



ARACHNOIDITIS HANDBOOK FOR RELIEF AND RECOVERY

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PREFACE

- This handbook contains supportive therapies that have been found helpful over several years by our chronic cauda equina syndrome (CCES) and adhesive arachnoiditis (AA) patients
- Many of the recommendations here are century-old remedies that are time-eternal but still useful.
- Information here may be shared with any CCES or AA patient and family as these conditions may be rapidly progressive and have disastrous disabling consequences

This handbook is dedicated to my early, instructive and afflicted patients who persevered: Gary, Michael, Marjorie, Melody, Joe, Kimberly, Radine, James, Leslie.

DEFINITIONS

ARACHNOIDITIS—ICD 10-G03.9

Technically this refers to inflammation of the arachnoid lining of the thecal sac or meninges. It is now generally used, however, to encompass chronic cauda equina nerve root inflammation and/or compression.

ADHESIVE ARACHNOIDITIS—ICD 10-G03.9

A diagnosis given when a patient has symptoms and adhesions between some cauda equina nerve roots and the arachnoid lining which is observed on a lumbar spine MRI.

ACUTE CAUDA EQUINA SYNDROME—ICD 10-G83.4

Traditionally, an acute compression of cauda equina nerve roots that causes severe pain, leg paralysis “saddle anesthesia”, and dysfunction of bowel and bladder. Emergency surgery is often necessary to relieve the compression usually caused by trauma or a herniated (slipped) intervertebral disc.

CHRONIC CAUDA EQUINA SYNDROME—ICD 10-G83.4

A dysfunction of nerve roots in the cauda equina caused by neuroinflammation. Symptoms are identical to adhesive arachnoiditis including severe pain, paralysis of the legs, bladder, bowel, and sexual dysfunction, radiating pains, tremors, heat/sweating episodes, and inability to sit or stand for more than short periods. Cauda equina nerve roots on an MRI may, but not always, show enlargement, displacement, and clumping without adhesions to the arachnoid lining. Serum neuroinflammatory markers may be elevated.

STRONG RECOMMENDATION: We recommend use of the terms “adhesive arachnoiditis” and “chronic cauda equina syndromes” in a chronic pain patient based on whether adhesions between nerve roots, clumps, and the arachnoid lining are visible on MRI.

ARACHNOIDITIS—HOW IT DEVELOPS AND PROGRESSES

Arachnoiditis simply means inflammation of the arachnoid lining of the thecal sac. Adhesive arachnoiditis means that the arachnoid layer has adhered or glued itself to nerve roots or the spinal cord.

The above definitions do not describe the usual pathologic process that precedes the tragic development of adhesive arachnoiditis. The actual disease process begins with nerve root or “cauda equina” inflammation. Only when inflamed nerve roots stick or adhere (forming an adhesion) to the arachnoid lining does “arachnoiditis” occur. Some patients who are diagnosed as arachnoiditis or have the symptoms of this condition only have nerve root inflammation and have not progressed to the point that the nerve roots have adhered to the arachnoid lining. This does not necessarily mean that symptoms and impairments are less or that aggressive treatment is not needed.

MRI INTERPRETATION

Magnetic resonance imaging (MRI) studies are often not interpreted by radiologists as showing the presence of arachnoiditis even though the patient has all the symptoms. This is usually because the nerve roots are in the inflammation and clumping stage but have not yet adhered themselves to the arachnoid lining. Nerve root or cauda equina inflammation can often be, however, observed on an MRI since inflammation causes edema (swelling), displacement, and the adherence or clumping of nerve roots to each other.

DANGER OF NEUROINFLAMMATION

Make no mistake about nerve root inflammation. It is extremely painful, debilitating, and progressive. A major reason for this short education piece is to broaden the understanding of nerve root inflammation, expand MRI interpretation, and, most of all, call for more aggressive treatment of nerve root inflammation. Simply put, if nerve root inflammation is not stopped, the nerve roots will clump together in a mass (tumor-like) and cause severe pain and dysfunction of the nerves that connect to the stomach, intestine, sexual organs, pelvis, legs, and feet. The clump retains electricity, interferes with nerve conduction, interferes with flow of spinal fluid, and produces toxic.

