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APTS Monthly



VOLUME X, ISSUE IX

SEPTEMBER 2020

Office Hours:

Monday - 8:00am - 5:30pm

Tuesday - 8:00am - 7:00pm

Wednesday - 8:00am - 6:00pm

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Myths of Manual Therapy

When patients are referred for “manual therapy” as part of their physical therapy treatment, it is not uncommon for the referral to be followed by the phrase, “I just want to let you know that it will probably hurt”. The thought that comes to the patient’s mind may be something to the effect of, “I want to go to physical therapy to get out of pain, not to get more pain”. In many ways, providing the patient with the “fire and brimstone” speech about “manual therapy” may actually discourage them from trying a manual therapy approach to treating their problem. The purpose of this article is to dispel some of the “myths” of manual therapy providing a clearer picture of the “manual therapy” experience a patient may encounter.

Manual therapy is, for the most part, any form of mechanical therapy applied with or by the hands. Manual therapy techniques include joint mobilization (non-thrust), manipulation (thrust), myofascial release techniques, neuromuscular techniques, instrument assisted techniques, cupping, etc. Basically, if the provider uses his or her hands in mobilizing, manipulating, or stretching a muscle, tendon, ligament, nerve, or joint, it is considered a manual therapy technique. This provides the treating healthcare provider with a variety of options when treating a patient. There are gentle techniques for patients in acute or postoperative pain and more aggressive techniques for patients with chronic or lower level pain.

The two biggest myths of manual therapy treatment are (1) that it has to hurt in order to be effective and (2) that the treatment is all or nothing: very aggressive or not at all. Nothing could be further from the truth! In fact, manual therapy is more about “feel” than “force”. Overly forceful manual therapy is counterproductive for two reasons: it causes unnecessary pain for the patient and it prevents the provider from accu-

rately assessing the tissues that are being treated. Manual therapy is more about shades of gray than it is about absolutes. The provider needs to be able to assess what tissues are restricted, adhered, or scarred to one another and which tissue is causing the restriction or pain in that area. This can only be accomplished with



slower movements and working within a pain free range of motion. I would be remiss if I didn’t say that in some cases the treatment is uncomfortable, because it is. Generally speaking, we use the numerical pain scale (NPS) to help the patient understand what is an acceptable level of discomfort. The scale is 0-10; 0 being no pain and 10 being the worst possible pain. Typically we will inform the patient that a 4-5/10 is an acceptable NPS during treatment depending on their starting point. On occasion, the pain level may go higher but this usually occurs in a small percentage of patients that have long standing very stiff joints or multiple underlying pathologies. Communication between the patient and the provider is key to making the manual therapy treatment as effective as possible.

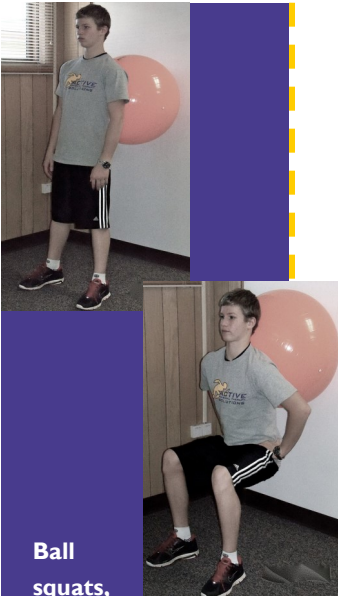
Some patients experience a sense of “soreness” after the treatment but at the same time report an increase in range of motion and may state that, “I feel looser”. The following day it is not uncommon to report delayed onset muscle soreness similar to a heavy exercise bout

or a day of working in the yard. This usually resolves in 48-72 hours. On occasion, depending on the manual treatment that is applied, there may be areas of bruising. This usually happens because the “lymph” layer, or drainage layer, is compressed or adhered between the adjacent tissues. This causes fluid to back up and pool. This is why the home exercise program is so crucial. The exercise assists in moving the fluid through the injured area and reestablishing good tissue movement after the manual therapy treatment.

When combined with a comprehensive therapeutic exercise program, manual therapy treatments can be one of the most effective methods for the treatment of a variety of musculoskeletal disorders such as lower back pain, neck pain, shoulder pain, foot and ankle pain, knee pain, and hip pain. There have been several good research studies over the last 10 years that show when you combine manual therapy with therapeutic exercise, the treatment is more effective than either of those treatments by themselves.

