AMERICAN COLLEGE OF RHEUMATOLOGY
EDUCATION • TREATMENT • RESEARCH

Specialists in Arthritis Care & Research

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Spondylarthritis (Spondylarthropathy)

Description

Spondylarthritis (or spondylarthropathy) is the name for a family of inflammatory rheumatic diseases that includes ankylosing spondylitis; undifferentiated spondylarthritis; reactive arthritis (known previously as Reiter's syndrome); psoriatic arthritis; and arthritis associated with the inflammatory bowel diseases, ulcerative colitis and Crohn's disease.

Fast facts

- The major symptom in most patients is inflammatory low back pain. This is particularly seen in axial spondylarthritis. In a minority of patients, the major symptom is pain and swelling in the arms and legs. This type of spondylarthritis is known as peripheral spondylarthritis.
- The prototype of spondylarthritis known as ankylosing spondylitis, which more commonly usually strikes young males.
- Nonsteroidal anti-inflammatory drugs (commonly called NSAIDs) offer considerable symptom relief in most patients. TNF blockers are effective in patients that do not respond adequately to NSAIDs.
- Regular recreational activities and back exercises are recommended.

What is spondylarthritis?

Spondylarthritis is different from other types of arthritis in that it involves the entheses, where ligaments and tendons are attached to bones. There are two major types of presentations. The first is inflammation causing pain and stiffness of the spine and, in some, pain and swelling of the arms and legs. The second type is bone destruction causing deformities of the spine and disabilities of the shoulders and hips.

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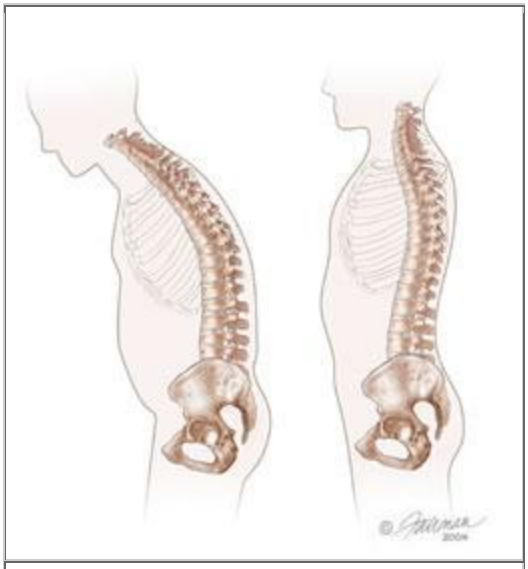
What causes spondylarthritis?

In ankylosing spondylitis, the most common type of spondylarthritis, the disease is caused by multiple genes. At least 14 of these genes have been identified. The major gene is HLA-B27. Almost all Caucasian ankylosing spondylitis patients are carriers of HLA-B27. Recent studies have provided clues as to how HLA-B27 induces spondylarthritis, although this still is a subject of intense research. The causes of other members of the spondylarthritis family are discussed in their respective fact sheets.



Over time, spondylitis results in pronounced curvature of the spine (left).

Who gets spondylarthritis?

Ankylosing spondylitis usually starts in the teens and 20s and strikes males 2-3 times more frequently than women. Family members are at higher risk, depending partly on the HLA-B27 gene.

There is also an uneven ethnic distribution. The highest frequency appears in the far north in cultures such as Alaskan and Siberian Eskimos and Scandinavians Lapps (Samis), as well as in certain Native America tribes in the western U.S. and Canada. African-Americans are affected less frequently.

How is spondylarthritis diagnosed?

Correct diagnosis requires a physician to evaluate the patient's history and do a physical examination. The physician also may do two other types of evaluation. One is ordering an X-ray of the sacroiliac joints, a pair of joints in the pelvis. X-ray changes of the sacroiliac joints known as sacroiliitis is a key sign of spondylarthritis. If X-rays do not show adequate changes, but the symptoms are highly suspicious, a physician might decide to visualize the sacroiliac joints with MRI. Besides imaging, the second type of supplementary tests are blood tests for HLA-B27, and sometimes also for acute phase reactants such as C-reactive protein. Ultimately, diagnosis relies on the judgment of the attending physician. There are people who have a positive HLA-B27 gene test, but do not have arthritis and never develop arthritis. Therefore, a positive test does not mean that someone will develop spondylarthritis in the future.

