Back to Life 2015

NEW MINIMALLY INVASIVE SPINE SURGERY TECHNIQUES SHORTEN INCISION, SPEED RECOVERY

NON-SURGICAL OPTIONS THAT RELIEVE BACK & NECK PAIN

BACK PAIN? GET BACK TO GOLF & AN ACTIVE LIFE IN THE SF BAY AREA

Get Back to Golf this year! by using the right "back swing"

"The San Francisco Bay area has some of the most beautiful golf courses in the nation, and golf is a great way to enjoy the outdoors and get exercise at the same time," explains Adebukola Onibokun, MD, a spine neurosurgeon at San Jose Neurospine. "Unfortunately, too many times golfers try to hit the ball too hard, and with an incorrect swing which can strain the back."

If back pain has put you on the sidelines, try easing back on course with the tips shown here. Also consider letting someone drive the cart with your clubs while you walk. Or start by limiting



yourself to 9 holes rather than 18. Golf can be an avenue back to an activity that can be healthy for your weight and our back.

GET BACK ON COURSE WITH THE RIGHT SWING MECHANICS

Most back strain in golf can be traced to a poor swing. Fact: Golf requires solid swing mechanics to provide the best impact and distance. In the 1970s, the "reverse C" finish put excessive strain on the back. Modern swing gurus like Butch Harmon now preach a finish where the back is perfectly straight at the finish — which lessens strain on the back. Amateurs also swing way too hard. Tour pros achieve huge distance by staying in balance and swinging at 80%. The best investment to save your back is to have a lesson with a PGA-certified teaching pro who can provide the right instruction to lessen strain on the back. Here are additional tips to get you back on course this year.

STANCE & ADDRESS Proper grip and stance at address presets either success or failure. Ideally the feet should be aligned "parallel left" of your target. Your feet and club should be aligned like two railroad tracks aimed at your target. If alignment is off, it will cause a series of compensations to get the club back to the ball. A good PGA pro can help you start with the correct basics.

CORRECT TAKEAWAY

Most amateurs and beginners snatch the club away from the ball, which causes an "over-the-top" movement where the clubface swipes across the ball creating an undesirable slice that robs distance and accuracy. A good tip for a correct take away is taking the club back with the grip pointing at your stomach for the first few feet of the swing.

GOLF STRETCHES ON THE COURSE



STANDING PIRIFORMIS Right: Lean against a tree for support. Then raise your knee up, and across your body. Hold for 5 seconds and repeat with other leg.

THE GOAL IS TO SAVE YOUR BACK, NOT SAVE PAR

KICK IT OUT OF THE ROUGH & SAND

Most injuries are from swinging too hard, especially when trying to gouge the ball out of deep heavy grass or sand. Hitting the ball fat also creates resistance with the ground. Adjust your goals: Play for the enjoyment of the game. Tell your playing partners that your goal is to play golf without risk of restraining your back. They'll understand and applaud your eagerness to get back on the course.

2 strain on a back.

18 holes.

3 TRUNK LEADS THE ARMS

In a proper golf swing, the rotation of the trunk pulls the arms and hands around the body like a whip. Instead of hips sliding back and forward, the golf swing is a rotary engine, as if a spike were going through the center of the body. Your hips should not move laterally, but instead should rotate around a pivot point to generate power.

4 NIX THE "REVERSE C"

Back in the 1970s the fashionable swing of young Johnny Miller featured the back bent backward in the follow through which looked like a backward C. Today, the modern golf swing is much better on the back, and positions the back in a more straight up position as the body turns on a straight left leg. Ironically, as Johnny Miller aged, he too changed his swing to a more rotary swing that's easier on the back.

