

MIDLANDS

orthopaedics, p.a.

Non-operative Treatment of Arthritis

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Arthritis simply means an inflammation of joints. Almost everyone has suffered from this at one point in their lives. There are many types of arthritis. Sometimes it only involves a single joint, other times it can affect many at the same time. The most common type of arthritis is osteoarthritis. This involves a gradual deterioration of the cartilage surface of a joint.

In all joints in the body a thin layer of cartilage covers the bone surface. Cartilage is a live tissue, but it contains no nerves. When a healthy cartilage layer is present on both bones that come together to make a joint, the joint moves smoothly without pain. One cartilage surface glides smoothly against the other, lubricated by joint fluid. When these cartilage layers start deteriorating, there is usually some pain and inflammation. When the cartilage surface is completely gone, a joint is said to be "bone on bone". At this point, the nerve fibers contained in bone are stimulated and this sends powerful pain signals to your brain. When this occurs in the weight bearing joints of the lower extremity, the pain becomes very limiting and medicines no longer give adequate relief. Only surgery that provides a new artificial joint surface can solve this problem. Joint replacement or resurfacing procedures apply a new artificial layer to the end of each bone. As long as these implants don't wear out and as long as they remain well fixed to the bone there is good pain relief. The implants glide against each other, lubricated by natural joint fluid, once again protecting the ends of the bone from being stimulated.

There are also other problems in and around joints that can cause pain. These may all require different specific treatments. For example meniscus tears, labral tears, tendon inflammation and tears, and bursitis. Therefore you should see an Orthopedic Surgeon to diagnose your problem before you assume you have osteoarthritis and begin treatment. Orthopedic surgeons are the specialists most knowledgeable and able to treat these types of mechanical problems of individual joints.

Some people have more generalized immune system related arthritis conditions such as lupus or rheumatoid arthritis, which are best managed by medical arthritis specialists called rheumatologists.

If a proper diagnosis has been made and you have osteoarthritis that is not yet severe enough to consider joint replacement, the following nonoperative measures may help. If you take any of these medications long term, including the over-the-counter ones you should inform your regular medical physician and have routine checkups at least once a year to monitor for side effects.

I am a surgical specialist in hip and knee reconstructive surgery. I do not offer long-term medical management for chronic arthritis pain. Because many people have arthritic problems that may not yet require surgery, I offer the following educational brochure. If you have any questions that apply to your specific case, please do not hesitate to ask me. However, prescriptions and monitoring for these treatments is most appropriately handled by your medical physician.

If you choose a trial of conservative treatment, I would recommend you consider the following:

- I. Activity modification; avoidance of activities that aggravate the problem. Typically swimming, water exercises, and exercise bicycle are less painful activities for people with arthritis of the weight bearing joints.
- II. Medication: Usually a combination of antiinflammatory medication, Tylenol and Glucosamine is helpful. Muscle relaxants and narcotics can be used for a short term, if symptoms are severe. Of course, medications that you are allergic to or cannot tolerate for other reasons should be avoided.
 - A. Anti-inflammatory medications: There are many choices, both prescription and over-the-counter. Only one from this category should be selected and taken on any one day. If any of these are taken long-term, you should advise your medical doctor and have routine blood tests done periodically.
 1. Over-the-Counter:
 - Ibuprofen 200 mg (Advil, Nuprin, etc.) Maximum prescription strength would be 800 mg three times daily. This is best taken with food.
 - Naproxen Sodium 220 mg (Aleve). Maximum prescription strength is 500 mg two times daily. This is best taken with food.
 2. Prescription:
 - Celebrex 200 mg, one to two times daily.
 - Meloxicam 7.5 mg two times daily.
 - Many others are available.

Stomach problems occur in up to 5% of people taking these medications long-term. You should inform your medical doctor and have routine monitoring of blood tests, if you take any of these medications long-term.