THE ANATOMICAL SETTING FOR CAUDA EQUINA INFLAMMATION

The pathologic process that leads to arachnoiditis can occur due to the anatomic make-up of the spinal cord and nerve roots. The spinal cord itself goes from the brain down the vertebral canal to about the first lumbar vertebra. The end is cone-shaped known as the “conus medullaris”. About 2 dozen string-type nerves known as nerve roots or collectively as the “cauda equina” (in Latin this means horses tail due to the visual similarity) originates from the conus and trail downward to the sacrum. These nerve roots are encased in a protective sac known as the thecal sac. Its lining is called the dura mater, and the inner-most layer is the arachnoid. Within the thecal sac is the cerebrospinal fluid which is there to nourish the nerve roots and wash away toxic materials such as tissue particles that may result from inflammation. The small nerve roots are always in fluid and protected by a covering. Any contaminant or irritant that enters this protected area may set-up an on-going inflammatory process.

inflammatory by-products that create a systemic (“all-over”) autoimmune condition. The retained electricity and impairment of nerve conduction leads to such symptoms as sweating, hot flashes, jerking legs, and burning feet. The mass of clumped nerves may also cause some blockage of cerebrospinal fluid flow that can produce headaches, blurred vision, and pain behind the eyes. All these symptoms may occur without the arachnoid layer actually being adhered to inflamed nerve roots.

NECESSITY OF EARLY DIAGNOSIS

Patients tend to respond much better to treatment if they only have inflamed nerve roots and have not yet progressed to adhesion formation with the arachnoid lining. Cauda equina nerve root inflammation is analogous to the inflammation of rheumatoid arthritis in a joint. If it is not controlled by aggressive medical management, the joint will progressively be more painful, deformed, and destroyed. The same process occurs with the nerve roots in the spinal canal.

INCREASING HOPE FOR THE FUTURE

The term “arachnoiditis” will continue to be used to encompass both patients who show nerve root adhesion to the arachnoid layer as well as those patients whose nerve roots are inflamed and pathologically clumped together. Arachnoiditis is still listed as a rare disease on the “Rare Disease Registry”, and it is recognized enough to have its own “International Classification of Disease” code number (ICD-10, G 03.9). In the past it has been thought to be a “hopeless” disease for which only symptomatic treatment could be done. Our new understanding of nerve root inflammation, autoimmunity, centralized pain, electromagnetism, and the neurohormones have given us the tools to greatly control arachnoiditis and nerve root inflammation just as we do with rheumatoid arthritis. A medical protocol to treat arachnoiditis has been developed for outpatient, medical practitioners and it will be made available on request. Every patient with arachnoiditis can and should now get enough relief and recovery to have a meaningful, quality of life without suffering.

ARACHNOIDITIS EDUCATION PROJECT

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**“Our mission is to bring
arachnoiditis treatment
to every community”.**

NEUROINFLAMMATION

THE MISSING LINK

The reason that arachnoiditis sufferers have not been able to get much help is because medical science did not realize that the central nervous system creates an inflammation that has unique characteristics compared to that in joints and muscles. It is formed by the microglial cell, and it does not respond or suppress much, if at all, to standard anti-inflammatory drugs or hydrocortisone.

SPINAL CORD INFLAMMATION: Arachnoiditis is basically inflammation of the lining of the spinal covering. Adhesive arachnoiditis is when some of the spinal nerve roots in the cauda equina or the spinal cord adheres or attaches to the lining because of inflammation. Nerve roots of the cauda equina which become inflamed show swelling, enlargement, clumping, and displacement on MRI.

SYMPTOMS AND CHARACTERISTICS OF SPINAL CORD INFLAMMATION:

PAIN	FATIGUE	SUDDEN FLARES	SCARRING
SWEATING/TEMPERATURE		PROGRESSIVE CLUMPING/PARALYSIS	

INFLAMMATION ACCUMULATES: Neuroinflammation constantly builds up and then may suddenly “strike” with a severe pain flare or more paralysis. Worse, it continues to create clumping and scarring.

REASON FOR FAILURE: Arachnoiditis patients naturally want to focus on relief of pain, fatigue, and paralysis. We now realize that any medication for pain or even hormonal treatment is only marginally effective UNLESS spinal cord inflammation is first controlled.

PREVENTION OF BUILD UP: Every arachnoid patient must have a daily regimen to keep neuroinflammation from accumulating. This has been the missing link to relief and recovery.

THE IMPORTANCE OF SPINE BRACING

Shockingly, few arachnoid or spinal cord inflammation patients are told they need to periodically wear a brace to protect their damaged area.

WORST SITUATION: Riding in a car on plane that has bucket seats.