OLD SCHOOL



NEW SCHOOL

START WITH 9

For someone with back pain, it's a good idea to start off with just a 9-hole outing and gradually build up your endurance to a full

WALK RATHER THAN RIDE

Let your playing partner drive the cart so you can walk at a leisurely pace. Walking is good for your back. A bumpy ride in a golf cart can also put some

THE SWING'S THE THING

Tour pros spend hours on the range refining very efficient swings. Most beginners, however, never invest in learning a proper swing. Many times, back injury at golf stems from swinging too hard with a violent out of balance swing. A lesson with a PGA pro can get you back on the course in a way that lessens risk of future injury.

WANT TO TACKLE BACK PAIN?

Paradoxically, when a back spasm strikes, the natural reaction is to stop what you are doing. This is good advice in general for the first 48 hours after a back strain.

But beyond that, the key is movement. Research studies in the 1980s and 1990s conclusively proved that too much rest actually hurts your back. For example, a landmark study in the New England Journal of Medicine found that people did worse with extended bed rest beyond two days. Another study in Finland found that persons with back pain who continued their activities without bed rest recovered faster than those who rested in bed for a week. Other studies linked bed rest to other problems like depression and weakened muscles. Some researchers went as far as saying that bed rest may be the most harmful treatment for simple acute back strain

"When you have a charley horse in your calf, the immediate natural reaction everyone has is to get up and walk on it to relieve the muscle spasm," explains Adebukola Onibokun, MD, spine surgeon and founder of San Jose Neurospine. "Butwhen we have a back spasm, the immediate reaction is to stop all movement. Rest, ice and heat might be okay for the first day or so, but beyond that, inactivity creates problems. A short walk on flat ground can be great therapy for a back strain because it improves circulation in the tissues and loosens up strained ligaments. The other benefit is that for simple back strain, a walk outside can change a person's focus from their pain symptoms to enjoying the outdoors. You have to convince yourself that getting moving will actually help relieve your pain symptoms."

Just what the doctor ordered

So in fact, a little hike outdoors may be just what the doctor ordered for your simple back strain. But first, it's important to understand what may be causing your back pain. For example, 80% of back pain is related to strain of the muscles in the back. The other 20% of back pain can come from disc-related problems. How do you know the difference? Disc-related problems create symptoms that radiate into the leg or arm. For disc problems in the back, the symptoms of pain, numbness or weakness can radiate down into the leg or foot.

"A back strain can be excruciating and drop you to your knees," says Dr. Onibokun. "While a disc problem in the back is more serious, the symptoms are typically felt in the leg, which in turn may be treated with drugs or spinal injections to reduce inflammation on the nerve root.

Weakness or numbness in the foot are emergency symptoms that need to be seen within a week to prevent nerve damage which would cause these symptoms to become permanent. So while watchful waiting can be used for radiating pain in a leg or foot, that is not the case with numbness or weakness in a leg or arm."

Take a hike

Even disc problems can benefit from movement, adds Dr. Onibokun. "Studies have concluded that for rehab of injured tissues to occur, you need blood circulating oxygen to the injured tissues. You need movement to get circulation and nutrients to the disc and ligaments in the back. The less movement you have, the more you impair the back's ability to recover from strain."

The second common by-product of back strain can be depression. Back pain

LIGHT ON THE PACK

"Walking can be a great way to loosen tight ligaments & relieve symptoms"



The journey back to activity requires a first step off the couch. "For simple strains, we often will recommend that the person begin with a walk in the neighborhood," says Dr. Onibokun. "Start with several blocks, and you gain confidence that your back strain didn't return. You didn't hurt yourself. Then work up to longer walks. Ultimately, you should strive toward a mile or more"

Smart tips for hiking with a bad back

USE A WALKING STICK

For longer distances, those with back pain should have good shoes, hike with a very light backpack at most and use a walking stick or hiking poles to help

with balance. "Hiking poles or a walking stick can help distribute body weight to the shoulders and arms especially going uphill or downhill when balance can be difficult," Dr. Onibokun adds.

