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Arthritis and Physical Activity in Mid- and Later-Life

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Case Study

Arthritis and Physical Activity in Mid- and Later-Life

by Nicholas Turkas, M.S.

Educational Objectives

1. Describe some of the more common types of arthritic conditions.
2. Discuss co-morbidities or co-existing conditions often occurring with arthritis.
3. Describe the Arthritis Foundation as a relevant resource when dealing with arthritic conditions.

Background

Arthritis is the most prevalent chronic condition among older Americans, with most having one or more of its many forms. The pain and stiffness of some types of arthritis may often discourage those with an arthritic condition from physical activity, even from social interactions. The consequences of these "pulling back" behaviors may not only actually worsen the arthritic condition, but also may create isolation and a lowered quality of life. The Arthritis Foundation addresses these realities through outreach, education, and opportunities. The Foundation's website is a source of relevant information and is cited throughout this paper as a source.

What is Arthritis?

Arthritis comprises more than 100 different rheumatic diseases and conditions, the most common of which is osteoarthritis. Other frequently occurring forms of arthritis include rheumatoid arthritis, lupus, fibromyalgia, and gout. Common symptoms include pain, aching, stiffness, and swelling in or around the joints. Some forms of arthritis, such as rheumatoid arthritis and lupus, can affect multiple organs and cause widespread symptoms. Although arthritis is more common among adults aged 65 years or older, people of all ages (including children) can be affected. Nearly two-thirds of people with arthritis are younger than age 65. Arthritis is more common among women (24.3%) than men (18.7%) in every age group, and it affects members of all racial and ethnic groups. Arthritis also is more common among adults who are obese than among those who are normal weight or underweight (Cheng et al., 2010).

In Virginia, 54% of seniors ages 65 years and older report living with arthritis. The most common form of arthritis, osteoarthritis (OA), is characterized by the breakdown of cartilage, the part of a joint that cushions the ends of the bones and allows easy movement. As cartilage deteriorates, bones begin to rub against one another. This can cause stiffness and pain that make it difficult to use that joint. OA can also damage ligaments, menisci, and muscles. Over time, OA may cause a need for joint replacements (Dunkin, 2001).

There are two types of OA: primary and secondary. Primary osteoarthritis is generally associated with aging and the "wear and tear" of everyday life. With increasing age, a person becomes more likely to have some degree of primary osteoarthritis. However, not everyone gets it, not even the very old. This is because OA is a disease, and not part of the normal aging process. Secondary osteoarthritis, in contrast, tends to develop relatively

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early in life, typically 10 or more years after a specific cause, such as an injury or obesity.

Osteoarthritis occurs most often in knees, hips, and hands. But other joints, including the shoulders, can be affected. OA rarely affects other joints except as a result of injury or unusual physical stress (see www.arthritis.org/what-is-osteoarthritis.php).

Rheumatoid arthritis, or RA, is a form of inflammatory arthritis and an autoimmune disease. For reasons no one fully understands, in rheumatoid arthritis, the immune system, designed to protect our health by attacking foreign cells, such as viruses and bacteria, instead attacks the body's own tissues, specifically the synovium, a thin membrane that lines the joints. As a result of the attack, fluid builds up in the joints, causing pain in the joints and inflammation that is systemic, meaning it can occur throughout the body.

Rheumatoid arthritis is a chronic disease, one that cannot be cured. Most people with RA experience intermittent bouts of intense disease activity, called flares. In some people, the disease is continuously active and worsens over time. Others enjoy long periods of remission, having no disease activity or symptoms at all. Evidence shows that early diagnosis and aggressive treatment to put the disease into remission are the best means of avoiding joint destruction, organ damage, and disability.

Other common forms of arthritis include lupus, an autoimmune disease that causes joint pain, skin rashes, and may cause kidney and neurological problems; fibromyalgia, intensive muscle pain, and fatigue; and gout, joint pain in the big toe, often a result of poor diet.

Why Is Arthritis a Public Health Problem?

An estimated 50 million U.S. adults (about one in five) report doctor-diagnosed arthritis (Cheng et al., 2010). An even greater number may have arthritic conditions not formally diagnosed. As the U.S. population ages, these numbers are expected to increase sharply, with the number of adults with doctor-diagnosed arthritis projected to rise to 67 million by 2030, and more than one-third of these adults having limited activity as a result. Importantly, arthritis occurs with other significant co-morbidities; half of the people diagnosed with arthritis live with diabetes or heart disease. More than 42% of the U S adults with arthritis, or 21.1 million adults, have activity limitations attributable to their arthritis. In addition, the CDC currently states that some form of arthritis or other rheumatic condition affects one in every 250 children (see www.cdc.gov/arthritis/data_statistics/arthritis_related_stats.htm).

