Genezen
Pain Clinic

WE DEVELOP INDIVIDUAL TREATMENT PLANS THAT ARE SPECIFICALLY DESIGNED TO MEET EACH PATIENT'S INDIVIDUAL NEEDS.

Our Goals

- ✓ Identify and treat the source of pain
- ✓ Plan and execute a practical approach looking at age, gender and associated medical conditions.
- ✓ Avoid spine surgery and subsequent consequences
- ✓ Coordinate a multidisciplinary approach for the treatment of pain syndromes
- ✓ Achieve maximum pain relief for the greatestlength of time possible
- ✓ Help patient return to a normal productive life

Our work library

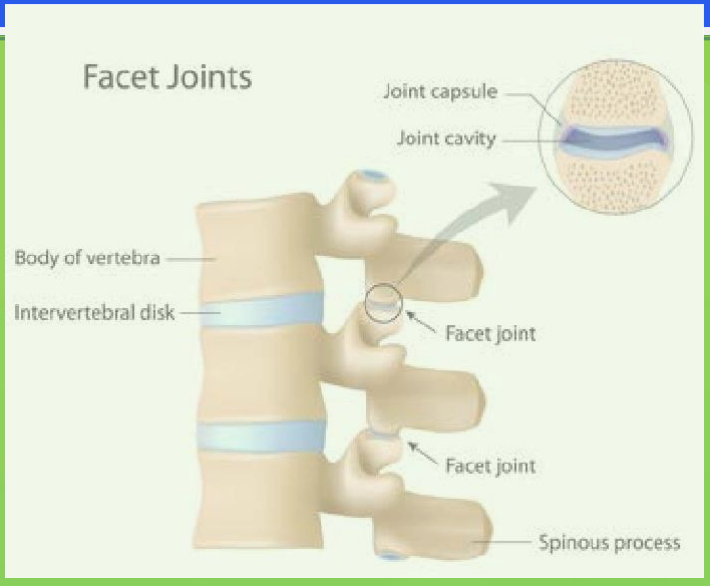
- ✓ Transforaminal Nerve Blocks.
- ✓ Rf Ablation.
- ✓ Trigeminal Neuralgia.
- ✓ Selective Endoscopy Discectomy.
- ✓ Vertebroplasty.
- ✓ Spinal Cord Stimulation.
- ✓ Intrathecal Pump.
- ✓ Pioneer in Percutaneous Endoscopic
- ✓ Cervical Discectomy

Your Problems...Our Procedures!!!

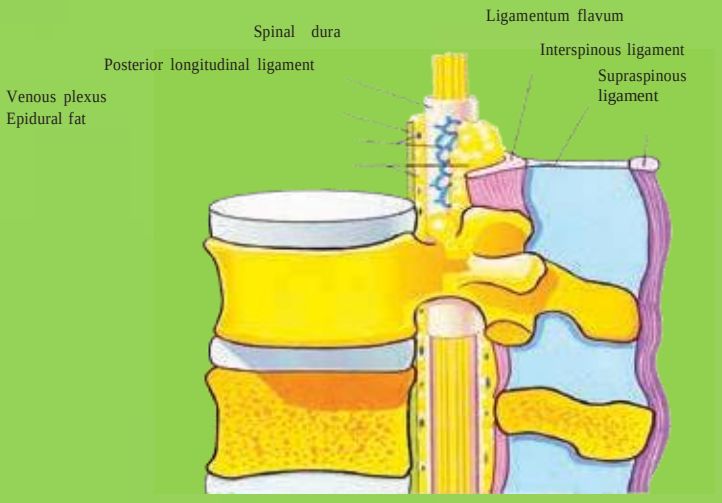
Facet Joint Block & Medial Branch Radio Frequency Lesioning:

Facet joints are located on the sides of your spine, away from the spinal cord. Age related disc
Degeneration, sudden twisting, back injury and open spine surgery can contribute arthritis and instability. They may be the only cause of your back & neck pain and sometime goes down to extremities. The MRI is not sensitive to diagnosing facet related pain.

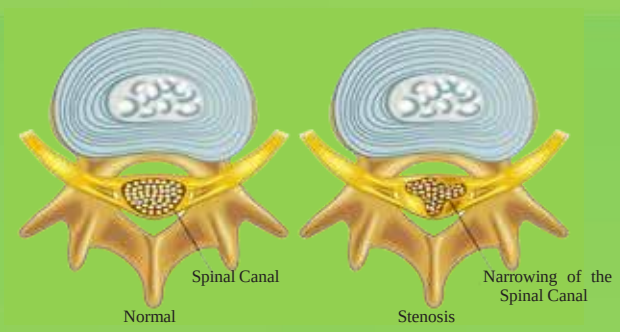
The facet joint pain is a clinical diagnosis. If we suspect that your neck or lower back pain may be caused in part by the small facet joints of the spine, diagnostic injections are done to numb the joint. After diagnostic injection you should check all movements and if your pain is relieved, we can offer long-lasting pain relief with radio frequency treatment by ablatingsmall nerve supplying the joint.