"Secondly, we recommend that people stick with even surfaces, like a sidewalk, dirt road or foot path, rather than rocky, uneven ground that increases the risk of falling," he adds. "For those who are overweight or sedentary, taking a hike can be a new experience. Try not to push yourself too hard at the beginning. Work up your distance until you can take an hour long hike. Take someone along. You'll enjoy your conversations as you enjoy nature. Pretty soon, you'll be focused on all the things you can do with your back, instead of all the things you can't do. That's when you are on the road to recovery."

GOOD SHOES/FLAT ROAD



Yoga is becoming a popular recreational activity for both men and women. Yoga, which has been around for thousands of years, is a form of exercise that involves holding various poses to develop core strength. To the casual observer yoga stretches look easy. Once you try them, you'll feel that a yoga workout can be demanding.

Many moves can actually be helpful to a bad back as they involve extension and flexion of the back muscles. In fact, many of the customized stretches used by spine therapists evolved from yoga poses.

For example the Sphinx or Cobra yoga pose is the common press up extension exercise. The "Cat" and "Cow" poses similarly create flexion and extension of the spine.

A yoga workout can aid in circulation and provide a natural way to bring oxygenated blood and nutrients to the intervertebral discs. Even for

some minor disc herniations, certain flexion or extension movements may relieve some symptoms as well as improve the flexibility of the ligaments in the back. It is important to note that some disc herniation patients may find that spinal flexion worsens their symptoms,

while extension movements offer relief. Those with spinal stenosis — a narrowing of the spinal canal typically associated with those over 60 — may find flexion exercises to be more comfortable. If you have a back problem, it's best to consult a spine specialized therapist to

evaluate your back problem and customize an exercise program for your particular back problem. San Jose Neurospine has multiple spine-specialized physical therapists that can customize the best exercises for you this year.

EXTENSION STRETCH

Cobra

This is a common back extension stretch, also referred to as the sphinx or press up. Start by lying flat on your stomach, with your hands on the floor under your shoulders. As you inhale, begin to raise your upper body slowly, while keeping your pelvis flat to the floor. Try to create an arch in your low back. Go up as far as you can without experiencing discomfort. Work up to the position shown here. Hold your finish position for 10 seconds, breathing easily. Exhale as you release back to the floor.



Cat & Cow

Start on all fours in the START position shown below keeping your back straight. Your head should be in a neutral position, eyes looking to the floor. CAT FLEXION: Arch your back UPWARD, and lower your head at the same time. Hold for 10 seconds COW EXTENSION: Arch your back

DOWNWARD without arching your neck upward. Hold for 10 seconds.









Bridge

Start by lying on your back with hands to the side. Knees should be bent with heels close together. Exhale and raise your hips upward so your back forms a straight line. Tighten your stomach muscles as you do so. Keep your thighs and feet parallel. Lift your buttocks so that thighs are almost parallel to the floor. Raise your chin slightly away from your chest, this will result in your shoulder blades moving toward your back. Press the top of your chest toward your chin. Remain in this pose for 30 seconds. Exhale and bring your spine back down to the floor.



Head-To-Knee Forward Bend

extended leg. Hold for 30 seconds and relax. Inhale as you return to the start position, repeat the instructions with

OTHER STRETCHES

HOW THERAPY IS USED TO **RESOLVE SYMPTOMS AND** PREVENT BACK PAIN ATTACKS



Passive, palliative "modalities" like ice, heat and massage may feel good on a sore back, but they don't cure anything long term. That's why health insurance companies won't pay for those things. The key is to make the back stronger, more flexible and resistant to future strain. Consequently the best spine therapists use custom stretches and movement.

Sadly, many back and neck pain sufferers travel from doctor to doctor trying to find relief from recurring back pain symptoms and spasms. Along the way, a doctor may have recommended therapy as a non-surgical treatment option. Unfortunately, some people may be disappointed with the result.

"Part of the problem is that people want immediate symptom relief and are attracted to passive things where they lay on their stomach and someone applies ice, heat or massage," explains Dr. Onibokun, the founder of San Jose Neurospine, located in Silicon Valley. "That may feel good at the time, but long term it cures nothing because they aren't changing the physiology of your back,"

"The only things that changes the physiology

of your back or neck is surgery - or exercise that strengthens muscles and ligaments in your back, makes them more flexible and then more resistant to strain," he adds. "Surgery is the last resort. So active therapy, or manual manipulation, is our least invasive treatment option."