Whether you are a high school athlete or a grandparent, manual therapy is a safe and efficient treatment methodology for most musculoskeletal disorders from strains and sprains to osteoarthritis. Adding manual therapy to your post-operative rehabilitation protocol can also speed your recovery. If your doctor is recommending physical therapy you may want to consider requesting that “manual therapy” be part of the physical therapy order. If you were told it was going to be painful, discuss your concerns with the physical therapist performing the treatment rather than avoid a potentially effective treatment.

Article by Dale Buchberger, DC, PT, CSCS



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

Exercise of the Month: Ball Squats

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!

Health Benefits of Apples



Other than being an easily portable, grab-and-go snack, here are 10 facts about apples that you might—or might not have—known:

Nutrition. Four grams of fiber and 95 calories per medium-sized apple makes them a filling snack. (Five grams of fiber are found in a large apple.) One medium apple counts as one serving of fruit, too. Apples also contain vitamin C, B-complex vitamins (such as riboflavin, thiamine, and B-6), phytonutrients, calcium, potassium, and phosphorus.

Weight loss. Some researchers believe that the antioxidants and pectin (a type of fiber) in apples plays a role. And since apples are high in fiber, they will help to fill you up without costing too many calories.

Heart health. Antioxidants found in apples helps prevent LDL cholesterol from oxidizing and inhibits inflammation. Apples are associated with a decreased risk of death from coronary artery disease and cardiovascular disease. Some other research suggests that apple eaters have a lower risk of having a thrombotic stroke. After just six months, one study showed that older women who ate apples everyday had 23% less "bad" cholesterol (LDL) and 4% more "good" cholesterol (HDL).

Protect against metabolic syndrome. Metabolic syndrome is a cluster of symptoms that leads to heart disease and diabe-

tes. Research has found that people who eat apples are less likely to have symptoms of metabolic syndrome, including lower levels of C-reactive protein, which is an inflammatory marker whose presence in the blood suggests and increased risk of heart disease or diabetes. Additionally, one study showed that people who eat 3 servings of apples a week had 7% lower risk of developing type 2 diabetes.

Exercise extender. Eating an apple before working out may boost your exercise endurance. An antioxidant called quercetin, a flavanoid, is found in apples and it aids endurance by making oxygen more available to the lungs. Quercetin can also help to boost and fortify the immune system.

Preventing dementia. A study found that including apples in your daily diet may protect neurons against oxidative stress-induced neurotoxicity and may play an important role in reducing the risk of neurodegenerative disorders such as Alzheimer's disease.

Protect against cancer. The consumption of flavanol-rich apples could help decrease your risk of pancreatic cancer by 23%. Researchers at Cornell University have identified several compounds called triterpenoids that are

found in the peel and have potent anti-growth activities against cancer cells in the colon, liver, and breast. Additionally, the National Cancer Institute has recommended consuming high amounts of fiber to help prevent colorectal cancer.

Neutralize irritable bowel syndrome. Whether you can't go to the bathroom or you can't stop, the fiber found in apples can pull water out of your colon to keep things moving along when you're backed up or absorb excess water to slow things down. The fiber can also help prevent straining too much when going to the bathroom, therefore averting hemorrhoids.

An apple a day keeps the doctor away, but not the dentist. Because apples are fairly acidic, they can be up to four times more damaging to the teeth than carbonated drinks. Snacking on acidic foods throughout the day is most damaging, while eating them at meal times is much safer.

And, most importantly, apple seeds should not be consumed as they contain cyanide, a powerful poison!

Article by Carolyn Collier, PTA



Exercise Based on Your Joint Structure



Either our families or our friends growing up drive most of our exercise experiences. It usually starts with the big three: football, basketball, and baseball. Then from there it may change based on

interest, peer group, parental history, or coaching suggestions. What is rarely done is choosing our exercise choices by our joint structure. Typically speaking, we are either loose jointed or stiff jointed. This is determined by the genetic makeup of our bones, ligaments, and supporting tissues.

Patients that are loose jointed are thought to have joint hypermobility syndrome. This can be assessed using the Beighton score, which consists of five tests: Score one point if you can place your palms on the ground while standing with your legs straight; one point for each elbow that bends backwards; one point for each knee that bends backwards; one point for each thumb that touches the forearm when bent backwards; one point for each little finger that bends backwards beyond 90 degrees. If your Beighton score is four or more, it is likely that you have joint hypermobility.