Transforaminal Selective Nerve Root Sleeve Injection & Pulsed Radio-Frequency:



The intervertebral disc is made up of outer tough later called annulus and inner soft material called nucleus. The nucleus contains many chemical and irritating agents. Age related degenerative process of spine, sudden bending, and weight lifting, accidental
Injury of spine may breach of the outer layer (annulus) and release those chemical mediators from centre



Endoscopic rhizotomy: A minimally invasive, high-techprocedure can be used for direct visualization and ablation of the nerve.

Part (nucleus) resulting in severe inflammation and pain in back or neck going down to extremities.
Microadhesions can be there due to long term persistant inflammatory sequelae and can lead to persistent pain and numbness only in walking and standing due to epidural venous congestion.

transforaminal selective nerve adhesiolysis procedure involves volume and pressure adhesiolysis with hypertonic saline and hylase enzyme. It also washout chemical mediators.The highly concentrated anti- inflammatory drug is delivered to exact site to reduceinflammation.

It can also be used for diagnosis in case of multilevel disc disease.and relieve pain due to herniated disc, canal stenosis, tumor or any other cause when cause of your pain is not

Pulsed Radio - Frequency: Dorsal root ganglion pulsed radio-frequency lesioning done for intractable pain in the area innervated of particular Lumbar, Thoracic or Cervical nerve root for long term results.

Spinal Canal Stenosis:

Patients with spinal canal stenosis can have pain, tingling, numbness, heaviness while prolong
Standing or walking. These kind of patients can do well with pain management techniques.

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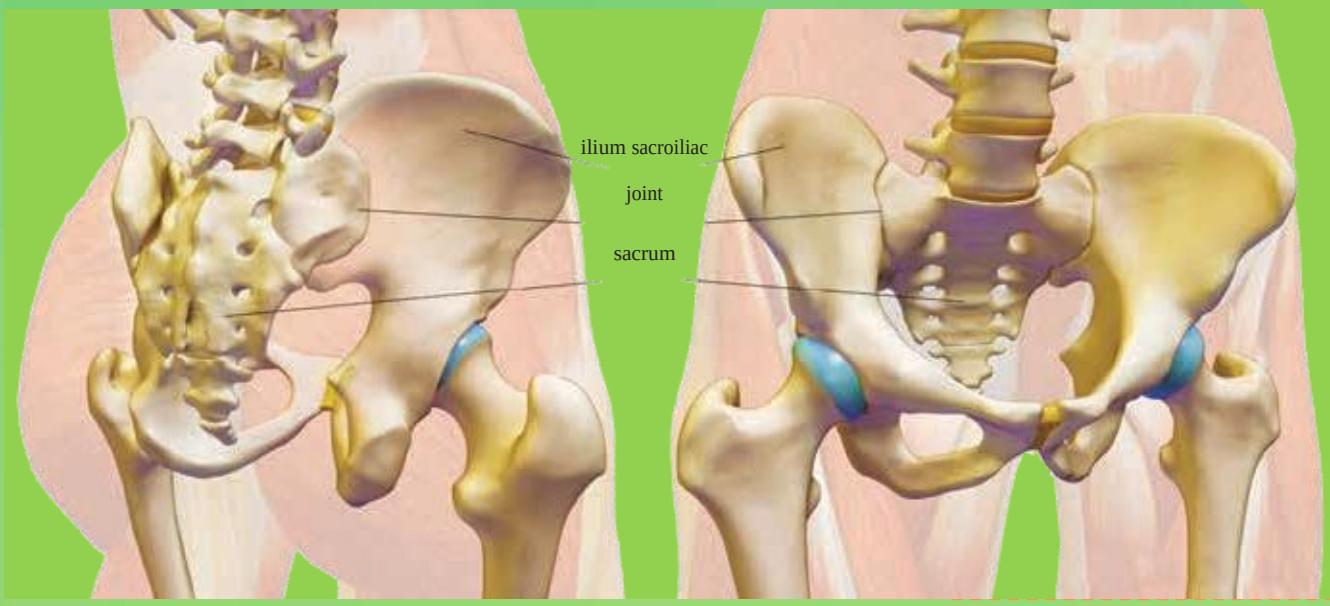
SED-Selective Endoscopy Discectomy:

Is the treatment of choice for advanced disc bulge cases creating mechanical compression or severe spinal canal stenosis.

