

Rheumors
Volume 2, Number 4
October 1991

EXERCISE AND ARTHRITIS

by Evan L. Siegel, M.D.

"What about exercise?" is a common question heard by the Rheumatologist. The question usually refers to the advisability of beginning some sort of exercise program, and comes from people at all levels of physical ability. Some are healthy individuals wondering if exercise might predispose them to, or cause arthritis. Others already have some form of arthritis, and are concerned as to whether exercise would be helpful or detrimental. The answers are nearly as numerous as the questions.

In considering a specific exercise program for an individual patient the physician or physical therapist must first understand the problems imposed by an arthritic joint as well as the benefits that exercise can confer. In inflammatory arthritic processes, such as Rheumatoid Arthritis, joints are inflamed, painful, and resistant to motion. Osteoarthritis, or degenerative arthritis, causes joint space narrowing, new bone formation near the joint, and pain from rubbing of joint components among other reasons. While joint rest is an important component of every arthritis patient's therapeutic regimen, and has been prescribed for decades in the treatment of Rheumatoid Arthritis, excessive rest can lead to disuse which can be quite detrimental. Disuse can cause fairly rapid muscle weakness and atrophy, with loss of strength estimated at a rate of 8% per week. Contractures can occur resulting in loss of range of motion. Similar processes can occur in the osteoarthritic joint. Exercise in these situations must be thoughtfully prescribed; excessive motion of an acutely inflamed joint can increase the inflammatory response. In degenerative arthritis, exercises which involve repetitive trauma can further promote the destructive process.

The benefits of cardiovascular exercise are well known. The benefits of joint exercise in patients with rheumatic diseases can be more subtle and yet just as important. The goals of these programs include the maintenance of range of motion, the re-education and strengthening of muscles, improvement of endurance, and better biomechanical function. Some forms of exercise will improve bone density and help prevent osteoporosis. Specific post-operative exercise regimens clearly are a major determinant of success or failure of joint replacement surgery. In all patients, improved overall function and sense of well-being will often follow an appropriate exercise regimen.

Recent studies have shown that vigorous exercise in a normal healthy individual does not predispose to degenerative arthritis. People with a joint injury, however, who continue to perform strenuous exercise despite cartilage erosion, a meniscal or ligamentous tear, etc., are likely to suffer progressive joint destruction.

In patients with arthritis several rules of thumb apply. Low impact exercise should be the focus. Examples would include walking, swimming, and cycling (stationary or on the road). Water exercise programs are generally beneficial, with some being offered under The Arthritis Foundation's supervision. New or increased exercise regimens should be eased into slowly after consulting with a physician. Cardiovascular status must be considered carefully as well as current joint symptoms. Actively inflamed joints should be eliminated from exercise regimens,

but should gently and frequently be moved through their full range of motion. Fatigue should not last more than one hour after exercise has stopped, and there should be no increased joint swelling or pain. Medical attention should be sought should these danger signs occur.

Specific exercise programs should be developed for each patient in consultation with his or her own medical professional. Printed material is available to teach and reinforce particular exercise programs. In many cases referral by the physician to a physical therapist is appropriate for tailoring of an exercise program to special patient needs.

DO BREAST IMPLANTS AND COLLAGEN CAUSE ARTHRITIS?

There's good news and bad news. The good news is you can get your breasts enlarged and the wrinkles in your face removed! The bad news is you may be placing yourself at a small risk for developing a rheumatic disease.

Recent reports in the popular press have linked the development of serious forms of rheumatism to breast enlargement surgery and to the use of collagen injections for removing "crow's feet", "frown lines" and other facial wrinkles.

In the past, environmental factors have been linked to rheumatic illnesses. It is well known that *systemic lupus* may occur as a reaction to certain medications, *scleroderma*-like illnesses may result from the use of vibrating machinery (such as chain saws and jackhammers) and abuse of pain medication may lead to an illness that mimics *polymyositis*. These illnesses, broadly called the *connective tissue diseases*, most commonly occur spontaneously without any clear precipitating factors.