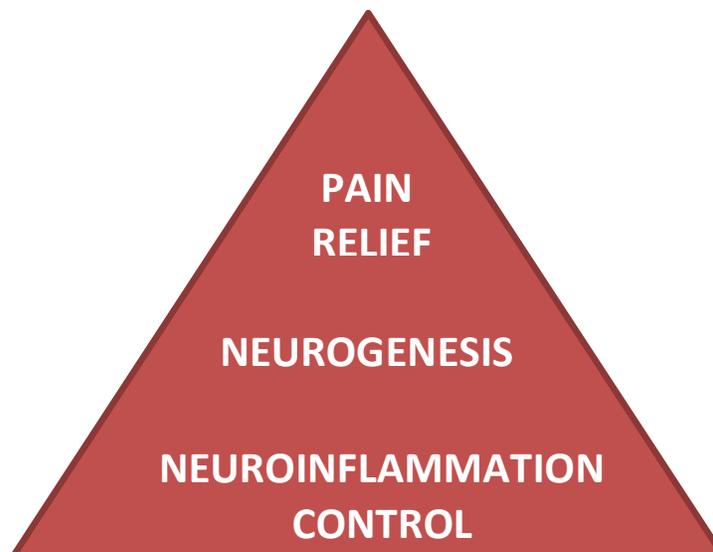
DANGER SITUATION: Walking in unfamiliar areas such as a shopping center, grocery store, or social event.

Always wear a back brace to protect yourself in the above situations.

MOST IMPORTANT TIME TO WEAR A BACK BRACE:

PAIN FLARE

THREE COMPONENTS OF TREATMENT



Patients with AA need to participate in all 3 components each and every day.

DO YOU HAVE ENOUGH PAIN RELIEF?

Without enough pain relief, you can't expect the anti-inflammation and neurohormone regeneration elements of the medical protocol to help much.

Excess pain eliminates the ability of nerve roots to regenerate.

Here is how to know you have enough pain relief:

1. You must have enough pain relief to get out of bed between 6:00 and 7:00 am. Keep your pain medication next to your bed and take it immediately when you awake each morning. Your first dosage should be before 7:00 AM.
2. You must be out of bed and doing normal activities of daily living before 8:00 am. The natural hormones of the body are at their highest peak between 6:00 and 10:00 am. It is critical that you are active at this time every day because these are the hours that the body does most of its healing and regeneration.
3. Take your last dosage of pain medication within 1 hour of going to bed. If you awake with pain during the night, take a dose of pain medication.

KET POINT: IF YOU DON'T HAVE ENOUGH PAIN RELIEF TO GET OUT OF BED BETWEEN 6:00 AND 7:00 AM EACH DAY, YOU NEED MORE OR BETTER PAIN MEDICATION.

TOPICAL RUBS

1. Lidocaine Gel
2. Soma - 350mg
3. Morphine – 30mg

To make topical creams, crush 2-3 tablets and stir into 1 ounce of cold cream.

Topical creams work best under infrared, vibrator, massager, or heat.

"Dr. Beak says,"

Intractable pain patients collect a lot of electricity in the skin and soft tissues around a pain site. Topicals provide a lot of relief and allow you to reduce oral opioids.



SLEEP

A regular sleep pattern enhances the hormone and immunologic systems that are necessary for neurogenesis.

- ✓ Be in bed between 10:00 and 11:30 PM.
- ✓ Do your last stretches and medication dosage 30 to 60 minutes before bedtime.
- ✓ Keep your pain medications beside your bed. Take additional dosages during the night, if necessary.
- ✓ Take your first morning pain relief medications to be out of bed between 6:00 and 7:00 AM.
- ✓ Goal is 4 to 8 sleeping hours. Do not expect more than four hours of consecutive sleep.
- ✓ Most popular sleep aids are zolpidem (Ambien®) and temazepam (Restoril®).
- ✓ Take melatonin 5 to 10 mg with your sleep aid to assist sleep and help regulate your hormone and immune systems.

INSOMNIA

Intractable pain patients who have centralized their pain will almost always have insomnia. Very few IP patients can get over 4 hours sleep at a stretch. Many only sleep for about 2 hours at a stretch. The cause of insomnia in IP patients is not just pain but the central nervous system is over-aroused or stimulated.

Follow these steps as IP patients **MUST** get some sleep each night.

STEP ONE—Use pain medication at bedtime. Take a dose of your pain medications just before bedtime. You may need to take another dose when you awaken in the night.

STEP TWO—If you can't get enough sleep with a bedtime dose of your usual medication, take one or more of these natural, non-prescription, over-the-counter preparations.

- L Tryptophan-1000 to 2000mg
- Valerian-1000 to 2000mg
- Benadryl® (diphenhydramine) – 25 to 50 mg

MELATONIN

Melatonin is the body's natural sleep hormone. It also helps regulate the body's pain and hormone system. New patients will be given Melatonin 10mg to be taken for at least a month or until the sleep pathway becomes normal. Established patients should also try it for 1 month to see if they have more sleep, energy, and pain relief.

Melatonin is to be taken with, not a substitute for other sleep aids.

