

Introduction/Problem Statement

In the United States, nearly one in four adults suffers from pain due to arthritis and it is currently the leading cause of disability¹. Given the alarmingly high rate of developing arthritis, it warrants a quick review of what the modifiable risk factors are for developing arthritis. Firstly, overweight and obese people are more likely to develop this given that the extra weight overtime puts chronic stress onto joints such as the knees². With the US obesity prevalence being around 43% in 2018, the likelihood of this group of individuals developing disability due to arthritis is quite astounding³. Additional modifiable risk factors include joint injuries or overuse, most of which is due to occupations that require repeated bending, squatting and lifting². Additionally, smoking is a modifiable and entirely preventable risk factor that can lead to development of rheumatoid arthritis (RA) and can also lead to the development of disease that making staying physically active very difficult². Healthcare providers play a vital role in counseling and encouraging patients with arthritis about the benefits of physical activity. With nearly 80% of Americans viewing their physicians as their primary source of health information, the importance of provider guided counseling on the benefits of physical activity is essential to encouraging patients to stay active after being diagnosed with arthritis⁴. Given that HCP's have a crucial role in informing and educating their patient, there is a clearly demonstrated need for HCP's to receive training on how to appropriately counsel and advise their patients on these benefits. Given the trust and reliance that patients have on the advice of their HCP's and the clear

benefit of physical activity on patients with arthritis, it is clear why this topic is included in the Healthy People 2030 Initiative. Healthy People 2030 emphasizes that the benefits of physical activity are low-cost, low-risk way to ease the burden of joint pain in adults with arthritis and it is an important alternative to opioids analgesics¹. However, given that this alternative is low cost and simple to implement as a treatment most adults are not receiving counseling about how to implement this from their HCP's. Therefore, there is an evident need that for HCP's to receive training on how to appropriately counsel and advise their patients on the benefits of physical activity after diagnosing arthritis.

Body Paragraphs

First it is warranted to take a look at what some of the data supporting the use of physical activity shows and how it affects those suffering from osteoarthritis. In a systematic umbrella review conducted in 2019 by Kraus et al., participants with hip and knee osteoarthritis were followed over the course of 12 years and their level of physical activity (as assessed by number of steps per day) was related to the improved or sustained progression of their disease and their levels of pain over time⁵. This study demonstrated that those with both modest intensity exercise and high intensity exercise have improved physical function and decrease pain levels and that the measurable benefits were sustained for nearly six months following the cessation of the program⁵.

The Centers for Disease Control (CDC) has created specific guidelines for exactly how activity can be used as a treatment for patients with arthritis⁶. These guidelines are useful for both medical and non-medical individuals as it has specific guidelines on the type, quality and quantity of physical activity and how to implement these practices in order to develop a routine that can be incorporated into patients' lives⁶. According to the CDC, low-impact anaerobic

activities include things such as walking, swimming (water-aerobics), cycling, light gardening or group exercises⁶. Introducing the concept of ‘start low and go slow’ and encouraging patients to assess how their bodies feel in response to the activity, is a great way to begin, then counseling patients to increasing activity by 3-5 minutes two times daily and eventually titrating up by increments of 10 minutes as tolerated. This specific and measurable CDC guideline is essential for clear communication between providers and patients with arthritis. Once a tolerance to the aerobic activity has been developed, it is recommended that patients engage in up to 150 minutes of moderate intensity activity (i.e., cycling at a low speed) per week⁶. For those who tolerate the moderate intensity, a goal of high intensity can be achieved through 75 minutes of vigorous activity (i.e., cycling at higher speed). When aerobic activity has been tolerated well the addition of muscle-strengthening should be incorporated; examples of this include yoga, weightlifting and resistance-bands. An emphasis should be placed on educating patients that the presence of pain, stiffness and swelling during the beginning of a new exercise regimen are not signs that the activity should be reduced or discontinued⁶. Given that there are many clearly defined guidelines and benefits of how to stay active and use exercise as a therapeutic modality for treating arthritis, specific interventions and clear guidelines for HCP’s to utilize are needed.

Interventions

Arthritic patients need clear messaging when it comes to the benefits of exercise on their condition and how they can incorporate it into their daily lives⁴. It is incredibly important to stress the point that physical activity regimens (when being recommended and monitored by a HCP) have not been shown to cause or worsen arthritis⁴. On the other hand, lack of physical activity has been shown to increase joint stiffness, muscle weakness and reduce range of motion

and lead to generalized deconditioning in the aging adult⁴. Stress should be placed on the recommendation of exercised that are directly at the whole body and not just the affected joints⁴.