Arthritis is a substantial barrier to the people living with this disease. For years, it was believed that exercise was dangerous and could "wear out" joints. Thinking has changed. Now, most people know that exercise is an important part of a way to manage arthritis pain. However, people with arthritis report other barriers, such as lack of motivation and time, competing responsibilities, and difficulty finding an enjoyable activity. Unfortunately, a lack of training and understanding among some health care professionals and exercise instructors may compound these factors (see www.arthritis.org).

Co-Existing Conditions

Nearly half (47%) of adults with arthritis have at least one other chronic condition (Murphy et al., 2009). Murphy et al. identified four common co-existing conditions among adults with arthritis in 2007. Some 11.2 million people, or nearly one in four adults with arthritis (24%), also had heart disease, the most common co-morbidity. Next most common are chronic respiratory conditions, 19% (9.0 million), and diabetes, 16% (7.3 million). Stroke is the fourth most common condition and affected 3.2 million people with arthritis.

Researchers cannot say definitively why people with arthritis have so many co-morbidities. Studies by Murphy et al. (2009) and Cheng et al. (2010) suggest that arthritis and other chronic conditions share some of the same non-modifiable risk factors, e.g., age, and modifiable risk factors, e.g., obesity, that predict these conditions. For instance, an estimated 33.8% of women and 25.2% of men who are obese report doctor-diagnosed arthritis. Furthermore, arthritis itself may directly cause physical inactivity, thereby precipitating weight gain, obesity, and other chronic conditions. Notably, the CDC recommends that all people with arthritis, with or without co-morbidities, participate in regular physical activity (see www.cdc.gov/arthritis/data_statistics/comorbidities.htm)

Arthritis Foundation Programs

The Arthritis Foundation is a resource organization of staff and volunteers networked throughout the United States to offer information, activities, and inspiration for people with arthritic conditions. Recognizing the therapeutic benefits of activity, the Arthritis Foundation offers a variety of group exercise programs in community settings. These programs are different from typical exercise programs. While, in general, there is no shortage of group exercise classes, including aerobics, Jazzercise, Zumba, Cardio-Kick Boxing, and Yoga, many of these classes include bouncing and pounding movements and are led by instructors who are unfamiliar with arthritis. In contrast, the Arthritis Foundation Exercise Program features low-impact physical activity proven to reduce pain and decrease stiffness. Developed by the Arthritis Foundation, the Exercise Program uses movements created by physical therapists that address pain and fatigue while increasing strength. The routines include gentle range-of-motion exercises that are suitable for every fitness level. Led by a certified instructor, the classes may be taken either standing or sitting. The simple routines are easy to replicate at home. Classes meet for one hour, two to three times per week for eight weeks and are designed to be relaxing and enjoyable. Participants may use hand and ankle weights to increase resistance. Resistance bands, scarves, and balls may be used for variety. The program is evidence-based, and studies show that individuals attending the classes report having less pain, more confidence in their ability to continue activities, increased social activity, and fewer doctor and emergency room visits (Callahan et al., 2004; Wang et al., 2007).

The Arthritis Foundation also offers an adapted form of Tai Chi. Once synonymous with martial arts, Tai Chi normally requires years of patient study to "master." The Arthritis Foundation Tai Chi Program, developed by Dr. Paul Lam, uses gentle Sun-style Tai Chi routines that are safe, easy to learn, and suitable for every fitness level.

The fluid, circular movements of Tai Chi look like a blend of dance and karate. The "soft" martial art of Tai Chi has been practiced in China for more than 600 years. The Arthritis Foundation's Tai Chi program is led by certified instructors. Its one-hour classes meet two times a week for eight weeks and are designed to be relaxing and enjoyable. The program can be done while sitting or standing. Each session includes warm-up and cool-down exercises, six basic core movements, and six advanced extension movements. The benefits of the program include reduced stress, and increased balance and flexibility.

In addition, the Arthritis Foundation offers an evidence-based walking program, Walk with Ease, and the Arthritis Foundation Aquatics Program. All leaders are certified by the Arthritis Foundation. All facilities that offer classes sign a collaborative letter of agreement. The agreements and certifications are valid for three years.

