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RHEUMORS

Practice Newsletter WINTER 2020

ARA Welcomes Our Newest Physician to the Practice

Dr. Maher, a native of Pittsburgh, earned her undergraduate degree in English Literature from Georgetown University in Washington, DC. She completed her medical degree at Georgetown University School of Medicine at which time she developed an interest in patient advocacy while volunteering with an organization that served displaced young adults. Dr. Maher then completed her residency in internal medicine at MedStar Georgetown University Hospital, where she served on the Ethics Committee during her third year. She began practicing medicine as a hospitalist at MedStar Georgetown University Hospital.

Dr. Maher then worked as a primary care physician with a large medical group in Washington, DC, before making the decision to pursue a fellowship in rheumatology at MedStar Georgetown University Hospital. During both years of her rheumatology fellowship, Dr. Maher was awarded first place for her poster presentations at the hospital's Department of Medicine Research Day. She also helped lead a project to improve the treatment of osteoporosis at the Washington, DC, Veterans Affairs Medical Center and co-designed a patient advocacy training program to help physicians identify shortcomings and improve patient medical care environments.

Dr. Maher sees patients in our Rockville and Frederick offices. She treats all types of rheumatic conditions and has a special interest in rheumatoid arthritis, scleroderma, osteoporosis, and gout. Dr. Maher is board certified in internal medicine and is a member of the American College of Rheumatology, the American Medical Association, and the American College of Physicians. She lives with her husband and two young children in Alexandria, Virginia.

RHEUMINATION:

CBD (Cannabidiol) Role in Treatment

BY DAVID P. WOLFE, MD, FACR

CBD has been widely discussed in the media recently and has been touted as a cure-all for all manner of medical conditions. While there is emerging scientific evidence that CBD can be a benefit for certain conditions, it is important to separate fact from fiction.

CBD (Cannabidiol) is a chemical compound found in a type of plant called cannabis sativa, which includes both marijuana and hemp plants. The marijuana plant produces flowering buds that are rich in THC (Tetrahydrocannabinol), the psychoactive, or "high"- producing chemical in the plant. It also contains lesser amounts of CBD and other medicinal chemical resins called terpenes. The hemp plant does not produce flowering buds and therefore contains very little THC or terpenes. It does, however, contain abundant CBD.

Unlike THC, CBD is not a psychoactive compound, meaning ingestion of even large amounts produces no intoxicating high. CBD works in the body by raising the levels of chemicals that the body already makes itself. These chemicals, called endocannabinoids, bind to various nerve receptors in the body that have been shown in animal and human studies to moderate pain, anxiety, depression, and insomnia. CBD also has been found to treat childhood seizures. In animal studies it reduces inflammation and strengthens bones amongs other potentially promising effects. CBD has been shown in animal models to moderate pain processing at all levels including where the pain signal originates, along the nerve path of transmission of the pain signal to the spinal cord, at the level of the spinal cord, and in the brain.

There are many ways to use CBD including as creams or salves, by inhaling vaporized concentrate, consuming edibles, or using liquid tinctures (oils). For many people the tincture form is preferred as the dose can be reliably reproduced and the duration of action tends to be longer. When using CBD tincture, it is best to start out with a dose as low as 1 drop. The dose is held under the tongue for 3-5 minutes before swallowing and this is done 2-3 times per day. The reason it is best used sublingually (under the tongue) is that cannabis is not particularly well absorbed by the stomach and by holding it under the tongue a larger percentage of it can be absorbed directly by the sublingual blood vessels. If the starting dose does not work, it can be raised by 1 drop every 2-3 days as necessary.

The most commonly reported side effects of CBD include sleepiness, nausea, and diarrhea. People who get too sleepy should take less during the day and more at bedtime. If it makes them nauseous or causes diarrhea, they can hold it under their tongue for 3-5 minutes and then spit it out instead of swallowing it.

