

Diagnosing Arthritis – Dr. David Howdijam MD

Arthritis affects millions of people worldwide and can have a huge impact on the lives of those with the condition. It is the main cause of disability among people over fifty-five years of age the world over. Arthritis has emerged as the most common ailment in India among the aged and about 650 million people suffer from it.

WHAT IS ARTHRITIS?

If one has trouble moving around or feel pain or stiffness in the body, one could have arthritis. In the majority of cases, arthritis causes pain and swelling in the joints. The word "arthritis" comes from the Greek word **arthron** meaning "joint" and the Latin **itis** meaning "inflammation".

Eventually, a swollen joint can suffer severe damage. In some cases, arthritis can cause problems in the patient's eyes, skin or other organs.

Arthritis is not a disease – it is a term that covers over 100 medical conditions. Osteoarthritis is the most common form of arthritis and generally affects the older population. Some forms of arthritis can affect people at an early age.

WHAT CAUSES ARTHRITIS?

Basically, a joint is where one bone moves on another bone, where the two bones are held together by ligaments. The ligaments are like elastic bands keeping the bones in place while the muscles relax or contract to make the bones move. The cartilage covers the bone surface to stop the bones from directly rubbing on one another. The space within the joint has synovial fluid which nourishes the joint and the cartilage. In people with arthritis, something goes wrong with the joint. It could be that the cartilage is wearing away, a lack of fluid, autoimmunity (one's body attacking itself), infection, or a combination of many factors.

WHO GETS IT?

Men and women of all ages can get arthritis; however, there are a number of factors which can make one more likely to develop arthritis, including:

- **GENETICS** – many forms of arthritis run in families, although this isn't always the case.
- **LIFESTYLE** – physically demanding jobs can sometimes lead to osteoarthritis.
- **TRIGGER FACTORS** – short-lived arthritis can be triggered by some infections or allergic reactions.

The list above is, however, not definitive as there are many varied reasons why people develop arthritic conditions.

HOW IS ARTHRITIS DIAGNOSED?

The first step in the diagnosis of arthritis is a meeting between the doctor and the patient. The doctor will review the history of symptoms, examine the joints for inflammation and deformity, as well as ask questions about or examine other parts of the body for inflammation or signs of diseases that can affect other body areas. Furthermore, certain blood, urine, joint fluid, and/or X-ray tests might be

ordered. The diagnosis will be based on the type of symptoms, the distribution or type of inflamed joints, and any blood and X-ray findings. Several visits may be necessary before the doctor can be certain of the diagnosis.

BLOOD TESTS TO DIAGNOSE ARTHRITIS

- **Blood Markers for Rheumatoid Arthritis:** Rheumatoid factors are a variety of antibodies that are present in 70% to 90% of people with rheumatoid arthritis (RA). Rheumatoid factor (RF), however, can be found in people without RA or with other autoimmune disorders. A new test for rheumatoid arthritis that measures levels of antibodies that bind citrulline modified proteins (anti-CCP) is more specific and tends to be elevated in patients with rheumatoid arthritis or in those about to develop rheumatoid arthritis. The presence of anti-CCP antibodies can be used to predict which patients will get more severe rheumatoid arthritis.
- **Tests to Determine Inflammation:** The erythrocyte sedimentation rate (ESR) reflects the degree of inflammation in the body. It doesn't indicate any particular disease, but is a general indication of the amount of inflammation in the body. C-reactive protein (CRP) levels are an even better indication than ESR of the degree of inflammation present. In people with rheumatoid arthritis, if the CRP is high, it suggests that there is a significant inflammation or injury in the body.
- **Tests That Indicate Disorders like Lupus:** The ANA profile is a series of tests that measure the presence of abnormal antibodies. The profile helps to look for diseases such as Sjögren's syndrome, lupus, drug-induced lupus, polymyositis, and scleroderma. When the ANA is positive, it indicates that one may have autoimmune disorder.
- **Tests That Indicate the Presence of HLA-B27:** HLA-B27 is a genetic marker. In people with inflammatory arthritis of the spine and joints (not osteoarthritis), a positive HLA-B27 test is associated with the presence of one of a group of diseases called seronegative spondyloarthropathies. This includes diseases such as ankylosing spondylitis (AS), psoriatic arthritis, and Reiter's syndrome (also called reactive arthritis).
- **When Muscle Enzymes are High:** When muscle enzymes – creatinine phosphokinase (CPK) and aldolase are high, it indicates a possible inflammatory muscle disease.
- **Presence of Antineutrophil Cytoplasmic Antibodies (ANCA):** ANCA are abnormal antibodies found in the blood in most people with Wegener's granulomatosis, a disease that affects the upper respiratory tract, lungs, and kidneys. They are uncommon in other diseases, which makes them useful in diagnosing this particular disease.
- **The Complement System:** The complement system is made up of a network of proteins that involve the immune system and inflammation. Decreased levels of various components of complement C3, C4, or CH50 can be seen in lupus.
- **Presence of Cryoglobulins:** Cryoglobulins are antibodies that may be high in a variety of different diseases, including rheumatoid arthritis, lupus, Sjögren's syndrome, and other infections.

EARLY DIAGNOSIS IS CRUCIAL

Many forms of arthritis are more of an annoyance than serious. However, millions of people suffer daily with pain and disability from arthritis or its complications. Earlier and accurate diagnosis can help prevent irreversible damage and disability. It should be noted that both before and especially after the diagnosis of arthritis, communication with the treating doctor is essential for optimal health.

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