

Physical Activity and Arthritis

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Abstract

Many people with arthritis report physical limitations when completing their usual patterns of activity. These limitations are not only related to physical restrictions imposed by the disease but can also be the result of immobility caused by pain and possibly by the fear of movement. This paper explores the benefits of exercise to help slow the progression of arthritis.

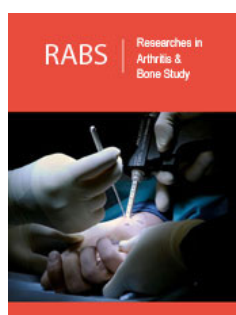
Background

In a survey conducted by Centers for Disease Control and Prevention (CDC), it is reported that 22.7% of adults in the United States (54.4 million) had been diagnosed with arthritis between the years 2013-2015. This number is projected to increase to approximately 25.9% (78.4 million adults) by the year 2040 [1]. Many people in this diagnostic group, report physical limitations when completing their usual patterns of activity. These limitations are related to physical restrictions imposed by the disease. The limitations most frequently reported include restrictions in self-care, work, and community participation [2]. As a result of these restrictions, pain, stiffness, and fatigue increase and participation in physical activity diminishes even more, exacerbating disease progression. The likelihood of experiencing arthritis and increasing severity of the symptoms is inversely related to participation in physical activity. Suggesting that pain and mobility restrictions are significantly higher for those who do not meet the guidelines for physical activity recommended by the CDC [2].


The Benefits of Exercise

Currently the CDC recommends 150 to 300 minutes of moderate-intensity aerobic activity per week. This can include brisk walking or fast dancing. Adults also need muscle-strengthening activity, like weight-lifting or push-ups, at least 2 days each week. These are considered to be minimal recommendations, with greater benefits associated with higher levels of physical activity [3]. For people with arthritis who meet the guidelines, a variety of benefits have been observed. The most commonly reported benefits are decreased pain, increased independence in ADLs, increased strength, increased lean body mass, increased range-of-motion, improved cardiovascular function, increased energy, improved cognitive function, and improved sleep [4,5]. In addition to these direct benefits, several secondary benefits are associated with increasing levels of physical activity, such as increased longevity, improved self-efficacy, and greater community participation [4]. The results appear to be related to the effect physical activity has on delaying the degenerative process of the body [6]. When viewed collectively, this indicates improved quality of life. However impressive, these benefits need to be considered in balance with the imposed risks associated with increased physical activity. The primary risk is for increased joint degeneration. This occurs most frequently when exercise is initiated at high intensities, at acute joint angles, or during periods of inflammatory exacerbations. Because of these risks, patients are often confused about the dose-response relationship and the approach they should follow.

The confusion is increased when medical professional are not able to adequately address their concerns. A study exploring barriers to physical activity and exercise in persons with arthritis found that, while medical professionals often recommend physical activity, they do not provide details related to the dose, frequency, and duration of the intervention [4]. The researchers also state that healthcare providers lack clarity and specificity about physical activity guidelines and how these should be interpreted based on the physical activity



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behavior of the patient [4]. One way to address this problem would be a simple referral to an occupational therapist (OT) or physical therapist (PT). These professionals are qualified to assist individuals with the dose, frequency, and duration of the intervention, with attention to the specific needs of the client.

The problem becomes more complex when viewed in concert with current beliefs and attitudes related to physical activity and arthritis. It is a commonly held belief that exercising will inflict more damage to arthritic joints and cause more pain [7,8]. Many people with arthritis believe they need to rest their joints. In a 2017 study of 2569 patients with arthritis, 18% (466) people demonstrated high fear-avoidance beliefs. Fear-avoidance is a set of beliefs which supports a relationship between activity and increases in pain and disability. People experiencing fear-avoidance believe that participation in a specific activity will lead to catastrophic outcomes, in addition they experience hyper-vigilance to bodily sensations. This increases their fear of activity and results in further activity avoidance [9]. These researchers suggest that high fear-avoidance related to physical activity poses a risk for entering a debilitating cycle of catastrophic thinking, avoidance of activities, disuse, and disability [9].

Conclusion

In conclusion, it is strongly recommended that people diagnosed with arthritis seek assistance when attempting to meet the guidelines for physical activity established by the CDC, from their Health Care Provider or from a licensed OT or PT. In addition, they should view the recommendations as a minimum, and exceed the standard if possible. In order to achieve this outcome, it is important for healthcare providers working with this population to do more than state the recommendations. They need to provide specific detail related to dose, frequency, and duration. They also need to recommend specific activities and ways to measure dosage. It is not enough to say you need to accumulate 30 minutes of moderate activity five days per week. They need to discuss the activity recommendations with the patient find what will work best for the patient. Should they recommend a group exercise program at a community center or a walking program in their neighborhood? This can be determined by discussing patient goals and opportunities.

Once this is established, further discussion to explore the patient's beliefs and attitudes toward exercise would prove beneficial. The final step should include ways to measure progress and determine dosage. With the commonly available activity trackers and metabolic calculators, this is more easily accomplished than ever before. As the patients, become active participants in the process they will be able communicate their concerns and success more accurately and with better communication, greater progress can be made. In the end, promoting activity in a more personalized and comprehensive manner can increase participation and reduce the burdens associated with the disease.

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