Dr. Beak says,
"No sleep, no
pain relief."



SPINAL CORD EXERCISE

FULL-BODY STRETCH LAYING DOWN

Lay down on the floor and do a full-body stretch. Count up to 10.

FULL-BODY STRETCH STANDING

Spread hands and reach “to sky” until you feel pressure and tugging in your back. Count up to 10.

SIT AND STRETCH ARMS

Stretch your arms and spread your fingers. Count up to 10. Can do while sitting in a car or plane.

LEG RAISE WHILE LAYING DOWN

Raise leg until you feel tugging in your back. Count up to 10.

LEG RAISE WHILE STANDING

Stabilize yourself next to a table or wall. Raise your leg and flex your foot.

KNEE PULL WHILE LAYING DOWN

Pull knee back until you feel tugging in your back. Count up to 10.

INVERSION TABLE

If able, a short episode on an inversion Table may assist in pulling adhesions and cauda equina nerves apart to preventing scarring and allow electricity to pass.

CONTRACTURES: A PATIENT'S WORST ENEMY

A contracture is a scarring and shrinking of the muscles and tendons attached to your joints. Muscles are attached to your spine vertebrae, hips, and knees. When pain starts to scar, shrink, and contract your muscles, you are pulled to one side and your hips and knees are pulled to tightly into their sockets. When contractures occur more pain is generated. This leads to less reach and walking ability. The reason pain patients end up in a wheelchair or need a walker or cane is contracture. Given here is a basic stretching exercise you must do daily if you have intractable hip, knee, neck or lower spine pain.

Don't cripple yourself. Stretch several times a day to prevent contractures. Contractures or muscle shortening causes even more pain and disability.



DO 3 OR MORE TIMES A DAY!

STEPS FOR BASIC BACK AND NECK PAIN

1. Spread fingers.
2. Reach straight up with both arms until you feel pressure on your pain site. **DO NOT CAUSE PAIN!**
3. Hold for a count of 15.
4. Repeat at least 3 times a day.
5. Over time – try to extend your upward reach.



STRETCHING PRINCIPALS

1. Stretch to a point you feel tugging or pulling but not pain.
2. Standing is best to stretch but sitting or lying down is OK.
3. You should do more than raise your arms. Stretch your arms and legs in positions that let you know you are tugging or pulling on a contracted area.

IMPROVING YOUR SPINAL FLUID FLOW

- ✓ Arachnoiditis and cauda equina inflammation commonly cause spinal fluid flow obstruction. When spinal fluid is obstructed you may get these symptoms among others:
 - Headache
 - Blurred vision
 - Inability to think or read
 - Weak legs
 - More pain
 - Bladder and bowel function worsens
- ✓ Even worse—the spinal fluid cannot carry away inflammatory particles generated by the inflamed nerve roots. This retards healing. Another function of spinal fluid is to bring nutrients from your food to the nerve roots in the cauda equina. This function may also be impaired. You must do some of the following each day:
 - Rock in a rocking chair
 - Walk on a trampoline
 - Use vibrator or massager over spine (Back scratchers and scrubbers are terrific)
 - Soak or wade in water
 - Walk and swing your arms (“Power Walking”)
 - Rock back and forth on your feet
 - Rub your spine with copper and a magnet
 - Nod your head up and down
 - Scrub you back with a brush
 - Deep breathing (diaphragm) with stomach

DIETARY SUPPLEMENTS FOR ARACHNOIDITIS AND CAUDA EQUINA INFLAMMATION

Natural Pain Relievers

White Willow Bark

Boswellia

Kratom

GABA

Bromelain

Natural Anti-Inflammatory Agents

L-Carnitine

Omega Fatty Acids

Turmeric/Curcumin

Palmitoylethanolamide (PEA)

Blood Flow Enhancer

Niacin

Vitamins/Minerals

- All B Vitamins, including B₁₂
- C, D
- Magnesium

ELECTRICITY ELIMINATION

A major problem with clumped or trapped nerve roots is that electricity does not pass as it normally should. It builds up – causes increased inflammation – and then it may suddenly release itself in dysfunctional bursts. This is why patients get:

- ✓ Shooting and burning episodes of pain
- ✓ Legs jerk and tremor
- ✓ Feet burn
- ✓ Temperature rises with sweating

When you daily do measures to control and eliminate your retained or trapped electricity, you not only suppress painful and troublesome symptoms, you reduce inflammation and promote healing and nerve regeneration. Here are routine measures. Do some daily.

