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GUIDELINES FOR EFFECTIVE MANAGEMENT OF ARTHRITIS

Arthritis is an often debilitating condition affecting millions of people throughout the world. Arthritis is characterized as a progressive inflammatory condition of the joints, which may cause pain, swelling, heat, and redness due to inflammation, infection or trauma.

These symptoms may lead to limitation of movement, joint deformation and contractures.

Osteoarthritis is the most common noninflammatory degenerative joint disease occurring chiefly in older persons, characterized by degeneration of the articular cartilage, hypertrophy of bone and changes in the synovial membrane; which houses lubricating fluid of the joint. It is usually accompanied by pain (usually before prolonged activity) and stiffness (particularly after prolonged activity).

Billions of dollars a year are spent on the management of arthritis. There are many companies promoting fallacious products promising relief from this often chronic and painful condition. The following suggestions are some of the more effective proven ways of managing various types of arthritic conditions.

Therapeutic Rehab Specialists Physical Therapy Departments specialize in treating multiple types of arthritic conditions. Call us today at **(813) 876-8771** to find out how our effective treatment options can help you start living a more productive life with less pain.

- NSAIDS such as and Celebrex, have been found to be effective in decreasing arthritic pain. They are the new generation of Cox 2 enzyme inhibitors, which make them safer on the stomach. Even though they have fewer side effects on the stomach, they have been found to decrease blood flow to the kidneys; therefore you should be adequately hydrated while taking these medications.
- Low doses of over the counter NSAIDS containing Ibuprofen such as (Motrin and Aleve) have analgesic or (pain relieving) effects (200-400 mg), and at higher doses anti-inflammatory effects (800-1000 mg). **Warning:** *High doses or long term use may result in gastric bleeding.*
- Diffuse pain, localized stiffness, crepitus, and inflammation may be related to or aggravated by allergies to food sources including: wheat/gluten products, dairy, corn, soy, eggs, chocolate, citrus, sugars, and red meat. Nightshade family plants such as eggplant, potatoes, peppers, and tomatoes may also aggravate inflammatory conditions. Other products to avoid are partially trans/ hydrogenated fats, sugars, and saturated fats. Use mono saturated (olive oil) and polyunsaturated oils that resist high temperatures for cooking. Avoid foods that irritate the gastrointestinal (GI) tract due to the nervous system and lymphatic system lying in the (GI) tract.
- Nutritional products recommended for osteoarthritis are the herbs: curcumin/tumeric and ginger, and antioxidants. Glucosamine sulfate is an amine sugar found in glycoproteins and naturally occurring carbohydrates known as glycosaminoglycans (GAG). The supplementation of between 1500-2000 mg/day or 1000mg twice a day (BID) has been found to be beneficial in people suffering from arthritic conditions and injuries involving the articular cartilage. Some studies have shown greater effectiveness than Ibuprofen after 6 to 8 weeks of supplementation, and actual increased joint space width on X-ray. It is recommended to start supplementation immediately after an injury to the articular cartilage. Low molecular weight good quality chondroitin sulfate is also recommended in doses up to 1200 mg/day.
Warning: *Due to sugar content, Diabetics should consult their Physician prior to usage.*
- **Prostaglandins are chemicals in the body that help to control lymphocyte activity, which is a type of white blood cell that regulates immune activity and inflammation. There are 3 types of prostaglandins. These three groups are derived from the diet in the form of essential fatty acids. The balance of favorable type 1 and 3 prostaglandins to unfavorable type 2 prostaglandins can be improved by supplementing the diet with essential fatty acids such as linoleate and linolenate. Omega 3 fatty acids, eicosapentaenoic acid (EPA), which are found in cold water fish, and (GLA) gamma-linoleic acid are recommended. Omega 3 fatty acids are found in seeds, nuts, flax seed oil, eggs, and fish also reduce the risk of coronary events. Flax seed oil should be refrigerated and stored in a black bottle. It is recommended to use these fatty acids a minimum of 3 times a week. Celadrin is a blend of fatty acids and carbons that help to relieve systemic inflammation as well as have a beneficial effect on heart disease. Studies have shown improved pain levels, better function, and improved ROM just 30 min. after use.**
- **Although NSAIDS are recommended to manage inflammatory conditions, the first 24 hours after post traumatic arthritic injuries, inflammation is essential for proper tissue healing. The immediate use of NSAIDS may decrease prostaglandin 2 production, which may initially result in less swelling but also decrease the strength of repairing tissue. Wait 24 hours prior to use.**