San Jose Neurospine refers patients to a therapy centers or chiropractic centers in the Silicon Valley area that emphasize an active approach, rather than a passive approach. "Manual therapy and manipulation can relieve pain symptoms which enables the patient to move into a customized exercise prescription and stretches. The result is that pain relief is achieved not passively, but through active movement of the joints and tissues." Dr. Onibokun notes

"The back pain sufferer needs to understand that pain pills only mask symptoms," he adds. "Exercises, manipulation and stretches can help repair and strengthen soft tissues and tendons. Simply put, movement is like lubricant for your back or neck. Bed rest and inactivity merely weakens bones and muscles and causes further disability. Even a simple 20 minute walk can be good for a sore back. Research has shown that the more you restrict movement, the harder and longer your rehabilitation. Some research notes that you need a 20 minute walk just to counter the effect of three hours lying down."

"At San Jose Neurospine, we want the patient to be well-informed about the causes of back and neck pain and what really works to free yourself from recurring back pain attacks," summarizes Dr. Onibokun. "We focus on a more permanent relief of back pain, rather than a temporary one."



Movement strengthens the back & neck for long term relief

expensive.

Assessing the type of soft tissue injury and strain to a back or neck, and then customizing an exercise program, requires extensive training and experience. For example, certain spine problems like stenosis can be made worse with standard exercises that might otherwise be recommended for other back pain







The bad news is that 4 out of 5 Americans will have an attack of back pain at some time in their lives. The good news is that about 80% of the time, back and neck pain can resolve without surgery. The problem is the other 20% of cases, which can guickly become complex and

HOW INJECTIONS **RELIEVE BACK & NECK PAIN SYMPTOMS**

Back and neck pain can sometimes be caused by a disc bulge or herniation that presses on a nearby nerve root branching off from the spinal cord. This can cause painful inflammation around this nerve root. The symptoms can include pain that radiates into an arm or leg, or weakness/numbness in a hand or foot. For these symptoms, a spinal



HOW INJECTIONS WORK

Medication is injected into the area surrounding a nerve root, which reduces inflammation and relieves pain. Relief from such injections can last anywhere from a few weeks to a few months and sometimes longer, especially if therapy is used simultaneously to strengthen muscles in the back.

injection can relieve inflammation and symptoms long enough for the person to bridge back into therapy and activity.

Injections can be therapeutic and diagnostic. They may relieve symptoms permanently, or just temporarily for a few months. Injections also provide the spine surgeon important information that can improve the likelihood of a successful spine surgery. For example, if an injection at a certain disc level fails to provide relief, the surgeon may then question if that disc level is what is really causing your pain. In that way, the pain management doctor-- and spine surgeon work as a team to ensure you are exhausting non-surgical treatment options and ensuring a more successful surgical outcome when surgery is necessary.

How injections work

When a disc herniates it can press on adjacent nerve roots that branch off from the spinal cord. Surgery doesn't repair the disc wall, but rather removes the herniated tissue which in turn relieves the pressure on the nerve root. Another way to relieve pressure on a nerve root is to inject pain medication directly to this area which reduces inflammation and pain symptoms. When spine physicians choose to use injection therapy, their ultimate goal is to relieve pain long enough to enable the patient to begin physical therapy.

"The purpose of a spinal injection is both therapeutic and diagnostic," explains Dr. Adebukola Oniobokun, a spine surgeon at



San Jose Neurospine. "If back pain symptoms respond to the injection at a certain disc level, we can then confirm that particular disc is the pain generator. So even if the relief is temporary, the injection can provide the surgeon valuable information that will help ensure a successful surgery when it becomes necessary."