Sacro-Iliac Joint Injection & Radio-Frequency Lesioning:

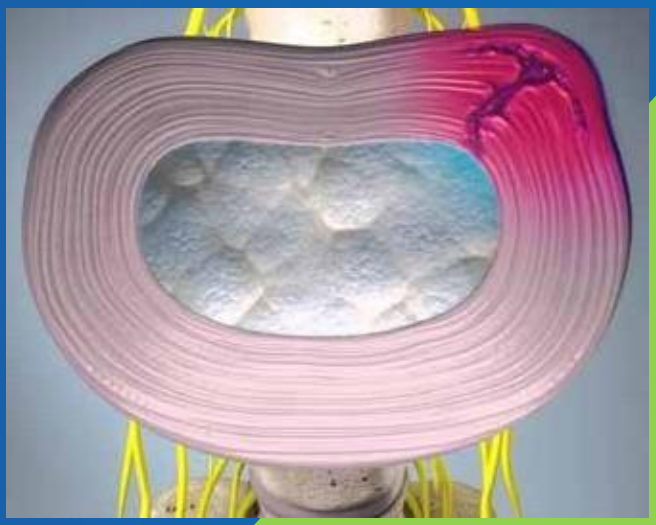
Gold standard in diagnosis and treatment of sacroiliac joint related pain. Here also MRI is not very sensitive. Simplicity is excellent way of doing RFablation for long term relief of S I joint pain.



Provocative Discography:

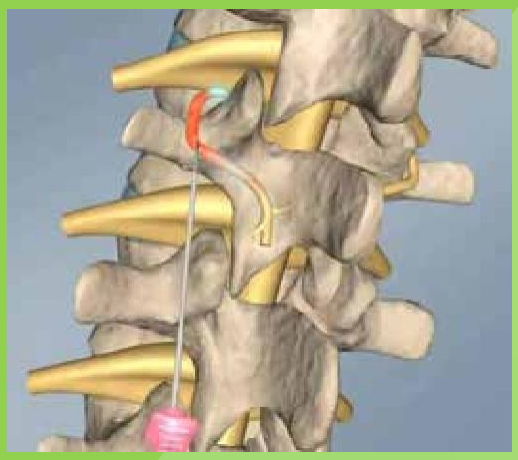
MRI is not always conclusive in many patients with low back pain. The patients have back pain, gluteal or hip pain only when there is increase in disc pressure like bending and sitting for long.

Provocative discography is required to identify which disc is culprit for pain. By injecting contrast dye into an intervertebral disc and measuring intradiscal pressure, this IITV guided procedure can help us diagnose various disc-related pains. Sometime immediate CT scan is required to document breach in annulus.The endoscopic or other surgical procedures can be plan depend upon result of discography.



Headache:

Many a times, there is no proper diagnosis of headache. Even CT scan, CSF examination or MRI is not conclusive. These patients are
Being treated as migraine for years. This type of headache may be cervicogenic headache, tension headache, cluster headache, occipital neuralgia etc. Pain Management specialist can diagnose & treat these conditions effectively.



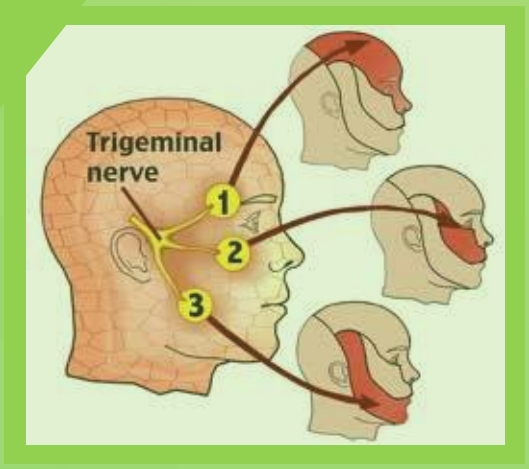
Sphenopalatine Ganglion Block & Radio-Frequency Lesioning:

For headaches not responding to routine treatment, Sphenopalatine neuralgia, atypical facial pain, Herpes zoster ophthalmitis.

Greater Occipital Nerve Block, Radio-Frequency Lesioning & Occipital Nerve Stimulation:

For deep occipital headaches & greater occipital neuralgia. Diagnostic block and then radio-frequency treatment for prolong relief.

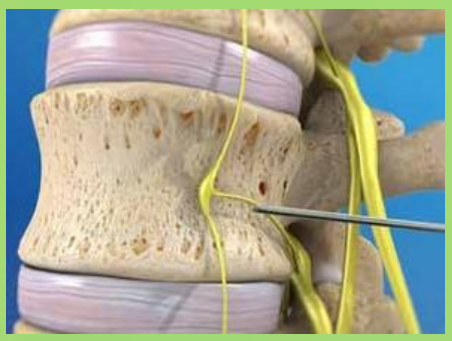
Occipital Nerve Stimulation with supra orbital nerve stimulation is current advanced modality for intractable migraine and occipital pain.



Gasserian Ganglion Radio-Frequency Lesioning:

For Trigeminal Neuralgia, (said to be most excruciating pain in the world) cluster headache not responding to conventional therapy. This Day care procedure under local anesthesia, with the state

Of art technique, a selective division of trigeminal ganglion can be targeted with radio-frequency generator under IITV or CT scan guidance.