- ✓ Rub your spine with copper or magnet
- ✓ Wear copper anklet or bracelet
- ✓ Use magnets in your shoes or mattress
- ✓ Wear lots of jewelry
- ✓ Hold door knobs or other metal a second longer
- ✓ Soak in water (Epsom salts help)
- ✓ Pet your dog or cat (Any fur will do)
- ✓ Walk barefoot on carpet or outside on your lawn

HIGH PROTEIN ANTI-INFLAMMATORY DIET FOR PAIN PATIENTS

PROTEIN

It provides the amino acid building blocks that are necessary for the production of neurotransmitters and tissue healing.

YOU MUST EAT SOME OF THE FOLLOWING EACH DAY

FISH	CHICKEN	TURKEY	BEEF
PORK	EGGS	COTTAGE CHEESE	

If you can't or won't eat any of the above you must obtain protein powder drinks and/or protein bars from the health food store.

VEGETABLES AND FRUITS

Some vegetables and fruits have anti-inflammatory activity. Eat some of these each day.

CARROT	CELERY	BEETS	TOMATOES
BROCCOLI	BRUSSEL SPROUTS	SPINACH	CUCUMBERS
RADISH	ONION	LETTUCE	WATERMELON
BLUEBERRY	BLACKBERRY	RASPBERRY	STRAWBERRY
APPLE			

DRINKS (Only use dietary sugars if weight is a problem)

COFFEE TEA DIETARY SODAS WATER

Low dose, occasional alcoholic drinks are acceptable.

BANNED TO CONTROL WEIGHT

MILK REGULAR SODAS FRUIT JUICE BREAD, ROLLS, BUNS

HIGHLY RESTRICTED TO CONTROL WEIGHT (Eat these very sparingly)

POTATOES including CAKES/PIES	FRENCH FRIES PASTA/PIZZA	CORN
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OXYGEN—YOUR ESSENTIAL INGREDIENT FOR PAIN RELIEF AND HEALING

WHY OXYGEN?

“Oxygen is necessary for healing, nerve functions, and medication effectiveness. Without enough, you progressively deteriorate.”

SYMPTOMS OF LOW OXYGEN

- Fatigue and Lethargy
- Slow or Forgetful Thinking
- Depression and Feeling of Hopelessness
- Tired But Can't Sleep
- Pain Medication Works Poorly

HOW DO I GET OXYGEN?

Oxygen is breathed in through your lung and enters your red blood cells to be carried throughout your body. Regardless, if your pain site is spine, brain, joint, or muscle, you must have oxygen for pain relief and healing. The more oxygen, the better.

HOW DO I GET MORE OXYGEN?

Your base oxygen intake and carrying capacity is what is in your blood when you are quietly sitting or lying down. Anytime you become active, your lungs breathe a little faster and deeper and your heart pumps a little faster, so you carry more oxygen in your blood. The healing and pain relief formula is simply to stay more active than what you are when you sit or lay down. Just increasing your breathing and heart rate due to any purpose increases oxygen at your pain site.

FIRST STEPS TO MORE OXYGEN

1. Stay active! Walk every day.
2. Breathe as deeply as you can with your stomach (diaphragm) and hold it for 10 seconds. Do it sitting or standing. Do it in a car, church, or home. Do this at least 10 times a day.

HORMONE REPLACEMENTS AND TREATMENTS

Hormone replacements and treatments are viewed as new therapies which are essential in treatment of AA.

MAJOR PROBLEM: HORMONE DEPLETION

Severe pain and opioids will deplete some hormones made in the pituitary gland, adrenals and gonads (ovary and testicle). When they deplete, good pain relief, sleep, and healing is not possible because the body and even some medications rely on specific hormones for pain control. Any of these hormones have to be replaced if they are found to be deficient:

**PROGESTERONE, PREGNENOLONE, DEHYDROEPIANDROSTERONE (DHEA),
TESTOSTERONE, ESTRADIOL, CORTISOL.**

TESTING

All patients in our program are now required to have their hormones tested at least 3 times a year.

TREATMENT

Two hormones are now classified as “neurogenic” in our program because their natural function is to regenerate nerves.

- **HUMAN CHORIONIC GONADOTROPIN**
- **OXYTOCIN**

Our clinical experience, to date, indicates that patients who take either or both of these hormones reduce their pain, and opioids, and increase their energy and mental function.

Dr. Beak says,

**Neurohormones offer you your best hope
for long-term, permanent pain reduction.
All other medications are symptomatic with
little or no healing ability.**



LYMPHATIC DRAINAGE FOR INTRACTABLE PAIN PATIENTS

YOU MUST FLUSH YOUR SYSTEM DAILY!