San Jose Neurospine works collaboratively with pain management physicians and physical medicine specialists in the Silicon Valley region and South San Francisco area to exhaust non-surgical treatment options.

During an injection procedure, the patient lies on his or her stomach to enable a C-arm fluoroscopic device to provide X-ray images of the spine. Local anesthetic may be injected into the skin and underlying tissues to reduce discomfort from the injection.

Next, a thin needle is inserted into the epidural space, with the vertebrae serving as landmarks. The physician views images from the C-arm to make sure the needle is positioned correctly. Once the needle enters the epidural space, a syringe containing corticosteroid solution is connected to it and the solution is slowly injected. During this time, you will be able to communicate with the doctor, and the most common sensation reported is one which resembles the feeling of "pins and needles."

There are risks involved in any operation or injection procedure. Injections involve less risk than surgery. In the case of epidural steroid injections, risks are minimal. Lumbar (low back) epidural injections involve less risk than cervical (neck) injections, because lumbar injections are performed away from the spinal cord and focus on the

nerve roots.

Years ago, a spine physician might arbitrarily perform "a series of three" injections. That is no longer the case. You are unlikely to benefit from repeated epidural steroid injections if the first or second does not provide relief.

After the injection

"If the injection provides relief of symptoms, we may refer the patient to a spine therapist," explains Dr. Onibokun. "This may include some customized stretches to strengthen the back, make it more flexible and resistant to future strain. In many cases, these injections can bridge many patients back to activity without surgery. And if surgery is necessary, the surgeon will have a lot more information to ensure a more successful surgical outcome."

How minimally invasive surgery shortens incision, speeds recovery

For those back and neck pain sufferers who have pain symptoms from a herniated disc, stenosis (narrowing of the spinal canal) or facet joint problems, surgery may be the only way to correct the problem and relieve pain symptoms.

Thanks to new advances in Minimally Invasive Spine Surgery, many patients of San Jose Neurospine can have their surgery in the morning and be home later the same day. However, that is not typically the case with other spine surgeons who do traditional spine surgery with an open 3-inch incision. Consequently, the back pain patient needs to re-

search which spine centers are truly proficient in the latest minimally invasive instrumentation.

"A problem we see now is that minimally invasive surgery has become a buzzword that is thrown about by some spine surgeons to attract patients when they really aren't trained in minimally invasive surgery and the instruments involved," explains Dr. Onibokun, founder of San Jose Neurospine, and an author of several medical papers on minimally invasive surgery. "Working through tubular retractors and visualizing the spine through an endoscope and navigating by the spinal column with

flouroscopy in the operating room is completely different than operating through a large three-inch incision."

"Some surgeons will say they are doing minimally invasive surgery because they are making a somewhat smaller open incision, or pulling a microscope by the operating room table for five minutes just so they can say they are doing a "microsurgery" technique," he adds. "A patient needs to investigate if the surgeon is actually operating through open incisions or through an endoscope."

With the above said, a patient now needs to become very well informed to select a surgeon who is





trained to use the new instrumentation involved with minimally invasive spine surgery. A patient should ask if a minimally invasive approach will be used, the length of the incision involved, and the length of time in the hospital and in recovery after surgery.

"Minimally invasive spine surgery reduces the hospital stay, reduces pain, results in less blood loss during surgery which can lessen the need for donated blood and the risks inherent in that," Dr. Onibokun adds. "The longer the surgery, the more time under anesthesia is needed, and a longer time in the hospital. So it's definitely worth the patient's time to research the difference in surgeons and surgical approach."



New techniques and instrumentation enable the trained spine suraeon to reduce the lenath of the incision, shorten time in the hospital and speed the return to activity with a less painful recovery. But the patient needs to become well informed about who is really doing "minimally invasive spine surgery."

HOW IT WORKS

In traditional spine surgery, the surgeon makes a three inch incision to access the herniated disc, which can disrupt ligaments and tendons making recovery longer and more painful.