Generally speaking, CBD is very safe. The only major concern is with potential drug interactions. The most well studied CBD-drug interactions are with drugs that are contraindicated with grapefruit (such as atorvastatin and simvastatin) as well as with warfarin. This is because both CBD and grapefruit can interfere with an enzyme called Cytochrome P450, which metabolizes a wide range of medications. For people taking a medication that is prohibited with grapefruit who plan to use CBD, it is important that they find an alternate medication that CAN be taken with grapefruit. If they are taking warfarin, they should either take another blood thinner or not take CBD. There may be

ARA Supports TOYS FOR TOTS

The staff and physicians were happy to contribute toys and money again this year as part of their community outreach.

other CBD-drug interactions that we are not aware of, such as with other blood thinners or with various anticonvulsants. For this reason, it is crucial that anyone taking CBD have an open dialogue with all of their physicians to alert them to the fact that they are taking it and to become aware of symptoms of excess drug levels of any and all of their medications.

Many people taking CBD also are taking opiates. Fortunately there is research suggesting that this combination is quite safe and does not increase the risk of opiate overdose.

According to the 2018 Farm Bill enacted by Congress, hemp-derived CBD can be purchased anywhere in the US and does not require a person to be enrolled in a state-sponsored medical marijuana program. When obtaining CBD it is very important to purchase it from a reputable source as there are many products on the market that have much less CBD than what is listed on the label, higher amounts of THC than are allowed by law (<0.3%), or even high levels of lead or other heavy metal compounds. CBD should be grown organically in the United States and the seller should be able to produce a Certificate of Analysis for its product that indicates the precise chemical analysis. Companies that meet these requirements include Bluebird Botanicals and Charlotte's Web, both are available on the Internet. Because it takes a lot of hemp to make a bottle of CBD, it is not cheap ($100+ for a 30 ml bottle). Because it is not FDA approved, CBD specifically, and medical cannabis in general, are not covered by private insurance, Medicare, or Medicaid.

Even though hemp-derived CBD has less than 0.3% THC by law, it still might trigger a positive drug screen for THC, which could jeopardize employment or insurance physicals. Furthermore, until the legal status of CBD is better defined by the DEA, FDA, and courts, those with a professional security clearance are discouraged from using it.

CBD has been shown in clinical practice to be a very safe and effective treatment for pain, anxiety, and insomnia for many individuals but it is not a cure-all. Like any and all treatments, it will work better for some people than for others. If you wish to learn more about CBD, go to www.projectcbd.org or speak with your treating physician about consulting with Dr. Wolfe at ARA.

Lyme Disease - Myth or Fact

BY PAUL J DEMARCO, MD, FACP, FACR, RHMSUS

In 1977, Dr. Allen Steere first described Lyme Disease in the premiere Rheumatology journal, *Arthritis and Rheumatism*. Dr. Steere was tasked by the Center for Disease Control in Atlanta, GA, to investigate a strange occurrence reported by a mother in Old Lyme, CT. She noted that several children in the same small suburban neighborhood were diagnosed with juvenile idiopathic arthritis, and she thought this was too rare of a disease to occur as often as it was noted. Dr. Steere agreed with the mother. He learned the children, more than adults, developed attacks of arthritis that lasted about a week and recurred about three times. Many cases were preceded by an expanding, red, annular lesion or skin rash. The arthritis was not showing evidence of a particular infection. The rash followed by the arthritis suggested to the initial investigators that an insect must be involved in the process.

The infectious agent, since identified as a spirochete or Borrelia burgdorferi species type bacteria, lives in the salivary glands of the deer tick, Ixodes Scapularis. It is important to know that there are many types of ticks in the United States. The bigger, black-colored dog tick is far more common and probably the tick that most people see. The deer tick is quite small, and only after it has eaten can it be readily seen.

The Borrelia (bacteria that causes Lyme disease) is more likely to be transmitted by the tick in its young stage, or nymph stage, but can be transmitted in the adult phase. The ticks are usually in the nymph stage in the summer and develop into the adult stage by the early fall months. The tick bites to obtain a meal of blood. These ticks bite many mammals but favor deer. The deer population therefore serves as another place for the Borrelia to live. When the tick bites to obtain its blood meal, the Borrelia in the salivary glands of the tick can enter the blood stream of the mammal it bites. This transmission of the Borrelia starts the infection that ultimately will become Lyme disease.

Lyme disease manifests in three stages: early localized disease, early disseminated disease and late Lyme disease. Early localized disease is marked by the presence of the localized rash, erythema migrans, which occurs somewhere between 7 to 14 days after the tick bite, at the site of the bite. It is a slow expanding ring with central clearing, with the appearance of a bullseye over time. This stage will resolve and, after weeks to months from the initial exposure, early disseminated disease is noted. The skin lesions, multiple sites of erythema migrans, can appear first, and can be followed with neurologic findings (Bell's palsy, neuropathies) and/or cardiac findings (heart block, palpitations, or heart failure). Late Lyme disease will manifest months to years after the second phase and are noteworthy for the arthritis of Lyme or other neurologic findings.