Pain is basically too many electric charges and inflammation in one spot. The body flushes itself primarily through the lymphatic system which consists of very small channels between cells that flow into larger channels. This system, unlike the blood system, doesn't have a pump ("heart") so a pain patient must daily take measures to make the lymphatic system flush itself. Inactivity, such as lying in bed, produces stasis of electricity and inflammation, so this is why pain is usually worse upon awakening in the morning. Healing can't take place if there is stasis.

Key Point: All movement keeps lymph moving.

Do some of these measures each day:

- Rocking Chair
- Vibrator
- Power or Fast Walking
- Swim or Wade in Water
- Walk on Trampoline
- Massage
- Rock Back and Forth on Your Feet and Shake Your Arms and Legs

TREATING THE UNDERLYING CAUSE

- ✓ REDUCE NEUROINFLAMMATION
- ✓ EXERCISE AND OXYGEN
- ✓ NUTRITION
"Think protein, amino acids, and green vegetables."
- ✓ NEUROHORMONES (Neurogenesis)
"Think oxytocin and human chorionic gonadotropin."
- ✓ ELECTRICITY CONTROL
- ✓ LYMPH DRAINAGE

Dr. Beak Says,

"Lymph it or lose it."



Dr. Beak says,

"Opioids, antidepressants, and anticonvulsant medications are just symptomatic to give you relief. The measures here get you some recovery and permanent healing!"



DO YOU HAVE CENTRALIZED PAIN?

Name _____
Last *First*

Today's Date _____

1. Is your pain constant (“never leaves”)? Yes † No
2. Do you have insomnia? Yes † No
3. Do you have periods of great sweating? Yes † No
4. Do you have periods when your temperature goes up (feel hot)? Yes † No
5. Are your hands and/or feet usually cold? Yes † No
6. Do you have periods that you have difficulty reading, analyzing, or remembering? Yes † No
7. Do you have periods when you can’t smell, taste, or hear? Yes † No
8. Do you sometimes have a lot of electricity?
(Shock others, burn out lights or watches) Yes † No
9. Are you always “fatigued” even if you get some sleep? Yes † No
10. Does some of your pain move from one location to another? Yes † No
11. Do you have jerking or tremors? Yes † No
12. Does the skin over your pain site really hurt if you touch or rub it? Yes † No
13. Does water hitting or splashing on your skin irritate or cause you pain? Yes † No

If you answered yes to number one and yes to over half of the other questions, your pain has settled in your spinal cord and/or brain due to neuroinflammation. We highly recommend a specific treatment protocol for neuroinflammation.

DO YOU HAVE EXCESSIVE NEUROINFLAMMATION?

Name _____ Today's Date _____
Last First

Answer each question based on your feelings and symptoms in the past week.

1. Do you have periods of heat? Yes † No
2. Do you have periods of sweating? Yes † No
3. Do you feel like your body has too much electricity or "shock" at times? Yes † No
4. Do you have periods of burning in your feet, hands, pelvis or buttocks? Yes † No
5. Do you have periods or episodes of strong feeling on your skin like bugs crawling or pin stabbing? Yes † No
6. Are you sensitive or become nauseated and dizzy in heat such as a hot summer day? Yes † No
7. Do the areas over pain sites sometimes become red and hot? Yes † No
8. Does your temperature rise at times? Yes † No
9. Are your pain flares accompanied by sweating and heat? Yes † No
10. Do you have periods of stabbing, shooting, or jerking pains? Yes † No
11. Do you have recurrent pain flares you can't control? Yes † No

INTERPRETATION: If you answered yes to over half of the above questions, you will most likely need specific treatment for neuroinflammation.



DO YOU HAVE ARACHNOIDITIS ?

Name _____ Age: _____ Sex: _____ Today's
Last First Date _____

		YES	NO
1.	Does it hurt to lie flat on your back?		
2.	When you stand with your leg straight and raise it, does this cause pain in your back?		
3.	Do you lose water (bladder) or stool (colon) without warning?		
4.	Does standing too long cause so much pain you have to sit or lie down?		
5.	Do you have periods or episodes of intense sweating or heat (temperature)?		
6.	Do you sometimes have to stand to relieve your pain?		
7.	Do you sometimes have shooting pains, tremors, or jerks in your legs?		
8.	Do you have to sometimes sleep sitting up?		
9.	Do you sometimes have pain behind your eyes?		
10.	Do you have trouble starting your bladder to urinate or bowel to defecate?		
11.	Is your pain constant (always present)?		
12.	Is your vision ever blurred?		
13.	Have you ever collapsed while standing or walking?		
14.	Are your hands and/or feet cold a lot of the time?		
15.	Do you get twitching or crawling feelings over your back and spine area?		
16.	Do you get burning or electrical pains in your feet?		
17.	Do you have to sit on a pillow or cushion at times?		
18.	Do you have pain when you walk up steps?		