By contrast, a surgeon who is proficient in Minimally Invasive Surgery uses special tools called tubular retractors. A small half-inch incision is made and the tubular retractor is inserted through the skin and soft tissues to access the spinal column. The surgeon accesses the spine using instruments that fit through the center of the tube. Some surgeries require more than one retractor. The sur*geon also uses fluoroscopy to display* real-time x-ray images of the patient's spine on a screen throughout the surgery.



HOW YOU BENEFIT

Benefits of minimally invasive spine surgery include:

- Smaller incision
- Smaller scar
- Home the same day
- Less damage to tissues
- Less pain after surgery
- Less blood loss
- Less pain in recovery
- Faster return to activity
- Less risk of complications from a larger incision and longer hospital stay

Minimally invasive surgeries performed by San Jose Neurospine

MIS Lumbar Microdiscectomy/ Laminectomy

A minimally invasive lumbar discectomy is when a herniated disc is removed in the lower back that pinches a nerve that may cause severe leg pain, numbness, or weakness. This procedure is done by making a small 1-inch incision over the herniated disc and inserting a tubular retractor. Then the surgeon removes a small amount of the lamina bone that allows the surgeon to view the spinal nerve and disc. Once the surgeon can view the spinal nerve and disc, the surgeon will retract the nerve, remove the damaged disc, and replaces it with bone graft material.

MIS Posterior Cervical Discectomy

A minimally invasive posterior cervical discectomy is when a herniated disc is removed in the back of the neck that pinches a nerve that may cause severe leg pain, numbness, or weakness. This procedure is done by making a small 1-inch incision over the herniated disc

and inserting a tubular retractor. Then the surgeon removes a small amount of the lamina bone that allows the surgeon to view the spinal nerve and disc. Once the surgeon can view the spinal nerve and disc, the surgeon will retract the nerve, remove the damaged disc, and replace it with bone graft material.

MIS Lumbar Fusion

A minimally invasive lumbar fusion can be performed the same way as traditional open lumbar fusion, either from the back, through the abdomen, or from the side.

Lateral interbody fusion (LIF)

A lateral interbody fusion, often used to treat spondylolysis, degenerative disc disease and herniated discs, is performed by removing a disc and replacing it with a spacer that will fuse with the surrounding vertebra. The procedure is completed on the side of the body in order to reduce the effect on the nerves and muscle of the back

Artificial Disc Replacement

Artificial disc replacement is intended to be an alternative to spinal fusion surgery. Unlike a fusion that locks the two vertebrae in place, an artificial disc retains movement in the spine by simulating the natural rotational function of the disc.

Posterior cervical microforaminotomy (PCMF)

A PCMF is performed to help relieve pressure and discomfort in the spine by making a small incision in the back of the neck and removing excess scar tissue and bone graft material.

Anterior cervical discectomy

An anterior cervical discectomy is used to reduce pressure or discomfort in the neck by removing a herniated disc through a small incision in the front of the neck. The space is then filled with bone graft material and plates or screws may be used to increase stability.

How artificial disc replacement works

San Jose Neurospine is one of few spine centers in the Silicon Valley area trained to implant the artificial disc.

Each year in the U.S., more than 200,000 spinal fusion surgeries are performed to relieve pain caused by damaged discs in the low back and neck. During a fusion procedure, the damaged disc is replaced with bone from a patient's hip or from a bone bank. Fusion surgery causes two vertebrae to become locked in place, putting additional stress on discs above and below, which can lead to further disc herniation with the discs above and below the degenerated disc.

An artificial disc replacement is intended to duplicate the rotation of a normal, healthy disc and retain motion in the spine, which lessens the risk to other disc levels.

With any joint replacement, surgeons try to postpone the implantation of an artificial joint until a patient is at least 50 years old so that they do not outlive their artificial joint, which may last from 15 to 20 years.

Unlike knee and hip replacement patients who are typically in their 50s or 60s, however, many spine patients can benefit from artificial disc technology at a much younger age — in their 20s or 30s.

