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RSDS: Your Questions Answered

WHAT IS RSDS?

Reflex sympathetic dystrophy syndrome, or RSDS, is known by many names. These include causalgia, Sudeck's atrophy, shoulder-hand syndrome and regional complex pain syndrome. The cause of this disorder is unknown but appears to involve abnormalities of the sympathetic nervous system. This network of nerves, located alongside the spinal cord, controls important body functions; in particular, the opening and closing of blood vessels that regulate blood flow and the control of sweat glands that regulate temperature.

The main symptom of RSDS is pain – usually a burning type of pain often associated with limited movement of an extremity. Most commonly the pain is present in the hand or foot, but it may be present in the shoulder or knee. Another problem associated with RSDS is a reduction in blood supply to affected areas. This may result in *dystrophy*, which is a weakness or wasting of the affected area.

RSDS frequently occurs between the ages of 40 and 60 but also can occur in children and the elderly. It is more common in women than in men.

WHAT CAUSES RSDS?

Although the exact cause is unknown, RSDS often develops as a result of injury to nerves, bones, joints and occasionally muscles, ligaments or tendons. The injury may be as minor as a mild sprain or as severe as a broken bone. Surgery on joints, bones or soft tissues in or near a limb also may bring on RSDS. In a small number of people with RSDS, the syndrome appears without any recognizable cause.

Many other conditions may rarely be associated with the development of RSDS. These include infections, cancer, diabetes, disorders in the neck and lower back, thyroid disorders, lung disease, stroke, heart attack and the use of certain medications. Doctors think that these

disorders can alter impulses in the sympathetic nervous system, leading to RSDS in patients predisposed to this disease.

What Happens In RSDS?

The course of RSDS has been divided into three overlapping yet progressive stages. However, it is often difficult to tell when one stage ends and another begins. In addition, the progression varies from one person to another. Importantly, in many patients RSDS may not progress, or progress more slowly, if it is recognized and aggressively treated in the first stage.

First Stage

In the first stage, the affected area is painful, tender and usually accompanied by swelling. Changes in the temperature (usually from warm to cool, but sometimes from cool to warm) and color of skin (usually from flesh tone to dusky purple) may occur, along with sweating. Other symptoms may include rapid hair and nail growth, and joint stiffness.

Second Stage

After the condition has been present for weeks or months, the second stage develops. This is characterized by persistent aching or burning pain, which is made worse by changes in temperature or by other stimulation, such as breezes, air conditioning or light touch. The skin becomes very cool and the nails become brittle. The area may become very swollen and look pale or waxy. X-rays show thinning of or damage to the bones. Pain may spread, usually toward the center of the body (for example, from the foot to the hip or the hand to the shoulder). The spreading pain often affects the muscles, producing painful spasms.

Third Stage

Permanent changes may result during the final stage of this disorder. The pain may become severe, although some people notice less pain. The skin becomes drawn, and the muscles and other tissues become wasted and contracted (tight). Joint movement and limb function are reduced.

HOW IS RSDS DIAGNOSED?

Your doctor will review your medical history and perform a complete physical examination. The affected area will be carefully examined for neurologic or vascular changes, skin abnormalities, or limitations of movement. X-rays and usually a bone scan will be necessary to help make a proper diagnosis and help determine treatment. Some doctors will order or perform other tests to identify the cause of your problem. These may include a thermogram to measure changes in skin temperature, electrical tests of nerve or muscle function, or other specialized tests.

HOW IS RSDS TREATED?

Early treatment of RSDS is very important. Your doctor will design a treatment program based on the duration and severity of your symptoms.

Muscle relaxants may help, especially when there are painful muscle spasms. A formal physical therapy or occupational therapy program with stress-loading and limited range-of-motion exercises should be started immediately to help maintain flexibility and strength.

Your doctor may prescribe corticosteroid (cortisone-like) medications. These are powerful drugs that require very careful monitoring by your doctor and may have a variety of side

effects. In patients with increased blood flow to the affected extremity as determined on a bone scan, corticosteroids given in high doses for two to three weeks can be very effective. The use of medications such as alpha-blocking drugs or calcium channel blockers, or procedures such as local anesthetic sympathetic blocks (a block of sensations in the sympathetic nervous system) to increase blood flow to the involved area, frequently relieve most of the pain, particularly when used early. With sympathetic blocks, a numbing agent (local anesthetic) is injected into the spinal canal (for epidural blocks) or alongside the spinal column (for paravertebral blocks).

Sometimes medications are injected into the veins of the foot or hand. This form of block (called a *Bier block*) may produce similar relief. Sometimes a single injection is all that is required, but it may be necessary to repeat this several times depending on the response.

Sympathetic blocks may relieve and sometimes cure RSDS, especially when given early and coupled with an appropriate exercise program. Sometimes blocks produce temporary relief for hours or days but do not provide permanent relief.

Treatment with a *transcutaneous electrical nerve stimulator* (TENS) unit or biofeedback may also be tried. A TENS unit is a small, battery-operated device that can relieve pain by blocking nerve impulses. Biofeedback is a technique that can help control pain, blood flow and skin temperature.

Acetaminophen, aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs), including COX-2 inhibitors, or narcotic analgesics (pain relievers) containing codeine-like medication may be used to relieve pain.

Other treatments have been used in RSDS. They include medications that affect bone growth (calcitonin and leukotriene inhibitors). Antidepressants and anti-seizure medications (neurontin) can provide additional relief.

HOW CAN YOU BEST MANAGE RSDS?

Learning to live with a serious and painful disorder such as RSDS can be challenging. You may have to make changes in your relationships, in your work situation or in your leisure-time activities. Any of these changes may be stressful. It may help to talk about your feelings with a family member, close friend or someone who has RSDS. If you find that you are faced with problems you don't know how to solve, ask your doctor to suggest a counselor or a psychologist.

IN SUMMARY

Early diagnosis and proper treatment are vital to help reduce or prevent permanent damage from RSDS. Once you've been diagnosed, remember to follow your doctor's advice carefully. Take your medication and perform your exercises regularly. Learn to reduce stress and to manage your pain. There is a great deal that can be done to help you learn to live more comfortably with reflex sympathetic dystrophy syndrome.

THE ARTHRITIS FOUNDATION

The mission of the Arthritis Foundation is to improve lives through leadership in the prevention, control and cure of arthritis and related diseases.

The Arthritis Foundation supports research with the greatest potential for advances and has invested more than \$320 million in these efforts

since its inception in 1948. Additionally, the Arthritis Foundation supports key public policy and advocacy efforts at a local and national level in order to make a difference on behalf of 70 million people living with arthritis.

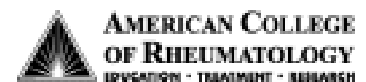
As your partner in taking greater control of arthritis, the Arthritis Foundation also offers a large number of programs and services nationwide to make life with arthritis easier and less painful and to help you become an active partner in your own health care.

Contact us at (800) 283-7800 or visit us on the Web at www.arthritis.org to become an Arthritis Advocate or to find out how you can become involved.

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For more information: The Arthritis Foundation offers a wide variety of books, brochures and videos about different forms of arthritis, treatment and self-management techniques to help you take control of your arthritis. To order any of these products, become an Arthritis Foundation member or to subscribe to the Arthritis Foundation's award-winning consumer health magazine, *Arthritis Today*, call (800) 283-7800. Call or visit our Web site (www.arthritis.org) to find out how you can take control of your arthritis and start living better today!

This brochure has been reviewed by the
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MISSION STATEMENT:

The mission of the Arthritis Foundation is to improve lives through leadership in the prevention, control and cure of arthritis and related diseases.



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