19. Describe your very first really severe pain.

- | | |
|---|------------------------------------|
| <input type="checkbox"/> Throbbing/pounding | <input type="checkbox"/> Dull/deep |
| <input type="checkbox"/> Burning/fiery | <input type="checkbox"/> Stabbing |

20. Describe your pain today.

- | | |
|---|------------------------------------|
| <input type="checkbox"/> Throbbing/pounding | <input type="checkbox"/> Dull/deep |
| <input type="checkbox"/> Burning/fiery | <input type="checkbox"/> Stabbing |

21. How many spine surgeries have you had? _____

22. How many epidural injections have you had? _____

23. What symptom or problem has most interfered with your life? _____

24. Where is your major damage and pain? (Check any that apply)

Cervical (neck)

Thoracic (chest)

Lumbar (spine)

25. How do you walk?

Unassisted

Cane

Walker

Need Wheelchair

26. How many hours a day are you in bed? _____

27. About how long have you had your condition? Yrs _____ Mos _____

28. Have you been told you have "Failed Back Syndrome"? Yes No

Return this Questionnaire to:

Forest Tennant M.D., Dr. P.H.
Veract Intractable Pain Clinic
338 S. Glendora Ave.
West Covina, CA 91790-3043
Fax 1: 626-919-0065 Fax 2: 616-919-7497
E-mail: veractinc@msn.com

NEUROINFLAMMATION OF THE SPINAL CORD

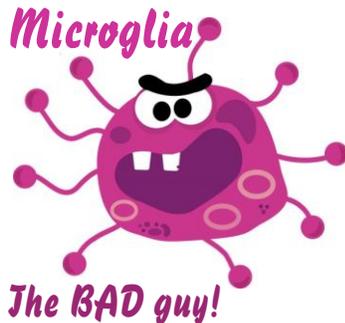
BASIC FACTS YOU SHOULD KNOW

FACT # 1

Severe pain, misery, and neurologic impairments such as inability to walk or sit may occur with conditions that cause neuroinflammation (NI) of nerve roots (cauda equina) and/or the supporting tissue structures in the lower spinal cord. NI in the upper spinal cord can cause pain and paralysis in the arms and hands

FACT # 2

Microglial cells are the main cause of NI in the spinal cord and roots including the cauda equina. Inflammation may also develop in the spinal canal covering (meninges, dura, thecal sac), particularly the arachnoid layer and fibrous tissue around nerve roots. Discs between vertebrae may become inflamed.



FACT # 3

It is not always possible to pinpoint the precise cause or location of NI. Regardless, it can still be treated and controlled. Conditions such as arachnoiditis, Tarlov cysts and epidural fibrosis may all cause almost identical symptoms including severe pain, and all must, consequently, be treated with essentially the same medical regimen or protocol.

FACT # 4

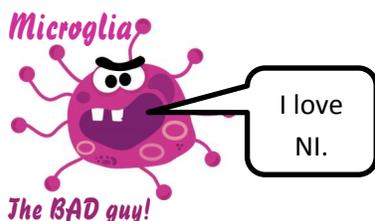
Some conditions such as reflex sympathetic dystrophy (RSD/CRPS), abdominal pelvic adhesions, and diabetic neuropathy may start in nerves outside the spinal cord, but cause NI inside the spinal cord.

FACT # 5

Only within the last 24 months has there been enough scientific breakthroughs to recommend a specific medical regimen or protocol for NI of the spinal cord. This regimen can be attempted with great safety, and the majority of patients with NI of the spinal cord will experience at least some improvement in pain relief, physical and mental functions, and quality of life.

WHAT IS NEUROINFLAMMATION (NI)?

- There is a specific type of inflammation that is only found in brain, spinal cord, and nerves. It is called neuroinflammation, and it is caused by a nervous system cell called microglia. In joints and skin the causative cell of inflammation is the lymphocyte.
- **THE CAUSE:** NI occurs when the microglia cell becomes over agitated by pain, stress, chemicals, friction, or infection. When this happens this cell produces toxins which damage surrounding tissue. Visually, inflammation has the appearance of a boil or acne in that it is red, swollen, and hot to the touch. NI retains electricity which drives up one's temperature and sweating.
- **THE GREAT DANGER:** NI may spread causing more nervous tissue to be damaged. For example, a patient with arachnoiditis may unfortunately see their bladder, legs, or bowel become progressively impaired over-time. A patient with reflex sympathetic dystrophy (RSD/CRPS) may see their disease spread from one arm to another.
- **TESTING FOR IT:** If you have constant spinal cord pain (neck or lumbar) and episodes or periods of sweating, temperature increases, and shooting or stabbing pains, you undoubtedly have excess NI. There are some blood tests for "inflammatory markers", but your symptoms are more telling.
- **TREATMENT AND CONTROL:** Once you develop NI, you must take a number of control measures which include an anti-inflammatory diet and NI treatment agents. Standard anti-inflammatory drugs which are used for arthritic or muscular ailments such as Motrin®, Celebrex®, and Naprosyn®, do not adequately enter the nervous system and provide relief for NI. Fortunately, some effective NI treatment and control agents have recently been identified.
- **ESSENTIAL FIRST STEP:** We firmly believe based on our clinical experience, that NI must be the first and primary target of treatment of conditions such as arachnoiditis, RSD, abdominal adhesions, or Ehlers-Danlos. Unless NI is controlled, pain relief drugs including opioids, neuropathic agents, and neurohormones aren't very effective.