Lumbar Sympathetic Block & Radio-Frequency Lesioning:

It may be done if you have reflex sympathetic dystrophy (RSD), a disease involving a disturbance of circulation to the skin or neuropathic pain. eg. Diabetic neuropathy.

RF ablation will give a very long lasting relief.

Trigger Point Injections:

For painful myofacial pain syndromes with painful triggerareas. Botox (Botilinum toxin) can be used in selected patients.

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Shoulder joint and supra-Scapular Nerve Block & Radio-Frequency Lesioning:

For patients with severe shoulder pain (Frozen Shoulder), not responding to routinemedication or physical therapy.

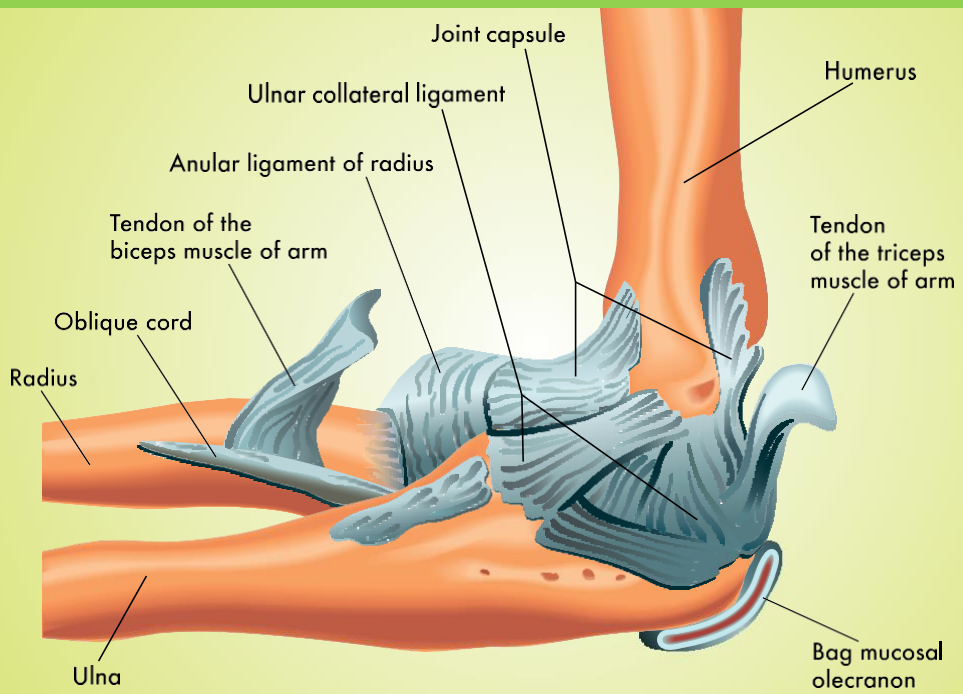
Prolotherapy:

Prolotherapy is an injection treatment designed to stimulate healing of chronic ligament and tendon weakness. The painful weakened areas are injected with a proliferant (Dextrose or Sugar, PRP, Stem Cell) which is a solution that directly stimulates the growth of healthy, strong tissues. The healing process can be expected to take about four to six weeks after theinitial treatment.

Indications:

Different types of musculoskeletal pain, includingarthritis

- Osteoarthritis of knee, Hip etc.
- Sports injuries
- Unresolved whiplash injuries
- Chronic tendonitis
- Coccycodynia
- Partially torn tendons, ligaments and cartilage etc.



Percutaneous Vertebroplasty & Vertebral Augmentation Procedure:

Minimally invasive procedure in which medical grade bone cement is injected into the vertebral body in case of vertebral fracture.

The cement functions as an internal cast in the vertebra for pain relief and stabilization. Patients with vertebral compression fratucres (VCFs), typically induced by osteoporosis, tumors, or a traumatic injury are good candidates for these procedures.

Vertebral Augmentation Procedure: a single or two balloons can be inflated before cement injection to create space for cement and achieve the height in case of collapsed spine. This is safe way to inject cement with low injection pressure to avoid cementleaking into spinal canal.