Children, adolescents, and even adults can have hypermobile joints. Individuals with hypermobile joints usually have difficulty with weight bearing exercises such as heavy weight lifting, body weight exercises such as pushups, throwing and striking activities such as baseball and tennis, and collision sports like football and ice hockey. They usually excel in sports that are gravity-reduced like swimming or linear activities like biking and running.

Our computer age and increasingly litigious

society has ensured that our children spend significantly more time sitting and inactive. Parents, teachers, and coaches alike refuse to push kids physically out of fear of injury or litigation. The reality is that most experts agree that more activity and not less is what's needed to prevent their loose joints from becoming painful joints. Because they are starting at such a physical deficit, it requires a more methodical approach to introducing activity. This activity should be of varying intensities and durations with a frequency of at least 4-5 per week. Weight bearing exercise should be introduced later in the process after some foundation of strength and endurance has been established. Maintaining an active lifestyle will allow individuals diagnosed with joint hypermobility syndrome to live a pain-free and active life.

According to Dr. Nathan Hasson, a consultant in pediatric rheumatology at London's Portland Hospital and an expert in joint hypermobility, "A good 30 percent of us are more flexible than most. The difference is that our children's muscles are far weaker than those of any generation before." Past generations had muscles strong enough to have day-to-day control over the range of movement of their ligaments, avoiding the pain and injuries associated with hypermobility. "But modern children spend much more time indoors; they cycle and walk less, and sit more."

"You will have walked to school, cycled everywhere, played outside with your friends and had several hours of physical education per week, so you'd have had the strength to be able to control your joints in a way today's children simply can't. Being hypermobile wouldn't even have registered with you," says Dr. Hasson.

On the other side of the coin are individuals that are stiff jointed or have structural

differences referred to as "retroversion" that prevent them from performing or assuming positions that a "hypermobile" individual could assume easily. Typically individuals that are stiff jointed respond better to weight bearing exercise and can accelerate and progress through weight training and dry-land programs at a quicker pace than hypermobile individuals.

People of varying ages have either retroverted hips or anteverted hips. Those that have retroverted hips find it very easy to sit in a cross-legged fashion on the floor. Those that have anteverted hips find it very difficult or nearly impossible to sit cross-legged and much prefer to sit in a "W" fashion. Each of these types of hip structure has both a benefit and a limitation.

In some ways the concept of "natural selection" does take place. It is rare to see a hypermobile individual become a championship power lifter, or to see a stiff jointed person become a champion gymnast. Two "X" factors are when our children realize what direction genetics as taken them and if they find out they are hypermobile after their body weight has passed their strength level. In this case, it will take a much longer and methodical process to acclimate back to weight bearing type exercise without becoming symptomatic. The earlier children are introduced to a variety of activities, the less likely it is that they will develop joint-related symptoms.

Ideally, it would be great to see physical education volume increasing in school curricula and not decreasing. At the very least, parents could make a concerted effort to get their children walking, cycling, swimming, and moving routinely rather than as an occasional activity.

Article by Dale Buchberger, DC, PT, CSCS

Individuals with hypermobile joints usually excel in sports that are gravity-reduced like swimming, or linear activities like biking or running. Those that are stiff-jointed respond better to weight-bearing exercises such as heavy weight lifting, body weight exercises such as pushups, throwing and striking activities such as baseball and tennis, and collision sports like football and ice hockey.

APTS Recipe Box: Crockpot Sugar Detox Dessert Stuffed Apples

September is the perfect time for apple recipes! If you're on a sugar detox, you're allowed green apples in moderation. If you're not on a sugar detox, use whatever kind of apples you may pick from the orchard (or the grocery store). The best part about these dessert apples is that they turn into applesauce if you cook them long enough.

Ingredients: 4 green apples, cored, with bottom still in place; 1/2 cup coconut

cream concentrate or homemade coconut butter, melted; 1/4 cup sunbutter, unsweetened (or other nut butter); 2 tablespoons (or more!) cinnamon; pinch of nutmeg; pinch of salt; 3-4 tbsp unsweetened shredded coconut; 1 c water.