- Methylsulfonylmethane (MSM) is a naturally occurring compound containing sulfur, which with less than 1000 mg doses can partially offset the loss of sulfur occurring in osteoarthritic patients taking pain medications. In higher doses it can have analgesic effects.
- Fibromyalgia is a type of inflammatory condition characterized by widespread pain in the joints, muscles, tendons and other soft tissues causing chronic pain and tenderness for over 3 months in 11 of 18 tender points. Symptoms may be magnified by stress and poor digestion. Sufferers are recommended to eat natural organic foods and decrease toxins in the body and environment, such as avoiding perfume products around the house, in clothes and on the skin. Drink filtered water but avoid drinking out of thin plastic bottled water due to plastic chemicals possibly contaminating water; especially when left in heat.
- Immobilization leads to stiffness and a decrease in the quality of joint, ligament and cartilage tissue. Exercise helps to decrease pain in local and general inflammatory disorders as well as improve cartilage nourishment. Strength training exercise helps in retaining body mass, decrease risk of falls and injuries in addition to increasing Growth Hormone (GH) release which helps improve muscle mass, and decrease effects of aging such as wrinkles and sagging skin.
- If you're having problems exercising due to daily fatigue unrelated to sleep deprivation you may want to consider taking supplements such as CO Q10 (100-300 mg/ day), L-carnitine (500-1000 mg 3x/day) and NADH (active coenzyme form of vitamin B3 (10 mg/day). Other B vitamins are also recommended to decrease plasma levels of the amino acid homocystine (tHcy) which irritates blood vessels if $>10 \mu\text{ml/L}$. High levels of (tHcy) cause inflammation, atherosclerosis, and coronary heart disease. Niacinamide another form of vitamin B3 which is important in carbohydrate metabolism. It is recommended to take up to 500 mg 3x a day with N-Acetyl Cysteine which is an amino acid found in food that helps break down mucus. When combined they help provide relief from inflammatory conditions.
- **Other often recommended dietary supplements include Boswellia, a type of herb used to decrease inflammation. Rosemary contains four anti-inflammatory substances: Carnosol, Oleanolic acid, Rosmarinic acid, and Ursolic acid. Carnosol acts on the same anti-inflammatory pathways as both steroids and aspirin, Oleanolic acid has been marketed as an antioxidant in China, Rosmarinic acid acts as an anti-inflammatory, and Ursolic acid, which makes up about four percent of the plant by weight, has been shown to have antiarthritic effects in animal trials. Alfalfa contains organic minerals such as calcium, magnesium, phosphorus, and potassium and almost all known vitamins, as well as being very high in chlorophyll, which is a diuretic. Most herbs with a diuretic action will help in some way, significantly or insignificantly, with conditions like arthritis. Putting it simply, they help to flush out the system, or detoxify. Drinking water will have much the same effect.**
- The use of protease enzymes such as (trypsin, chymotrypsin, bromelain, and papain) are recommended to be taken between meals.

- Among the multiple well know health risks of smoking, the impairment of microcirculation is something especially detrimental to the healing process of post-surgical patients or post traumatic arthritic conditions.
- Prolotherapy is the injection of a solution into ligaments or a tendon, which is performed by a Physician to promote stability in hyper mobile or unstable joints. It works by increasing blood supply and nutrients to the tissue and stimulates tissue repair decreasing tissue laxity. The average number of treatments for an area are 4-6. Prolotherapy can be effective in treating low back, shoulder, knee, and sacroiliac dysfunction.
- A synovial fluid analogue called Synvisc or Hyalgan can also be performed 1x a week for 3 weeks and has been found to be effective in reducing pain in hip and knee arthritic sufferers for up to 9 months. Synvisc also known as Hyaluronate which is a sodium derivative substance from Hyaluronan. It's a substance found in synovial fluid which when injected into the knee acts like your own joint fluid which helps lubricate and cushion joints.
- Post injury or surgery, vitamin C and zinc are recommended to promote tissue healing. Levels of vitamin C rise in healing tissue and return to normal after it is healed. Zinc is one of the oldest agents that can help promote wound healing. There are approximately 200 zinc-requiring enzymes in the body, such as DNA polymerase which is needed for cell regeneration during healing.
- Diseases modifying anti-rheumatic drugs (DMARDS) have been shown to be beneficial in decreasing the cause of Rheumatoid Arthritis as well as symptomatic benefit. The benefit is slow usually 4-16 weeks. These drugs may have side effects which should be monitored by the patient's physician.
- STEP (Scientific Therapeutic Exercise Program) consists of forces of compression, decompression and gliding which is designed to stimulate cartilage healing by using high repetitions (20-30), low resistive exercise for 4-5 sets a day. Beginners may want to start with lower repetitions until form improves.
- Physical Therapy has many worthwhile options in treating a variety of arthritic conditions. Electric stimulation or (TENS) and laser therapy have been found to be beneficial in giving pain relief. Therapeutic strengthening and stretching exercise have been found to be beneficial in granting pain relief. Exercise can also result in weight loss which will decrease pressure on weight bearing joints. Resting splints can also be used to decrease pain with activity but do not improve function, grip strength or dexterity. Joint traction and gentle mobilization of stiff joints may improve mobility and nourish joints. Aquatic Therapy is a fabulous way for arthritic sufferers to exercise in a safe comfortable and nearly weightless environment. Buoyancy of the water helps to unload the joints and the warm water helps improve circulation and decrease spasms.

Note: The above mentioned guidelines are meant as a source of information only. If you are suffering from health problems please consult your Physician before beginning medication, or initiating an exercise or nutrition program.