Therefore, the implantation of an artificial disc in younger patients can raise a surgeon's concern about the potential life span of the artificial disc in the spine and the need for revision surgery to replace a worn-out artificial disc, which can be complex. To see if you are a candidate for artificial disc replacement, call 408-377-3331.

There are several FDA approved (D)P artificial discs in use today, 10 including the Prestige® Artificial 000 Disc from Medtronic, shown left. Most spine surgeons favor artificial discs in the cervical (neck) area because the neck 6:0 is easier to access than the lumbar spine, and revision Contract of the local division of the local



PROS & CONS

Positives of the artificial disc:

- Retains motion of the vertebrae.
- Prevents damage to other disc levels .
- No bone graft required.
- Quicker recovery & return to activity.
- Less painful surgery than a fusion.
- Less blood loss during surgery.

Spine surgeons may be cautious about artificial discs for the following reasons:

- Wear and tear on artificial disc can require revision surgery in 10 to 20 years that can be complex.
- Disc implants only address rotational forces, not the up and down shock absorbing of the natural disc.
- Overweight people can wear out a lumbar disc prematurely.
- · Newer artificial discs are in development that may be better.
- · There are not many 20-year-long studies that show the long-term effects of wear on artificial discs.

SAN JOSE NEUROSPINE

UNDERSTANDING YOUR BACK OR NECK SYMPTOMS: WHEN YOU CAN USE WATCHFUL WAITING & WHEN YOU CANNOT

NOTE: A person may use "watchful waiting" for a few days for symptoms of muscle strain or even radiating pain into an arm or leg. However, ANY WEAKNESS OR NUMBNESS in an arm or leg, or loss of control of bowel or bladder, are emergency symptoms. You need to see a spine specialist promptly (as noted below) to prevent the symptoms from becoming permanent.

PAIN LIMITED TO THE NECK:

Neck pain can be caused by traumatic injury, like whiplash from a car accident, or muscle or ligament strain. See our Home Remedies section on our Internet site. If pain persists beyond a week, you should see a spine specialist to determine the underlying cause.

LOSS OF BOWEL OR BLADDER

CONTROL: This is a SERIOUS emergency symptom (cauda equina) that needs to be treated immediately by a spine surgeon within 24 hours. If you experience these symptoms at night or on the weekend, go to the emergency room. If not treated quickly, the person may lose control over their bowel and bladder permanently.

RADIATING PAIN INTO THE LEG: Pain that radiates into a leg below the knee can imply a herniated disc in the low back. But many times radiating pain can be treated nonsurgically. Radiating pain should be seen by a spine specialist within 2 weeks.

NUMBNESS OR WEAKNESS IN LEG

OR FOOT: Numbness or weakness in the leg or foot is a SERIOUS disc-related symptom that is NOT appropriate for watchful waiting. Left untreated, the symptom can become permanent. You should see a spine specialist within 3 days.

TRAUMA / FALL/ACCIDENT:

Any time you fall, are in a car accident, or could have fractured a bone in your back, you should see a spine specialist immediately!

FOOT DROP / WEAKNESS IN FOOT:

If pain, weakness or numbness extends into the foot so that you are unable to lift your toe as you walk, that is called Foot Drop, which is an emergency disc-related symptom. You need a spine specialist within 48 hours. If not treated promptly, it could lead to permanent weakness in the foot.

CAMPBELL: 3425 S. Bascom Avenue, Suite I, Campbell, CA 95008 ATHERTON: 3351 El Camino Real, Suite 200, Atherton, CA 94027 SAN MATEO: 101 S. San Mateo Drive, Suite 301, San Mateo, CA 94401

APPOINTMENTS & REFERRALS: 408-377-3331

FEVER, DROWSINESS, SEVERE HEADACHE, NAUSEA, VOMITING, **UNUSUAL SENSITIVITY TO LIGHT?** Other symptoms may be unrelated to a back or neck problem, like cervical meningitis. This can be serious. You should consult a physician immediately for any of the above symptoms.