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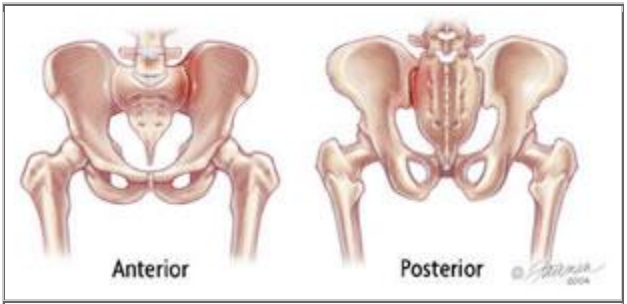

Red areas show location of inflammation in the sacroiliac joints.

How is spondylarthritis treated?

Physical therapy and joint-directed exercises are recommended for all patients. Smoking aggravates spondylarthritis.

There are many drug treatment options. The first lines of treatment are the NSAIDs, such as naproxen, ibuprofen, meloxicam or indomethacin. No one NSAID is considered superior to another. Given in the correct dose and duration, these in and of themselves will generate considerable relief for most patients.

For localized joint swelling, injections of corticosteroid medications into joints or tendon sheaths can be rapidly effective.

For those resistant to the above lines of treatment, disease modifying anti-rheumatic drugs (commonly called DMARDs) such as sulfasalazine (Azulfidine) might be effective, particularly in those with arthritis affecting the joints of the arms and legs.

Although they may be effective, corticosteroids taken by mouth are not recommended, because the doses required will lead to many side effects.

Antibiotics are considered only for those with reactive arthritis.

TNF alpha blockers (one of the drugs known as biologics) have been shown to be very effective in treating both the spinal and peripheral joint symptoms of spondylarthritis. The TNF alpha blockers currently approved by the FDA for use in ankylosing spondylitis are:

- infliximab (Remicade), which is used at a dose of 5 mg/kg given intravenously every 6-8 weeks;
- etanercept (Enbrel), given 50 mg by injection under the skin once weekly;
- adalimumab (Humira), injected at a dose of 40 mg every other week under the skin; and
- golimumab (Simponi), injected at a dose of 50 mg, once a month under the skin.

However, anti-TNF treatment is expensive and not without side effects, including an increased risk for serious infections, especially tuberculosis. Therefore, it should not be used without an initial trial of an NSAID. Those with arthritis in the knees, ankles, elbows, wrists, hands and feet also should try DMARD therapy prior to anti-TNF treatment.

Surgical treatment is very helpful in some patients. Total hip replacement is very useful for those with hip pain and disability due to joint destruction from cartilage loss. Spinal surgery is rarely necessary, except for those with traumatic fractures or to correct excessive flexion deformities of the neck.

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Broader health impacts

Patients with spondylarthritis can develop additional complications which should be discussed with their physicians. These can include:

- **Osteoporosis**, which occurs in up to half of patients with ankylosing spondylitis, especially in those whose spine is fused. Osteoporosis can increase the risk of spinal fracture.
- Eye inflammation, called uveitis, which occurs in about 40 percent of those with spondylarthritis. Steroid eye drops usually are effective, though more severe cases may require other treatments by an ophthalmologist. Symptoms of uveitis include eye redness and eye pain.
- Inflammation of the aortic valve in the heart, which can occur over time in patients with spondylitis. This should be monitored by the physician.
- Psoriasis and intestinal inflammation, which may be so severe that it requires more specialized treatment by a dermatologist or gastroenterologist.

Living with spondylarthritis

Despite the pain, fatigue and stiffness that can be continuous or intermittent, most patients with spondylarthritis lead productive lives with normal longevity, particularly with the newer treatments available. Regular exercise is essential to maintain joint and cardiovascular health.

Patient support groups are also available through the Spondylitis Association of America, the Psoriasis Foundation or the Arthritis Foundation. (See links below). These individuals and medical practitioners can be provided with valuable information and support.

Points to remember

- Spondylarthritis is a type of arthritis that attacks the spine and in some, the joints of the arms and legs. It can be associated with involvement of the skin, intestines, and eyes.
- Those in their teens and 20s, particularly males, are affected most often. Family members of spondylarthritis patients are at higher risk.
- Newer treatments have helped a great deal in controlling the symptoms and signs.

To find a rheumatologist

For a listing of rheumatologists in your area, click here. Learn more about rheumatologists and rheumatology health professionals.

For more information

The American College of Rheumatology has compiled this list to give you a starting point for your own additional research. The ACR does not endorse or maintain these Web sites, and is not responsible for any information or claims provided on them. It is always best to talk with your rheumatologist for more information and before making any decisions about your care.

Spondylitis Association of America
www.spondylitis.org

The Psoriasis Foundation
www.psoriasis.org

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Written by John D. Reveille, MD, and reviewed by the American College of Rheumatology Communications and Marketing Committee.

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