Lyme disease can be diagnosed with a blood test that determines the immune response to the presence of the agent of Lyme. Most commonly, a Western blot test is performed to look at two immunoglobulins, IgM and IgG. Having two of a possible three IgM responses suggests a positive test and having five of a possible 10 IgG responses also suggests a positive test. A newer approach uses a C6 ELISA, a single-step test, which is better for early disease but offers no advantage for early disseminated or Late Lyme disease.

Antibiotics, usually oral but sometimes intravenous, can treat Lyme disease. Antibiotics are prescribed for a defined period of time depending on whether there is skin, cardiac, neurologic or musculoskeletal (arthritis of Lyme) involvement. A rheumatologist may choose to coordinate this treatment with an Infectious Disease specialist. Studies have confirmed that longstanding antibiotic therapy causes more harm than good and is not recommended.

Patients should discuss concerns about Lyme disease with their rheumatologist who can advise them on the best approach for management of their disease.

Stopping Knee Pain with Cold Therapy - IOVERA

BY PAUL DEMARCO, MD FACP FACR RHMSUS; ASHLEY BEALL, MD FACR; AND JUSTIN PENG, MD FACP FACR

At Arthritis and Rheumatism Associates, we are always looking for new ways to treat arthritis and pain. We continually research new methods of treatment and try to offer therapies that can improve the quality of life for our patients. Research oftentimes leads to the development of new approved therapies. We are now offering a standard-of-care procedure called Iovera for the treatment of knee pain.

WHAT IS IOVERA?

It is a procedure used to freeze peripheral nerves, resulting in the blocking of pain signals. Freezing the nerve uses the body's natural response to cold to disrupt the transmission of pain signals sent to the brain. The pain relief effect is not permanent and will "wear off" when the nerve regenerates and sensory function is restored. This procedure manages arthritis knee pain and also can help post-surgical patients with knee pain. The device used for this procedure is FDA-approved.

HOW DOES IOVERA WORK?

A local anesthetic is used prior to the procedure. A hand-held device with three closely spaced tiny needle tips is placed through the skin, near the location of the nerves. The device sends nitrous oxide into the needle tips, creating a localized cold zone in contact with the needle tips. This freezes the nerves at the mid-thigh and medial to the knee. No nitrous oxide enters the patient. Three nerves are blocked per knee treated (2 branches of the AFCN - Anterior Femoral Cutaneous Nerve, and ISN - Infrapatellar Branch of Saphenous Nerve).

HOW LONG DOES IT TAKE TO RECEIVE TREATMENT WITH IOVERA?

Approximately 30-45 minutes, depending on whether one or two knees are done. Patients can walk out of the office afterward (assuming they walked in). Patients may return to non-strenuous activity immediately after receiving Iovera treatment, or at the discretion of their physician.

WHO IS A GOOD CANDIDATE?

A good candidate is any patient with knee pain who has tried medicines and/or injections but is still in need of pain relief. It can be administered to pre-knee replacement patients to minimize post-operative pain, or in patients not ready to proceed to, or not able to pursue, knee replacement. Patients with a knee replacement who still experience pain can benefit from this intervention too.

HOW LONG DOES AN IOVERA TREATMENT LAST?

Duration is variable. As with many treatments, some patients benefit and some do not, therefore response depends on the individual. Usually the effects are immediate. One treatment can last 90 days. In one clinical trial, a majority of patients have continued to experience relief beyond 150 days.

WHAT ARE THE CONTRAINDICATIONS?

Cryoglobulinemia; paroxysmal cold hemoglobinuria; cold urticaria; Raynaud's disease; open and/or infected wounds at or near the treatment line.

WHAT ARE THE SIDE EFFECTS?

Since no medicine is being injected into the patient, the side effects are usually minimal. Since the skin is punctured by the device, a patient may experience localized bruising, swelling, redness, tenderness, and altered sensation. Typically these reactions resolve without physician intervention. Patients are encouraged to apply ice to affected sites in the first 1-2 days after the procedure.