Instructions: Mix together coconut butter, sunbutter, cinnamon, nutmeg, and salt. Place your cored apples (with bottoms still in place) in the crockpot and pour water in the bottom. Use a

spoon to scoop the coconut and sunbutter mixture into each apple all the way to the top. Top off each apple with a bit more cinnamon and shredded coconut. Cook for 2-3 hours on low. The longer you cook it, the softer the apple will be.

These would even be delicious with nuts or dried fruit mixed in. Get creative!

Source: paleoing.com/crockpot-sugar-detox-dessert-stuffed-apples/



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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: Ten Day Detox Diet Meal Plan

Last month, we introduced the idea of the 10-Day Detox Diet created by Dr. Mark Hyman. This 10-Day Detox Diet can reset your metabolism to "factory settings". You can lose weight without going hungry, and possibly clear up a whole list of health problems. This month's article will breakdown exactly what the diet entails.

Breakfast: Dr. Hyman's Whole Food Protein Shake. This will power your through the hardest and longest of days. It is 100% whole, fresh, real food, with a spotlight on healthy fats and potent antioxidants.

Ingredients: 1/2 cup frozen wild blueberries, 1/2 cup frozen cranberries, 1/4 lemon with rind (optional), 1 tbsp almond butter, 1 tbsp pumpkin seeds, 1 tbsp chia seeds, 1 tbsp hemp seeds, 2 walnuts, 1/4 avocado, 1/2 tsp extra-virgin coconut butter, 1/2 cup unsweetened almond milk, 1/2 cup water.

Combine all the ingredients in a blender and blend on high until smooth, about 2 minutes. If the shake is too thick, add more water until you reach a thick, but drinkable, consistency. Makes one shake.

Lunch: Dr. Hyman's Super Salad Bar

- Choose a green base: arugula, spinach, or mixed salad greens
- Choose 3 vegetables: red, green, or orange

bell pepper, celery, mushroom, snap peas, jicama, carrots, radish, broccoli, cauliflower, cabbage, onion, roasted peppers, artichoke hearts, parsley, dill, cilantro, mint

- Choose 1 healthy fat: 1/4 avocado, 2 tbsp nuts or seeds (walnuts, almonds, pumpkin, or sunflower seeds), 2 tbsp olives (Kalamata)
- Choose one serving of protein (4 ounces): salmon, sardines or shrimp (wild fresh or canned), diced chicken or turkey, cubed tofu or tempeh
- Choose your dressing: 2 tbsp tahini with lemon juice, 1 tbsp olive oil with lemon juice or apple cider vinegar

Dinner: Nourishing Entrees with Aromatic Greens

- Choose a green base: broccoli, asparagus, arugula, spinach, kale or chard. Steam or lightly saute with some garlic and oil.
- Add 4-6 ounces of protein (chicken, turkey, salmon, shrimp, scallops, grass-fed meat, canned salmon, sardines or herring, hard boiled omega-3 eggs, tofu, or tempeh).

Snacks: Quick Creamy or Nutty Snacks

- Choose either: creamy tahini, hummus, or tapenade with sliced raw veggies of choice

- Or: 1/2 cup mixed nuts (raw, if possible), like almonds or walnuts

Unlimited Non-Starchy Vegetables Allowed:

arugula, artichoke, mushrooms, Swiss chard, asparagus, dandelion greens, mustard greens, tomatoes, bean sprouts, eggplant, onions, turnip greens, beet greens, endive, parsley, watercress, bell peppers (yellow, red, or green), fennel, radishes, celery, broccoli, garlic, radicchio, chives, Brussels sprouts, ginger root, snap beans, collard greens, cabbage, green beans, snow peas, jalapeno peppers, cauliflower, hearts of palm, shallots, kale, summer squash, zucchini, spinach, and lettuce.

Approved to cook and season meals with: coconut oil, olive oil, nut butters, nuts & seeds (hemp, chia, flax, pumpkin, and sesame), coconut milk, unsweetened almond milk, balsamic vinegar & apple cider vinegar, low-sodium vegetable broth, Dijon mustard, sea salt & black pepper, turmeric, cayenne, thyme, rosemary, chili powder, cumin, sage, oregano, onion powder, cinnamon, coriander, cilantro, paprika, and parsley.

For more detailed information on the 10-Day Detox Diet, visit <http://www.doctoroz.com/article/10-day-detox-diet-jump-start-guide>

Source: <http://www.doctoroz.com/article/10-day-detox-diet-one-sheet>