SELF-HELP FOR PAIN CONTROL

Why this Document?

The most common complaint that we receive from patients who have arachnoiditis, Tarlov Cysts, and other neuroinflammatory conditions of the spine is that they can't find a physician or nurse practitioner who is knowledgeable and/or willing to adequately relieve their pain. Our self-help recommendations are given here.

HELP FROM YOUR PRACTITIONER

Your primary doctor or nurse practitioner will usually be willing to prescribe some non-regulated medications that will help. They may not, however, be willing to prescribe potent opioids, hormones, or the neuroinflammatory agents prescribed by specialists. Drugs usually available from your primary doctor or nurse practitioner are: tramadol, topiramate, tizanidine, codeine, gabapentin, duloxetine, pregabalin, hydrocodone (Vicodin®, Norco®), oxycodone with acetaminophen (Percocet®), or buprenorphine.

NATURAL, NON-PRESCRIPTION AGENTS

- Natural Pain Relievers: Obtain one or more from a health food store or internet: kratom, white willow bark, bromelain, boswellia, GABA
- Natural Anti-Inflammatory Agents: Obtain one or more from a health food store or internet: curcumin, turmeric, carnitine, omega fatty acids, palmitoylethanolamide (PEA)
- N-Methyl-D-Aspartate Receptor Antagonist (This receptor becomes over-stimulated and must be calmed for pain control in inflammatory pain disorders). Dextromethorphan, 20 to 50 mg each day. It is found in over-the-counter cough medicines
- Vitamins B, B-12, D, C
- Sleep Aid: Take any medication that your MD or NP may prescribe. Add to it melatonin 5 to 10 mg or Benadryl® 25 to 50 mg.

YOUR GUIDELINE ON SELF-HELP FOR PAIN CONTROL

1. Take your prescription opioid drugs with a natural pain reliever or anti-inflammatory agent. Together, you will get stronger and longer pain relief.

SUMMARY: Take the pain relief, prescription medication your local doctor will prescribe and add to it the non-prescription agents listed in the box.

SHOES AND WALKING

Persons with AA must wear supportive, tie shoes such as tennis shoes.

Bare foot is better for an AA patient than the modern day practice of wearing thongs, sandals, flip flops, or slip-ons. These non-supportive footwear are a risk in 2 ways: (1) Falls: (2) prevents correct walking posture.

One slip, slide, or fall can set an AA patient back to square one. A fall may tear adhesions which cause severe pain which then re-heals with permanent nerve impairments!

WALK WITH CORRECT POSTURE

An AA patient must take walks every day to move spinal fluid and prevent adhesions.

Walk with toes pointed straight ahead. Swing your arms.

Lift your head so that your ears are directly over your shoulders. Breathe deeply.

LIFTING AND BENDING

The adhesive arachnoiditis patient must be very cautious and careful while lifting and bending over.

If you attempt to lift something that weighs more than about 10 pounds you run the risk of tearing adhesions or scars in and around your lower spinal column. When you bend over, raise up slowly because a jerk or rapid movement can cause a tear or rip. If this happens severe pain follows and the damaged area may be worse than ever.

Be cautious, vigilant, and careful.

MEDICAL TREATMENT PROTOCOL

A medical treatment protocol for medical practitioners has been developed to begin bringing some relief and recovery to suffering patients. This protocol is available on request.

The treatment is specific towards treating arachnoiditis which is a neuroinflammatory disease of the cauda equina nerve roots and the arachnoid lining of the spinal canal. All pain medication is symptomatic in that all opioids, muscle relaxants, neuropathic agents, and antidepressants simply provide temporary symptom relief. Arachnoiditis patients may have to take pain medication to function, but it does better the underlying cause of the pain.

The treatment protocol for practitioners is not shown here because it is frequently updated as new information is learned.