DOES INSURANCE APPROVE THIS PROCEDURE?

Most insurances cover this twice, at six-month intervals. However, this should be discussed with the physician or our billing office.

WHERE CAN I GET THIS PROCEDURE DONE?

At Arthritis and Rheumatism Associates PC – currently there are four sites offering it once a month: Wheaton (with Dr. DeMarco), Shady Grove (with Dr. Beall), Washington, DC (with Dr. Peng), and Frederick, MD (with Dr. DeMarco). Ask your rheumatologist, front desk staff, or contact our central call center.

Practice News

At ARA's annual holiday party, Dr. Herbert S.B. Baraf was presented with a special "Founder's Award" in recognition of his over 40 years of leadership. Dr. Baraf was one of the founding physicians at ARA and continues to serve the community and treat patients.

FUN RHEUM:

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Y S M L C B N C D N F V C I J D V M C D S T T R T R L T
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Diagnoses
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IBD
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Spondyloarthritides
Medications
Autoimmune
Diseases
Gene
Infusion
Immunosuppressive

Uveitis and the Rheumatologist

BY RACHEL KAISER, MD, MPH

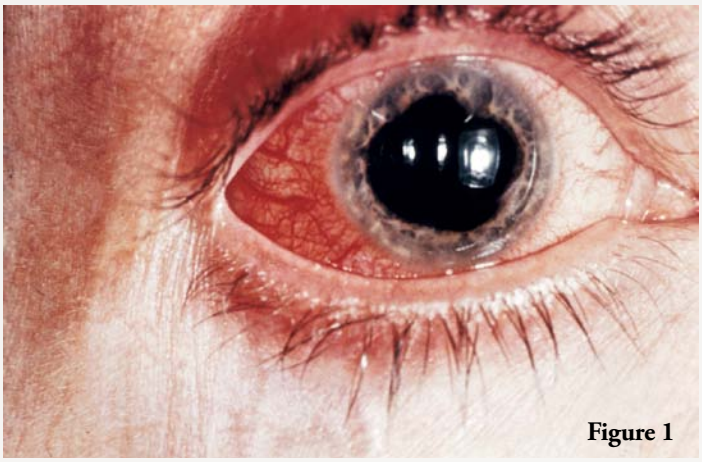

Figure 1

WHAT IS UVEITIS?

Uveitis is a disease in which inflammation inside the eye causes pain, sensitivity to light and redness in one or both eyes (Figure 1). Untreated, it can lead to vision loss. The most common causes of uveitis are infections (such as herpes, toxoplasmosis, syphilis, cytomegalovirus, or tuberculosis) and autoimmune diseases. Up to 30% of uveitis cases do not have a cause ("idiopathic").

Uveitis has several different subtypes based on which portion of the eye is involved (Figure 2). Anterior uveitis (that is, inflammation of the part of the eye in front of the lens) often is referred to as iritis. Posterior uveitis can be referred to as choroiditis, chorioretinitis, retinochroiditis, pars planitis, retinitis, and intermediate uveitis.

WHO DIAGNOSES UVEITIS?

Many diseases in addition to uveitis can cause a red, painful eye. An eye doctor or ophthalmologist diagnoses this condition by performing a thorough eye exam, often using special equipment such as a slit lamp, to look into the different layers of the eye. Some ophthalmologists subspecialize in the field of inflammatory uveitis.

HOW IS UVEITIS TREATED?

Autoimmune uveitis usually is treated with steroid eye drops (e.g., prednisolone acetate) in addition to an eyedrop that can dilate the pupil (e.g., scopolamine) to help with discomfort associated with muscle spasms of the muscles controlling the pupil.

WHAT DOES UVEITIS HAVE TO DO WITH RHEUMATOLOGY?

Rheumatologists become involved in the care of patients with uveitis to address two potential questions:

1. Is there a systemic autoimmune disease associated with the uveitis? and/or

2. Does the patient have uveitis that is resistant to topical treatment with eyedrops that may therefore require systemic immunosuppressive medications? Rheumatologists have expertise in managing such medications in other autoimmune conditions (e.g., lupus and rheumatoid arthritis) and can help manage these medications with the ophthalmologists.

WHICH AUTOIMMUNE DISEASES CAN PRESENT WITH UVEITIS AS ONE OF THE SYMPTOMS?