Stomach problems are less common with a Meloxicam and Celebrex. Prilosec 10 mg can be obtained over-the-counter and can protect somewhat against these stomach problems caused by these medications.

- B. Tylenol: Most adults can take up to six tablets (650 mg each) daily. Those people with underlying liver problems or who consume more than two alcoholic beverages per day should take less and have their liver function monitored by their regular physician.
 - C. Glucosamine: 1500 mg daily. There are many brands and formulations. Some do not contain the advertised amount of Glucosamine. Whether to add Chondroitin or not is controversial. There is good scientific evidence that Glucosamine (not Chondroitin) relieves the symptoms of mild or moderate arthritis. There is no evidence that it rebuilds cartilage or prevents further cartilage deterioration. (Beware of false advertised claims: The FDA does not regulate supplements).
- You need to take this supplement for at least two months to truly test its effect. If it does not relieve your symptoms after that time, there is no reason to take it any longer.
- D. Muscle Relaxants: Medications such as Flexeril or Valium may be helpful to relieve muscle spasms. They often make people “groggy”. I would only occasionally advise these for short periods of time.
 - E. Tramadol (Ultram): A semi-narcotic drug with some addictive potential. This can be used short-term for treatment of pain if other measures are not adequate.
 - F. Narcotics: Many different types are available. They all work in a similar fashion and they all have significant addiction potential, if taken long-term. They should only be used, if the other methods fail. I do not prescribe long-term narcotics. Common side effects include: mental changes, constipation, itching, and nausea.

III. Heat. Apply to the affected area; may help relieve symptoms.

IV. Aerobic Exercise: A good aerobic exercise program three times a week for at least 30 minutes is an important part of the program. Options include

such activities such as brisk walking, exercise bicycle, elliptical, or swimming. The key is to get your heart rate elevated through exercise without irritating the affected joint too much.

V. Weight Loss:

$BMI = (\text{Your weight in pounds}) \times 705 / (\text{height in inches}) \times (\text{height in inches})$

BMI > 40 morbidly obese

BMI > 35 severely obese

BMI > 30 obese

BMI > 25 overweight

If you get down to a normal weight, your back and other lower extremity joints will feel better

- VI. Diet: There are many fads out there. They mostly are quite expensive. People are easily fooled into believing they can “buy weight loss” through some fancy gimmick, that promises weight loss without much effort. They try to avoid the difficult discipline of adhering to a healthy diet and a program of moderate exercise. The formula is very simple: Calories eaten minus calories used = fat stored.

Calories consumed:

- Basic metabolic rate (BMR) : some people are fortunate to have a high BMR. There is no evidence that this can be changed by some type of gimmick or pill.
- Growth (This only applies to children).
- Exercise.

Generally healthy diets involve:

- Limitations of calories.
- Avoidance of sugars and starches.
- Preference for complex unprocessed carbohydrates containing as much fiber as possible.
- Moderate balance of healthy fat (olive oil, canola oil, poly-unsaturated oils).
- Protein.
- I recommend Weight Watchers or South Beach diet as a starting point.
- High Fat diets such as the Atkins diet have been shown to be very effective in quickly allowing you to lose weight, but they are probably very unhealthy over the long-term. They should only be used for quick

weight loss and then you should change to one of the healthier diets listed above. It is best to just start with a healthy diet from the beginning and take a slower approach.

- VII. Chiropractic Treatment: There is some scientific evidence to suggest that repeated spine manipulations for back pain are equally effective as a back exercise program that is taught by a physical therapist. Most other claims made by chiropractors are not based on physiologic and scientific principles. Over time, this treatment is likely to be much more expensive than an exercise program. There is no scientific evidence for the use of chiropractic treatment in osteoarthritis of other joints.
- VIII. Physical Therapy: There is occasionally a role for physical therapy in the treatment of osteoarthritis, especially for spine problems. Many non-arthritic joint problems such as tendonitis and bursitis can be treated with therapy.

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