Kyphoplasty (vertebral augmentation)

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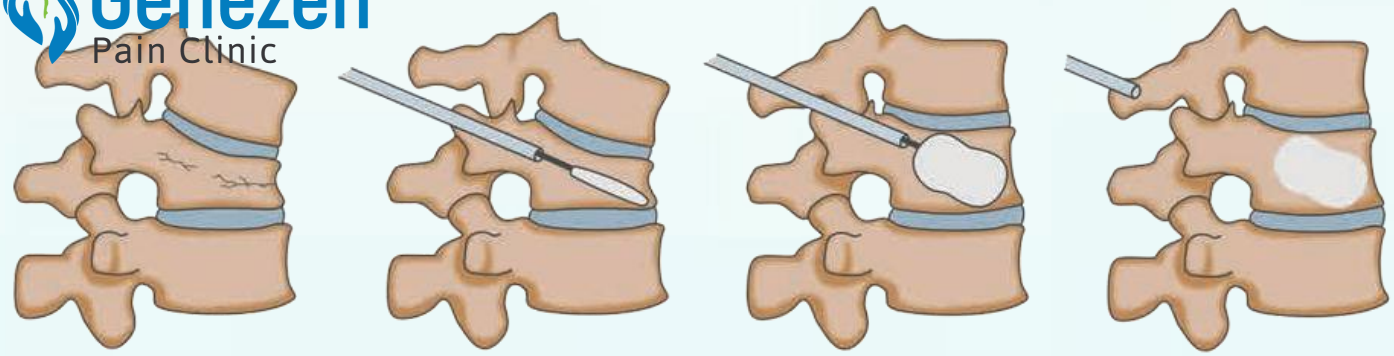

1. Vertebral facture
2. Insertion of tiny balloon under image guidance
3. Balloon is expanded creating space for the cement
4. The cement is inserted, stabilising the fracture

Spinal Cord Stimulator:

A spinal cord stimulator (SCS), also known as a dorsal column stimulator, (DCS) is an implantable medical

Device used to treat chronic neurological pain. An electric impulse generated by the device produces a tingling sensation that alters the pain perception. Thedevice is implanted into the epidural space either by percutaneous approach or by surgical laminectomy or laminotomy. A pulse generator or RF receiver is
Implanted in the abdomen or buttocks. A wire harness connects the lead to the pulse generator.

Indications:

- Failed back surgery syndrome / perineural fibrosis
- Adhesive arachnoiditis
- CRPS type I & CRPS type II
- Post herpetic neuralgia
- Peripheral neuropathy / Diabetic neuropathy
- Phantom limb pain / stump pain
- Peripheral vascular insufficiency
- Chronic Refractory Angina
- Cerebral palsy Multiple sclerosis etc.

Spinal Drug Delivery Systems

A surgically implanted programmable pump and catheter that delivers medication directly into the intrathecal space where fluid flows around the spinalcord.

Because drug is delivered directly to where it's neededmost in the spinal fluid, it relieves pain or spasticity with smaller amounts of medication (approximately 1/300 of an oral dose) than when drug is taken orally. This method of delivery may help minimizes side effects that can result from oral medication.

Sacral Nerve Stimulation (FDA Approved Treatment)

Sacral neuromodulation is a reversible option that can immediately reduce and even eliminate the symptoms of overactive bladder, including –

- Urinary Urgency : failure to be able to postpone theneed to urinate
- Frequency of Urination: the need to urinate atleast eight times per day
- Urge Incontinence : leakage of urine when onegets the urge to urinate.

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STITCHLESS Percutaneous Endoscopic Cervical Discectomy: A Day Care Discectomy Procedure.

STITCHLESS percutaneous endoscopic cervical discectomys [PECD] is safe, precise, targeted, and a complete endoscopic procedure to treat soft cervicaldisc herniation with unilateral radiculopathy. It allowsdirect visualization of herniated fragment under live camera system and its removal and inspection of decompressed nerve root in an awake and aware patient. As patients are awake, it reduces the risk related to general anesthesia and to the injury to important neurological structures.

However, all the patients treated with PECD can be candidates for anterior cervical discectomy and fusion (ACDF). ACDF requires a longer period of stay,expense, and more risk to neurological structures andultimately loss of the disc space by fusion.

Benefits:

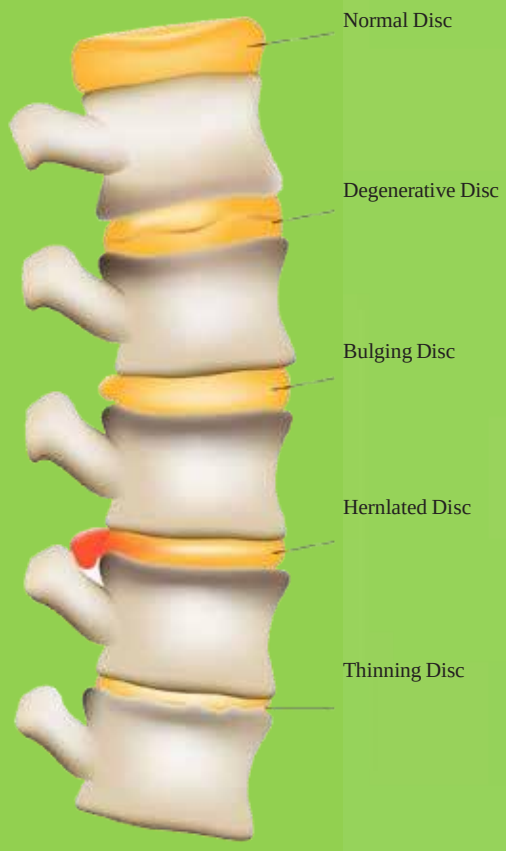
Safety as it is done under local anesthesia, smaller Incision, short hospitalization, fewer complications, avoidance of fusion, preservation of Segmental motion, preventing the adjacent segment degeneration, and avoidance of the risk related to thehardware (nonunion and pseudarthrosis).

sPECD is an effective and most advanced treatment modality for soft cervical disc with many added advantages over conventional open surgery.