Some of the more common autoimmune conditions associated with uveitis are:

- **Spondyloarthritides** (e.g., ankylosing spondylitis, reactive arthritis). These diseases can affect the back, hips and shoulders as well as the eye.
- **Psoriatic arthritis.** This disease can cause rashes, arthritis (swollen joints), and uveitis.
- **Inflammatory bowel disease** (Crohn's, ulcerative colitis). Severe gut inflammation also can be associated with uveitis.
- **Sarcoidosis.** This disease predominantly affects the lungs, but

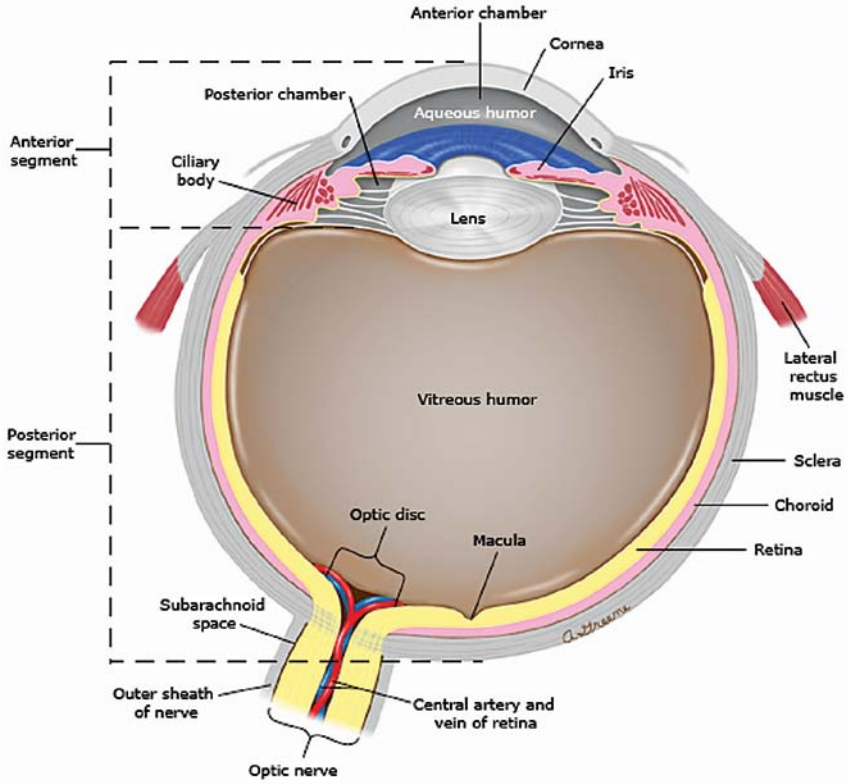

Figure 2

Cannellini Beans with Garlic and Sage

Beans are one of the top foods recommended by the National Arthritis Foundation to help reduce inflammation. They'll fill you up with lots of good fiber, too. They're also high in protein and low in fat, which can be useful to help ward off painful arthritis flares. For best results and maximum inflammation-fighting power, buy whole beans and soak and cook them yourself.

INGREDIENTS

1 pound dried cannellini (white kidney beans)
8 cups room-temperature water
2 tablespoons olive oil
1 large head of garlic, unpeeled, top 1/2 inch cut off to expose cloves
1 large fresh sage sprig
1/4 teaspoon whole black peppercorns
1 teaspoon coarse kosher salt
Extra-virgin olive oil (for drizzling)

RECIPE PREPARATION

Place beans in large bowl. Cover with cold water (at least 6 cups) and let soak overnight.

Drain beans. Place in heavy large pot. Add 8 cups room-temperature water, 2 tablespoons olive oil, garlic, sage, and black peppercorns. Bring to simmer over medium-high heat. Reduce heat to medium-low; simmer uncovered 1 1/2 hours, stirring occasionally. Mix in 1 teaspoon coarse salt. Continue to simmer until beans are tender, adding more water if needed to keep beans covered, about 30 minutes longer. Cool beans in liquid 1 hour.

Using slotted spoon, transfer beans to serving bowl, reserving bean cooking liquid, if desired, but discarding garlic, sage, and peppercorns. Season beans to taste with pepper and more coarse salt. Drizzle with extra-virgin olive oil and serve.

also can affect joints, skin and eyes.

