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## **Arthritis**

### Definition

Arthritis is the inflammation of one or more joints in a human being (Breedveld, & Combe, 2011). This results with the stiffness of the joints and constant pain. The condition is known to worsen with the age of the individual. There are two most common types of arthritis and these are rheumatoid arthritis and osteoarthritis.

Osteoarthritis is caused by the wear and tear of the joint of the individuals on a normal scenario. Rheumatoid arthritis on the other hand is an autoimmune disorder. There are also various types of arthritis and these include those caused by uric acid crystals, others caused by infections and those caused by underlying diseases such as lupus and psoriasis. The treatment of the disease depends on the type of arthritis the patient has been diagnosed with. During its treatment, its goal is to reduce the symptoms that have been caused by the disease and to improve on the quality of life of the patient.

### **Magnitude of the Problem**

Arthritis is known to affect many people all over the world physically, mentally, emotionally and even financially. When arthritis is mentioned to many, most of the people tend to think of an old person in a nursing home. This is not always the case; arthritis affects people of all background irrespective of the age of the person. The disease affects the elderly people mostly as almost half of the people over the age of 65 years do suffer from this disease (Ehrman, Gordon, Visich, Keteyian, 2013).

The most common type of arthritis, these being rheumatoid arthritis and

osteoarthritis tend to affect more women as compared to men. Research conducted have shown that there exist a correlation between arthritis and other diseases such as heart disease, obesity and diabetes.

In the United States, approximately 50 million people have some type of diabetes while in Canada almost 4. 3 million are of the same case. There is a relation between arthritis and obesity. It is predicted that there will be an increase in the arthritis rates in the country due to the rise in obesity rates.

## **Pathophysiology**

Osteoarthritis and Rheumatoid arthritis are the two common types of arthritis that affect most of the people in the United States of America. The two types of arthritis can be distinguished by the cartilage degeneration and the bony overgrowth of the joints once the patient is affected. It is obvious that the primary targets of the disease are usually the joints, however, the underlying pathophysiology of the two kinds are distinctively different.

Osteoarthritis is usually characterized by continuous loss of cartilage that is usually accompanied by thickening of the subchondral plate, the subchondral bone cysts and the osteophytes. With progress of the disease, calcification of the nearby articular cartilage and vascular invasion may probably occur. When the calcification and the invasion occurs, it may lead to the reducing of the thickness of the articular cartilage leading to bone remodeling and cartilage deterioration.

Unlike in the OA, the rheumatoid (RA) is an autoimmune disease. What triggers the rheumatoid are usually unclear but are speculated to be genetics, environmental factors and the hormones (Breedveld, & Combe, 2011). Once the cells have been triggered, the immune system will

produce inflammatory cytokines and autoantibodies. The two reactions end up creating a cascade of the inflammation that results in the formation of pannus. The pannus ends up invading and destroying the bone and the cartilage.

## **Symptoms and Diagnosis**

The diagnosis of arthritis involves checking on the signs and symptoms of the disease. For one to be diagnosed with the disease, he or she must show these signs Joint Pain, Joint swelling, Redness of the skin around the joint, reduced ability for the joint to move, stiffness and warmth around the joint. For the physical examinations by the doctor, he or she may check for fluids around the joint, red, warm and tender joints and difficulty in moving the joint.

Arthritis may also lead to deformation of the patients, this mostly happens in times when the disease is severe and is mostly untreated rheumatoid arthritis (Ehrman, Gordon, Visich, Keteyian, 2013).. Joint x-rays and blood tests are usually conducted to check for infections and other causes of the disease. The sample fluid on the joint may also be removed to be tested for any infections and signs of arthritis.

## **Complications**

Arthritis is seen to lead to various complications to the patient infected, causing deformity in severe cases. The disease may cause the joint of the patients to deform thereby reducing their chances of movement completely. In such a scenario, the body's immune system attacks the lining of the joint leading to bone and cartilage damage. In such case, if it goes untreated it

may lead to permanent deformity and joint damages.

The disease may also lead to the thinning of the bone, a condition known as osteoporosis. The loss of Bone substance leading to its reduced size increase the chances of the bones damage. Therefore, osteoporosis weakens the bones of the person in the long run exposing him or her to the outside world.

Scientists have established that there exist a direct relationship between arthritis and coronary heart disease. People with rheumatoid arthritis were noted to have a higher risk of contracting coronary artery disease. Coronary artery disease is the hardening of the arteries of the heart. Anemia is most likely to affect people with arthritis thereby leading to more complications to these patients if they do not seek any medical attention in due time.

## **Risk Factors**

According to Centre for Disease Control and Prevention, some factors have been more associated with arthritis as opposed to other. The factors can be divided into modifiable and non-modifiable factors. The non-modifiable risks include Age, Gender and Genetic. The risk of a person contracting arthritis increases with age. The risk of female contracting arthritis is higher than that of a male.

Modified risks on the other hand include obesity and overweight, joint injuries, occupations and infections. Modified risks are risks that patients expose themselves to due to their lifestyle (Ehrman, Gordon, Visich, Keteyian, 2013).

## **Management**

Patients suffering from arthritis often experience a lot of pain on their affected joints. Therefore, when managing arthritis, patients are advised first to focus on how to minimize the pain. Another thing that need consideration is to minimize the damage to the joint and also improving and maintaining of the functions and the quality of life.

Therefore, the best way to manage arthritis is by the patient following the given steps: Educate oneself about arthritis, being physically active, protecting ones joints and getting involved in the community helping those suffering from the same.

## **Benefit of exercise**

Its long since doctors advised the patients to rest their joints and minimize any strenuous activities. Doctors nowadays are advised to advise their patients to exercise their joints and avoid keeping them idle. Regular physical activities is not recommended just for the sick but also for those in good health. Scientific studies have shown that regular exercising by the patients in low intensity controlled areas limit the pain on their affected joints. Being physical active has also been noted to delay on the disability of the patients suffering from arthritis.

Exercise therefore, is a form of healing activity that a patient will administer to him or herself. It is required that all the arthritis patients to take part in physical activities no matter how much the pain and stiffness. Exercising reduces the stiffness of the joints thereby enabling the patients to increase their bodies lifespan.

## **Exercise Testing**

Exercise testing for arthritis patients is of utmost importance to enable them to keep their joints flexible and to avoid other diseases that come about with arthritis. Exercise testing may be different for the patients depending on their age, the extent of their arthritis and the negative effects the arthritis may have on them (Breedveld, & Combe, 2011).

## **Exercise Programming**

Arthritis patients should have a programmed schedule on how they should frequently exercise their joints. Adults are to program themselves to between 150 and 300 of moderate intensity exercise and 75 minutes to 150 minutes of vigorous intensity exercises. The upper limits represent those who want to achieve greater benefits faster and the lower limits refers to those who want to achieve the important health benefits first.

## **References**

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