SED-Selective Endoscopic Discectomy:

A minimally invasive spine endoscopy technique that utilizes an endoscope to treat herniated, protruded, extruded, or degenerative discs that are a contributing factor to leg and back pain. The endoscope allows the doctor to use a “keyhole” incision to access the herniated disc. Muscle and tissue are dilated rather than being cut when accessing the disc. This leads to less tissue destruction, less postoperative pain, quicker recovery times, earlier rehabilitation, and avoidance of general anesthesia.

The excellent visualization via the endoscope permits the doctor to selectively remove a portion of the herniated disc that is contributing to the patients' leg and back pain. The procedure is performed in an outpatient setting. The patient is awake throughout procedure hence during the procedure valuable feedback can be obtained from the patient so no chance of major neurological damage even by mistake also. Radiofrequency probe/electrocautery also help depopulate and ablate the pain fibers in the annulus. In case of major spinal stenosis, side firing holmium laser, endoscopic burr, trephines are very helpful. As the procedure is under local anesthesia with very small incision, the patients can be mobile after the procedure. No hospitalization is needed in most patients.



Frequently Asked Questions:

What are the methods to treat sciatica by operations?

1) Conventional Open Discectomy
2) Micro Discectomy / Micro Endoscopic Discectomy
3) Selective Endoscopic Discectomy (Stitchless)

What Are The Problems With Conventional And Microdiscectomy?

There is a lot of bone cutting, tissue destruction and Pain. Post-Operative stay is long. Mobility is quite delayed. Chances of Neurological & other Complications are much more. These operations are done under general anesthesia so risky for elderly andhigh risk patients.

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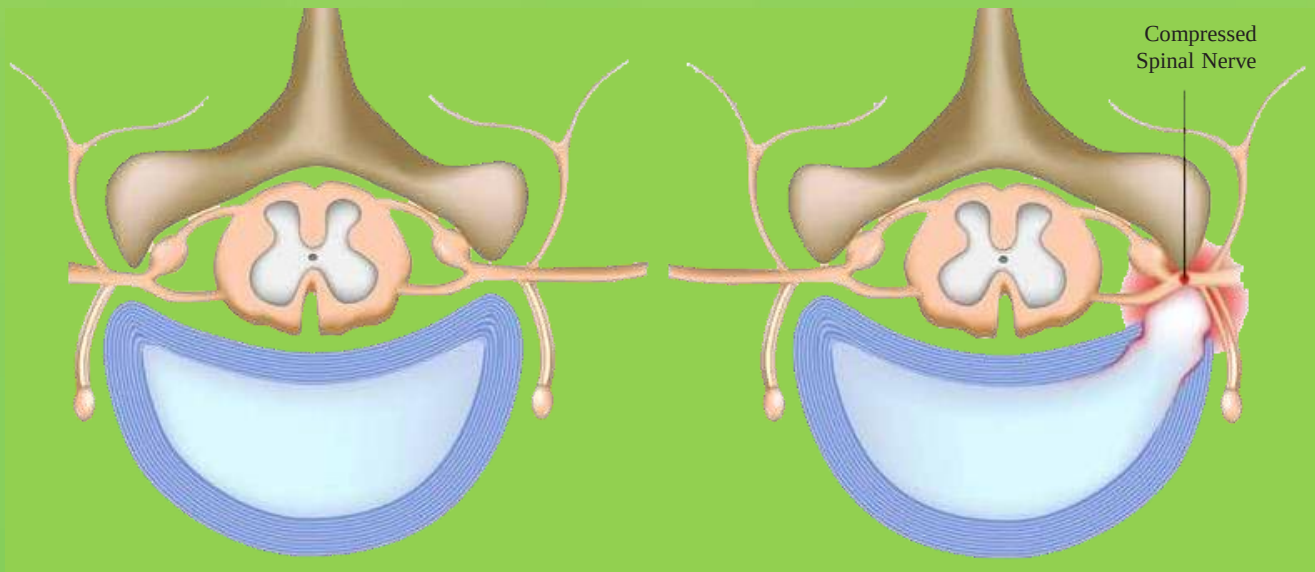