- **Juvenile rheumatoid arthritis.** Children with rheumatoid arthritis can get severe uveitis and often need frequent eye exams just to screen for this disorder.

- **Behcet's Disease.** This is a disease that can affect skin, joints, blood vessels and the eye.

ARE THERE ANY TESTS THAT HELP A PHYSICIAN TO MAKE THE DIAGNOSIS OF UVEITIS?

There isn't a specific lab test that confirms the diagnosis of uveitis. We talk to patients, perform an exam, and order lab and other tests (e.g., colonoscopy) to help us define any associated autoimmune diseases. Lab tests can help rule out infectious causes, for example. A gene found through a lab test, HLA-B27, often is associated with uveitis. Since it also can be seen in healthy people, its presence alone is not enough to establish the diagnosis.

WHAT ARE POTENTIAL SYSTEMIC TREATMENTS FOR UVEITIS WHEN EYEDROPS AND ORAL STEROIDS ARE INSUFFICIENT?

Prolonged use of steroid eyedrops can raise the pressure in the eye (glaucoma) and contribute to cataract development, which can further cloud a patient's vision. Systemic steroids such as oral prednisone can lead to weight gain, elevated blood pressure, and osteoporosis among other side effects. Therefore, sometimes oral medications that suppress the immune system such as methotrexate (a weekly oral medication) are used to help us reduce the need for topical or oral steroids. In more serious cases, advanced biologic drugs such as the self-injectable medication adalimumab or an infused drug such as infliximab can be used.

Close collaboration between ophthalmologists and rheumatologists can help ensure successful treatment of uveitis and any associated diseases. It is important to seek care quickly if you develop a painful red eye.

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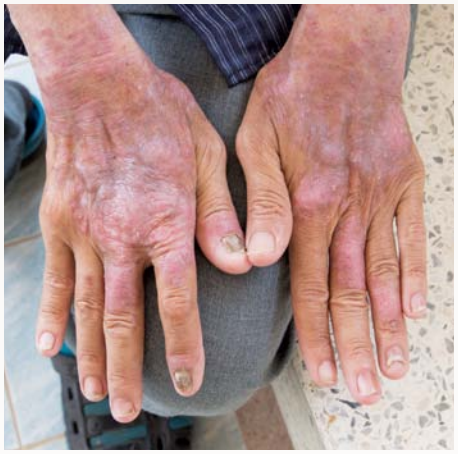
POINTS ON JOINTS:

Scleroderma

BY GRACE AHN, MD, FACR



Scleroderma is a rare autoimmune disease that can affect multiple organ systems of your body. Less than 1% of the population has scleroderma, with a prevalence estimate of up to 27 cases per million people. In the US, about 300,000 people have scleroderma. The majority of cases affect middle-aged women. Some children also can develop a juvenile form of scleroderma. The incidence is higher in patients with a family history of autoimmune diseases, such as lupus or scleroderma.

Scleroderma is a chronic illness caused by inflammation affecting the skin, blood vessels, lungs, kidneys, heart, intestinal system, as well as other parts of the body. Scleroderma patients can present very differently. Some patients have mild skin changes only, and some have multiple organ involvement. Depending on how patients present, they are divided into two types of scleroderma. In the localized form of scleroderma, only skin changes are found without damaging effects to their organs. Patients can have thickening and tightening of the skin due to buildup of scar tissue. Joints may look puffy or swollen. In systemic sclerosis, more organs are affected from the disease process. Systemic involvement generally causes large areas of thickened skin and is associated with Raynaud's phenomenon (fingers and toes turn white or blue in response to cold), stiff joints, rashes called telangiectasias, heart burn, small white lumps under the skin of the fingers, shortness of breath, kidney malfunction, acid reflux, as well as trouble swallowing.

Your rheumatologist can diagnose scleroderma after a comprehensive history and physical exam. You may need other evaluations including blood tests, skin biopsy, x-ray and lung or heart tests.

Once your diagnosis is confirmed, treatments may include prescription medicines to treat your symptoms or, in severe cases, possibly surgery. This is a chronic illness and you likely will need an ongoing treatment plan as well as regular tests to check your blood pressure, skin, and kidney, lung, or heart function. Often, rheumatologists work with other specialists such as a dermatologist, pulmonologist, or cardiologist to help treat your scleroderma. There are ongoing research efforts to find the underlying cause of scleroderma as well as better treatment options.