper with your hands. Once the bacon and apples are done cooking, use a slotted spoon to place them on a paper towel on a plate and let cool. Keep the bacon fat in the pan. Take a small ball of meat and smash it down so that it's a little thinner than a normal burger. Place a

spoonful of the bacon and apple mixture on top and place another patty on top. Use your fingers to pinch the sides together. Repeat until you're out of meat (this should make 3 patties). Reheat skillet and cook burgers for about 5 minutes per side, depending on the thickness.

Source: <http://www.paleomg.com/paleo-apple-and-bacon-rosemary-pork-burgers/>



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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: Top Diet Changes for Autoimmunity, Part 2

As stated last month, in autoimmune disease, the body starts to target its own organs since the body is unable to differentiate between a foreign invader from the body's own tissue. The body also may not be able to regulate how intense the immune response is leading to damage to various parts of the body. This is why what you put in your body is crucial when dealing with autoimmune conditions. If your body is already under attack from your own immune system, it is necessary to remove any foods that are going to cause additional inflammation and damage. Examples of autoimmune diseases include lupus, celiac disease, Type I diabetes, Graves disease, inflammatory bowel disease, psoriasis, rheumatoid arthritis, Hashimoto's thyroiditis, and even multiple sclerosis.

Aristo Vojdani, Ph.D., one of the world's leading authorities on environmental toxins and autoimmune disease, recommends three steps to heal from food immune reactions:

1. **Detect.** Do an elimination diet, which is the "gold standard" when it comes to discovering which foods are causing your immune system to overreact. Studies show elimination diets are extremely effective in reducing symptoms. Remove gluten, grains, processed foods (including meats and sweets), sugar, dairy, eggs, legumes (soy, lentils, beans, and peanuts), tree nuts, nightshades (tomatoes, potatoes, eggplants, peppers, paprika, salsa, chili peppers, cayenne, chili powder), pork, beef, alcohol, and coffee for at least 30 days, or until your symptoms disappear. Go slow with reintroducing foods, one at a time, and at least 48 hours apart.
2. **Remove.** To heal, you must eliminate the food triggers you identified in the Detect phase. For those with gluten sensitivities and any autoimmune concerns—not just celiac disease—gluten needs to go for good. After the elimination diet, you can reintroduce other suspect foods one at a time to see if you react.

3. **Repair.** Heal and seal your leaky gut by sipping bone broth and taking targeted supplements that repair the gut lining: vitamin A, l-glutamine, slippery elm, marshmallow root, quercetin, zinc, gamma linoleic acid (GLA). Tend to the balance of your gut bacteria with probiotics, prebiotics, fermented foods, and lots of leafy greens. Nourish your body with nutrient-dense, anti-inflammatory foods, emphasizing above-ground vegetables. Choose organic whenever possible.

 - Green tea contains many beneficial compounds, including a polyphenol called EGCG, which has a powerful ability to increase the number of regulatory T cells that play a key role in immune function and suppression of autoimmune disease.
 - Extra virgin olive oil turns off multiple inflammatory genes that are activated as a consequence of metabolic syndrome. This effectively provides a protective shield against cardiovascular disease and other chronic illnesses driven by persistent inflammation.
 - Curcumin (from turmeric root) is a powerful anti-inflammatory with far-reaching benefits for multiple sclerosis, rheumatoid arthritis, psoriasis, and inflammatory bowel disease.
 - Berries, including blackberries, blueberries, strawberries, raspberries, sour cherries, pomegranates, and cranberries, are especially rich in polyphenols, powerful antioxidants, and anti-inflammatories.
 - Consuming healthy saturated fats in the form of coconut, organic pastured meats and butter, and natural lard can help ease inflammation, strengthen your bones, improve cardiovascular risk factors, modulate nervous system function, and strengthen immune system func-

tion.

- Peony glucosides from the root of the white peony flower have been demonstrated to significantly restore immune system balance, reduce symptoms, speed onset of remissions, and reduce the amount of dangerous immunosuppressive drugs required.
- Supplementation with omega-3 essential fatty acids (EFAs) can alleviate many symptoms of autoimmune disease through their anti-inflammatory activity. EFAs are abundant in fish, flaxseed, borage oil, evening primrose oil, and blackcurrant seed oil.
- Regular consumption of cultured super foods like sauerkraut, goat or coconut kefir and yogurt introduces beneficial microbes into the digestive tract to aid digestion and detoxification, provide enzymes, vitamins, and minerals, and boost immunity.
- Quercetin, an antioxidant that's found in apples, leafy greens, berries, and broccoli enhances intestinal tight junctions, strengthening the gut barrier.
- People with autoimmune conditions are often deficient in micronutrients including selenium, magnesium, and zinc. Brazil nuts are high in selenium, which is essential for healthy thyroid function.

Follow these three powerful steps—detect, remove, and repair—and you'll be well on your way to reversing and preventing autoimmune conditions. It can be daunting to contemplate the dietary changes that are usually needed in order to reverse your autoimmune condition(s). But, once you experience freedom from symptoms by removing your food triggers and adding in nourishing foods, you'll be glad you did!

Article by Carolyn Collier, PTA

Sources: <http://www.healingisfreedom.com/science/top-five-autoimmune-triggers-food/>