Case Study #1

Gladys is a 70-year-old widow living in a small city. She lives alone, but regularly interacts with her extended family who call or visit. Her story is typical of many Arthritis Foundation Exercise Program participants. She was overweight and did not regularly exercise. Her osteoarthritis in her knees and shoulder had progressed to the point that the pain and stiffness were limiting her activities of daily living. At the urging of her primary care physician, she joined the Arthritis Foundation Exercise Program at a local community center. She found the class to be welcoming, filled with others living with arthritis who understood her pain. Over time, Gladys began to regain her strength and function. The program provides stretching, strengthening, and range-of-motion exercise. Her persistence has paid off, for now, five years later, Gladys teaches the class, having been trained by the Arthritis Foundation, which regularly offers training opportunities throughout her area. She especially enjoys the opportunity that she has as an instructor to welcome new people to the class and share success stories.

Case Study #2

Donna, age 58, has lived for many years with three types of arthritis: osteoarthritis, rheumatoid arthritis, and fibromyalgia. She has used a cane to aid her mobility and walked with a slow, almost painful looking, gait. Pain, stiffness, and, especially, fatigue have proven to be major obstacles for her with regard to fitness programs. She would join and participate in various exercise

classes in the past with minimal success. She became discouraged and had almost resigned herself to a life of inactivity. A friend told her about the Arthritis Foundation's Tai Chi classes. Donna signed up for the class, not sure what to expect. But now she calls Tai Chi her "miracle drug." It emphasizes slow, focused movements that are quite different from traditional western-style exercise classes. Donna found that the movements built up strength in her shoulders, core, and legs. She no longer uses a cane and has begun teaching classes regularly, including an outreach program at a prison.

Suggested Activities to Manage Arthritis Pain

Educate Yourself

Learning about your particular type of arthritis and ways to improve your health can help you make the right decisions for your health.

See Your Doctor

Although there is no cure for most types of arthritis, early diagnosis and appropriate management are important, especially for inflammatory types of arthritis. For example, early use of disease-modifying drugs can affect the course of rheumatoid arthritis. If you have symptoms of arthritis, see your doctor and begin appropriate management of your condition.

Watch Your Weight

The prevalence of arthritis increases with increasing weight. Research suggests that maintaining a healthy weight reduces the risk of developing arthritis and may decrease disease progression. A loss of just 11 pounds can decrease the occurrence of new knee osteoarthritis and a modest weight loss can help reduce pain and disability (Messier et al., 2005).

Protect Your Joints

Joint injury can lead to osteoarthritis. People who experience sports or occupational injuries or have jobs with repetitive motions like repeated knee bending tend to have more osteoarthritis. Avoid joint injury to reduce your risk of developing osteoarthritis.

Be Active

Research has shown that physical activity decreases pain, improves function, and delays disability (U.S. Department of Health and Human Services, 2008). Make sure that you get at least 30 minutes of moderate physical activity at least five days a week. You can parcel your activity into 10-minute intervals.

Arthritis Foundation fitness programs are designed to help you live better with arthritis. These programs help to reduce pain, increase strength and flexibility, and help you feel better. You may take part in a fitness program alone or in a group setting. Group classes are led by Arthritis Foundation certified instructors and can be modified to meet your needs.

Walk

The Arthritis Foundation Walk with Ease Program is an exercise program that can reduce pain and improve overall health. If you can be on your feet for 10 minutes without increased pain, you can have success with Walk with Ease.

Exercise

The Arthritis Foundation Exercise Program is a low-impact physical activity program proven to reduce pain and decrease stiffness. The routines include gentle range-of-motion exercises that are suitable for every fitness level.

Aquatics

The Arthritis Foundation Aquatic Program is a warm water exercise program that capitalizes on water's buoyancy and comfort to reduce pain and improve overall health. Suitable for every fitness level, the classes are held in a friendly and supportive environment that encourages social interaction among participants.

Tai Chi

Tai Chi (at left) is an ancient practice shown to reduce pain and improve mental and physical well-being. The Arthritis Foundation Tai Chi Program, developed by Dr. Paul Lam, uses gentle Sun-style Tai Chi routines that are safe, easy to learn, and suitable for every fitness level.

Study Questions

1. What are the most common forms of arthritis?
2. Why are co-morbidities seen so often with arthritis?
3. What are some of the barriers to exercise for people with arthritis?
4. What community programs does the Arthritis Foundation provide?

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Related Resources

www.arthritis.org
www.cdc.gov/arthritis
www.letsmovetogether.org

About the Author

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