Physical activity counseling should be tailored to fit each patient's unique physical and psychological needs⁴. There are five areas of readiness that should be assessed when considering how to tailor advice for patients 1) level of readiness to be more active; 2) confidence in their ability to start the exercise; 3) expectations about the benefits of the activity on their condition; 4) prior physical activity levels; 5) current lifestyle and level of activity⁴. Due to the recent transition to virtual medicine with the COVID-19 pandemic many patients are missing out on their usual face-to-face interactions with their HCP's. Given this lack of interaction with HCP's, many patients may become non-adherent to their exercise regimens which can worsen their arthritis and decrease their quality of life. A recent study by Nelligan et al., published looked at the use of a 24-week program that included self-directed, internet delivered OA education and exercise guidance and a behavior change text messaging adherence program⁷. Using this program HCP's can select patients with arthritis that they believe are good candidates and enroll them into a progressive lower limb strengthening program that is to be done three times weekly⁷. The benefits of using text messaging to remind patients to perform their exercise routines is a new and unique method of helping HCP's keep their patients accountable when they are not able to go into a clinic and be seen face-to-face.

Given that many HCP's feel pressured to see more patients in primary care and often report feeling rushed to shorten conversations outside of the patients main complaint, many patients may miss out on much needed education from their providers regarding the therapeutic benefits of exercise. A study conducted by Nicolson et al., looked at the use of 'booster' sessions with physical therapists in patients with osteoarthritis and chronic low back pain (CLBP)⁸. This

study's objective was to increase adherence to therapeutic exercise regimens in patients with OA and CLBP by utilizing physical therapists and their expertise in counseling patients on correct form and technique and how to perform exercises tailored to their conditions. Many providers often think to refer to a PT when a patient is injured, however, a referral can be used as a critical tool as part of a patient's diagnosis with OA. This study found that after only one to two visits with a PT, participants demonstrated stronger adherence to recommended therapeutic regimens for their OA with the addition of booster sessions with PT's⁸.

The Oregon Health Authority has partnered with Oregon State University to create an exercise program called "Walk With Ease" that is aimed at reducing pain associated with arthritis and improving overall health⁹. It is an example of a 'Self-Directed Program' that utilizes a 6-week program model, a guidebook and weekly reminder emails to help patients adhere to the program. The guidebook has very clear and specific guidelines for how long participants should walk each day and how to increase their walking distance in a safe and effective way for their arthritis.

Arthritis is a debilitating and often burdensome disease for both the patient experiencing it and the HCP's that work to help control the pain, reduce the progression of the disease and work to improve quality of life. Many adults with arthritis are prescribed opioids by their HCP's to manage and control their chronic pain, although many safer options are available and more effective.¹⁰ Opioid analgesics provide powerful pain relief associated with arthritis, however they have many undesirable long term effects on patients including dependence, tolerance and hyperalgesia and ultimately worsening of chronic musculoskeletal pain¹¹. The CDC's guide for prescribing opioids for chronic pain demonstrates that there is insufficient evidence for and potentially serious risks with long term use of opioids to treat chronic pain¹⁰. Its

recommendations include the use of exercise therapy, interventional procedures, using non-steroidal anti-inflammatories, acetaminophen and cognitive behavioral therapy¹⁰. An HCP plays a critical role in counseling and encouraging of patients with arthritis. Patients are much more likely to participate in self-management programs and learn to take control and manage their own conditions when they are recommended by a HCP than adults with arthritis who were not¹⁰.

Conclusion: why is it important to educate your audience about this topic?

With arthritis being a leading cause of disability in US adults and a projection of nearly 78.4 million adults being diagnosed by the year 2040 there is a clear indication to focus on the safe and effective treatments that treat, prevent worsening and improve the quality of life for patients with arthritis¹⁰. Among adults living with arthritis, there is a need for clear and specific counseling by their HCP's on how to treat and manage their conditions in the long run. HCP should utilize their time with patients to counsel and provide specific and measurable goals on how they can treat their arthritis using non-opioid medications and exercise therapy where appropriate. Although medications can help to decrease pain from arthritis, exercise therapy is known to improve pain, return function and allows patients to gain control over their condition¹². When patients feel control over the management of their disease they are less likely to experience depression and fatigue and more likely to have improved pain overall¹³. Given the influence that HCP's can have on patients' habits, it is important that providers have the data and the tools to help them efficiently and clearly give guidance to their patients with arthritis.

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