Breast implantation as a possible cause of connective tissue disease has been the subject of television reports on "Geraldo" and elsewhere. A number of women, including Jessica Hahn, have experienced rheumatological symptoms following this type of surgery. Symptoms of joint pain, color changes of the fingers with cold exposure, thickening of the skin and muscle weakness have been described in these patients. The number of patients thus affected is so small though, that a clear cause and effect relationship has been very difficult to establish. Physicians at Mount Sinai Hospital in New York City and at The University of Florida Medical School have suggested that the silicone in these implants may be responsible for the development of connective tissue disease, particularly scleroderma. It is known that silicone, implanted in the body for other reasons (mostly artificial joint replacements), can cause lymph node swelling and localized joint and skin inflammation. It is not clear if removal of silicone breast implants in patients who develop scleroderma or polymyositis will have any impact in reversing the disease once it has started.

Several weeks ago the ABC-TV program **20/20** did a story linking the development of polymyositis/dermatomyositis to injectable Zyderm collagen implants. These implants are used to remove wrinkles. They are commonly injected into the skin of the face in an attempt to give the patient a more youthful look. This procedure is not new, first being introduced about 10 years ago. As of August 1990 some 500,000 patients have received this treatment and approximately 100 cases of connective tissue disease have been reported. Again, careful investigation does not allow for a clear link between rheumatic disease and the injection of this material. Patients with rheumatic disease are generally excluded from receiving this kind of treatment. Patients who elect to have their wrinkles smoothed out are advised to undergo skin testing with the Zyderm collagen material before submitting to treatment.

The data relating to these procedures is not extensive, but patients should be aware of the possible association among silicone breast implants, collagen and arthritis.

Herbert H. B. Baraf, M.D.

QUESTIONS & ANSWERS

Q.

Does an elevated uric acid always mean that I have gout?

A.

No. Gout by definition is an acute arthritis produced by the deposition of crystals of uric acid within the joint spaces. The presence of an elevated uric acid predisposes an individual to developing gout. The patient's physician should determine the reason for the elevated uric acid and correct this if necessary. Most patients with elevated uric acid levels do not have gout.

Q.

I have been told that I have a positive rheumatoid factor. Do I have rheumatoid arthritis?

A.

Not necessarily. The rheumatoid factor is a substance in the blood of eighty-five percent of patients with rheumatoid arthritis but six to ten percent of older patients will have a low titer rheumatoid factor even though they do not have this illness. The diagnosis of rheumatoid arthritis is made after a thorough history, physical examination, appropriate xrays and other laboratory studies have been done. Your physician will use the criteria set up by the American College of Rheumatology to diagnose rheumatoid arthritis.

The above two questions point out that the diagnosis of rheumatic disease or any other disease, must meet certain criteria which are present in the history, physical examination and laboratory evaluation. Some of the rheumatic diseases are quite similar and frequently the physician will need weeks, months, even years to clarify the diagnosis.

Norman S. Koval, M.D.

Q.

What recommendations do you have regarding estrogens once the woman reaches the menopause?

A.

Estrogen therapy has long been used to control post menopausal symptoms such as hot flashes. Additionally, it is very helpful in retarding the progression of calcium loss from bone that leads to osteoporosis.

There has been some controversy that estrogens may promote the development of breast or uterine cancer. Studies relating to breast cancer are equivocal, some showing an increased risk,

others showing a decreased risk. The risk of uterine cancer can be eliminated when estrogen is given with progesterone. The combination of these two hormones will cause a woman to resume her menstrual flow however.

Just recently, an important study showed that women treated with estrogens after the menopause had a very significant decreased risk in the development of heart disease and stroke. It is now apparent that the increased risk for cancer is very significantly outweighed by the decreased risk for stroke and heart attack, thus, we are strongly recommending the use of estrogens in women who reach the menopause unless there is a known significant risk factor for the development of breast cancer. It is felt that the cardiovascular benefits and the benefit to bone overshadows the relatively small risk of breast cancer and improves the woman's overall chances for a long healthy life.

Herbert S. B. Baraf, M.D.

A quarterly publication brought to you by
Arthritis & Rheumatism Associates, P.C.

Norman S. Koval, M.D.

Herbert S. B. Baraf, M.D.

Robert L. Rosenberg, M.D.

Evan L. Siegel, M.D.

Emma DiIorio, M.D.

Margaret Dieckhoner, Editor

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