RADIATING PAIN IN THE ARM: Pain that radiates into an arm below the elbow can imply a herniated disc in the neck. Many times, radiating pain can be treated nonsurgically. Radiating pain should be seen by a spine specialist within 2 weeks.

> NUMBNESS OR WEAKNESS IN ARM OR HAND: Numbness or weakness in the arm or hand is a more serious disc-related symptom that is NOT appropriate for watchful waiting. Left untreated, the symptom can become permanent. You should see a spine specialist within 3 days.

PAIN LIMITED TO THE LOW BACK: Pain that is limited to the low back may be the result of muscle strain. While pain spasms can be excruciating, muscle strain problems do not require surgery. See our Home Remedies section on our Internet site for special stretches that can relieve pain, and the proper use of anti-inflammatories. While less common, a kidney injection or kidney stone may also cause low back pain symptoms. Consequently, you should consult a spine specialist accordingly for symptoms that persist beyond 5 days to determine the cause of your symptoms and the best treatment options, including a customized home exercise program that will make the back stronger, more flexible and resistant to future strain.



Campbell, CA 95008

SAN JOSE NEUROSPINE

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San Jose Neurospine specializes in the treatment of back and neck pain and other spine problems. Through its three offices in the Silicon Valley and South San Francisco region, the spine center works closely and collaboratively with pain management specialists and physiatrists in the medical community to exhaust non-surgical treatment options before surgery. When spine surgery is necessary, San Jose Neurospine provides the most advanced minimally invasive spine surgery options and artificial disc replacement.

Second opinion & MRI review

Through a second opinion you may learn that there is a non-surgical treatment option, or a minimally invasive procedure, that can have you home the same day for a faster and less painful recovery. Call: 408-377-3331 or complete and submit our second opinion form at SanJoseNeurospine.com. A patient can also complete a form for an MRI review.

NEUROSPINE

Home Remedy Book

San Jose Neurospine believes the best healthcare quality comes from a well-informed health care consumer. As a community service, the spine center produces this educational Back to Life Journal, a free 36-page Home Remedy Book and an online spine encyclopedia at SanJoseNeurospine.

Patients can request the Home Remedy Book by calling 408-377-3331 or online at SanJoseNeurospine.com. The Internt site has symptom charts, home remedies for back problems, medical illustrations and video animations on spine conditions and surgeries.



See our videos at. SanJoseNeurospine.com/videos



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Physician Profile

Adebukola Onibokun, MD

Board-certified Neurological Surgeon

San Jose Neurospine includes the expertise of Adebukola Onibokun, MD, a board-certified neurological surgeon who specializes in minimally invasive spine surgery.

Dr. Onibokun (pronounced "Oh-knee-bowkun") is Board Certified by the American Board

of Neurological Surgery and is a fellow of the American Association of Neurological Surgeons. Before medical school, he was a Magna Cum Laude graduate of Iowa State University. He received his medical degree



from the prestigious Northwestern University Medical School, graduating with honors. He then completed seven years of Neurosurgery Residency training at UCLA Medical Center, a program that consistently ranks as one of the top five neurosurgery programs in the country.

During his training at UCLA, Dr. Onibokun worked with the world's leading visionaries in the field of minimally invasive spinal surgery. As a direct result of this work, Dr. Onibokun coauthored one of the sentinel articles on the technique of minimally invasive pedicle screw fixation.

Dr. Onibokun has previously served as Chief of Neurosurgery at Elmhurst Memorial Hospital in the Chicago area, where he established their Minimally Invasive Spine Surgery program. Prior to relocating to California, he was a Health System Clinician at the Northwestern Medicine Regional practice. Over the course of his career he has performed more than 2,000 successful operations.

Dr. Onibokun specializes in minimally invasive surgical techniques, motion preserving spinal technologies (artificial disc replacement), endoscopic spinal fusion techniques, robotic computer assisted image guided surgery, complex spinal reconstruction, chiari decompression, transphenoidal surgery and microvascular decompression surgery.