Normal Disc

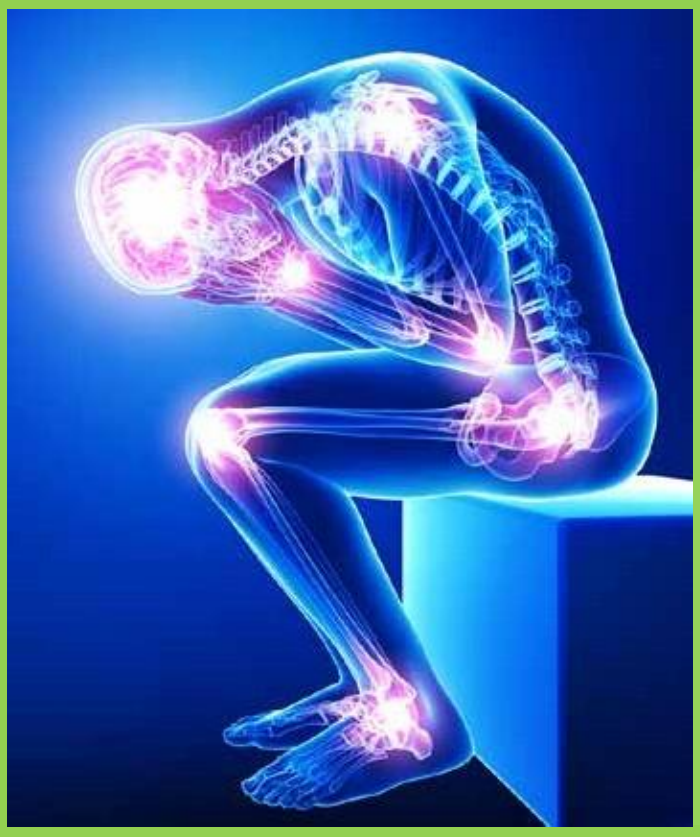
Herniated Disc

What are the indications for Selective Endoscopic Discectomy?

- Discogenic Low Back
- Discitis
- Spinal Canal Stenosis
- Pain Slip Disc / Sciatica
- Spondylolisthesis
- Pain after Spine Surgery

How Selective Endoscopic Discectomy (Stitchless) is superior to other surgical techniques?

- Day care surgery & Patient can be mobile afterfew hours.
- Done under local anesthesia so good for high risk& elderly patients.
- Endoscope gives direct and higher visualization ofpain generators
- Minimum pain- no bone cutting or minimal tissue disruption.
- Chances of complications are negligible in expert hands.
- No stiches



Am I a Candidate?

You may be a candidate for the procedure if you:Have leg pain, numbness, tingling made worse by sitting or bending or arching your back. Are not any better after 4 - 6 weeks of conservative treatment including rest and physical therapy Are not better after epidural blocks Have an MRI,CT scan, CT myelogram, or discogram showing a disc herniation Due to evolving methodology,
Certain degenerative conditions, if not too severe,can be helped, but only after individual evaluationof each patient the doctor can tell if the endoscopic procedure is recommended for you.

How is traditional surgery done?

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In traditional surgery pain generator diagnosis was gross. Surgery was essentially exploratory. Surgery was done by cutting skin and muscles in back and removing large portion of bones in back, making muscles weak, scarring the soft tissue damaging strength & flexibility of the back. Open, Micro and Microendo, Endospine or all other tube surgeries are same traditional surgeries done under new name and have same complications.

The claims about minimally invasive or endoscopy by other methodologies lack evidence as they are minimally invasive only at skin. Under the skin they are tent surgeries with widecutting of deeper tissues.

Expected Results:

The goal of this procedure is to provide relief of leg pain and prevent further neurologic injury. Back pain is frequently relieved, but may persist because of arthritis or other sources of back pain not coming from the disc.

Success Rates:

Similar to the published results of standard microscopic discectomy, but with less recovery time and quicker rehabilitation due to the more minimally invasive nature of selective endoscopic discectomy.

There may be some discomfort in the surgical area for first couple of days. Other light activity is resumed on the evening of surgery and is gradually increased at home. Leg pain may subside immediately or after several months depend upon persistent inflammation.

Your pre-operative pain may temporarily increase or change in character. On infrequent instances, if your pain persists or if it returns, further tests may be needed to look for other causes of your pain.

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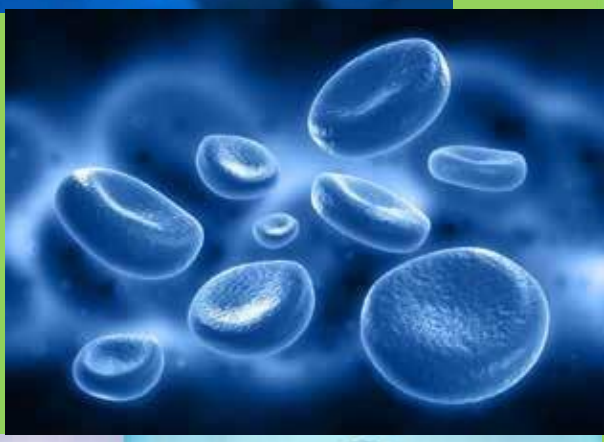
Regenerative medicine:

Regenerative medicine deals with the "process of replacing, engineering or regenerating human cells, tissues or organs to restore or establish normal function.This field holds the promise of engineering damaged tissues and organs by stimulating the body's own repair mechanisms to functionally heal previously irreparable tissues or organs"

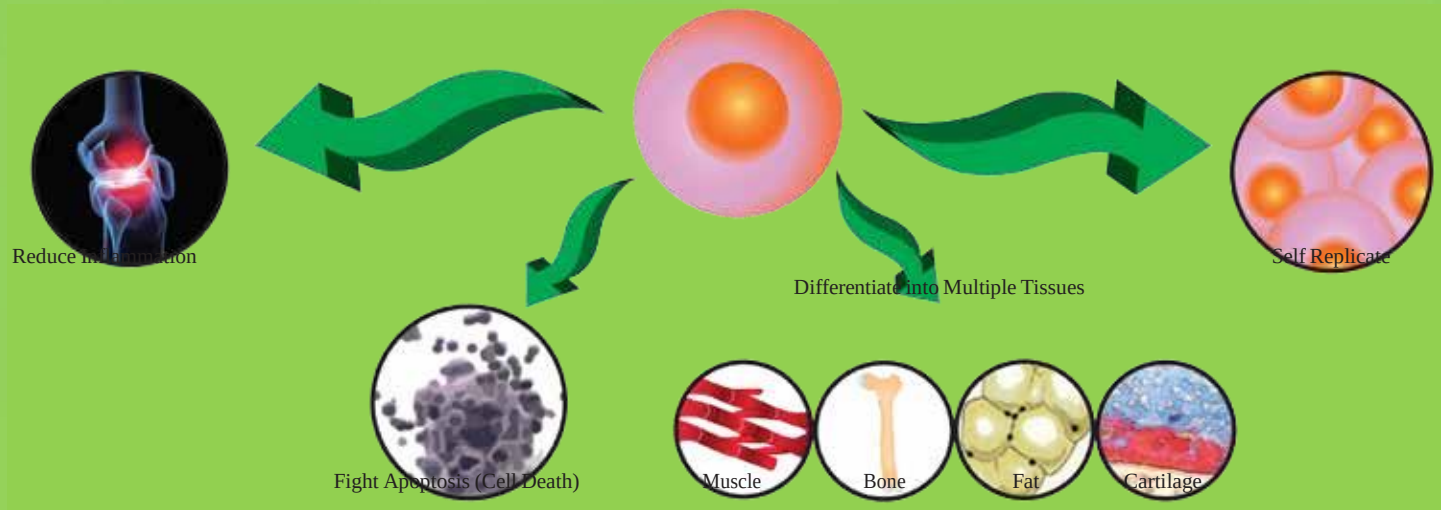


Types of Regenerative Therapy:

1. Stem Cell Treatments.
2. Platelet Rich Plasma (PRP)
3. Prolotherapy.
4. Surgeries for Cartilage Regeneration.

What is a Stem Cell?

A mesinchymal cell is a primitive cell with the ability to:



1. Stem Cell Treatments:

A stem cell does not serve a specific bodily function, but it can develop into a cell that does, such as a cartilage cell or a tendon cell. Physicians who use stem cell therapy believe that, when placed into a certain environment, stem cells can transform to meeta certain need. For example, stem cells that are placednear a damaged tendon are hypothesized to develop into healthy tendon cells.

Stem Cells from Patients
In almost all cases, the stem cells used in sports medicine come from the patient.

The process of collecting stem cells is often called harvesting. Physicians usually harvest stem cells fromthe patient's fat, blood, or bone marrow.

Fat: During surgery or liposuction a doctor can harvest adipose (fat) stem cells.

Blood: A blood sample from the patient can be used to harvest peripheral blood stem cells, which are found in the bloodstream.

Bone marrow: Doctors typically harvest bone marrow stem cells from the pelvic bone using a needle and syringe. The process is called bone marrow aspiration.Before a bone marrow aspiration, a patient is given a local anesthetic and may also be given a sedative.

Mesenchymal stem cells

All three types of stem cells listed above-adipose (fat), peripheral blood, and bone marrow-belong toa category of stem cells called mesenchymal stem
Cells. These stem cells, sometimes called adult stem cells, can be obtained from the patient's own body andare being increasingly used for treating sports injuries.

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2. Platelet Rich Plasma (PRP):

PRP (ie) Platelet Rich Plasma is a type of regenerative therapy. Here the platelets help in healing and the various growth factor present in granules of platelet stimulate the stem cells for regeneration of tissues.

PRP is derived from a sample of the patient's blood. Inthe bloodstream, platelets secrete substances called growth factors and other proteins that:

Regulate cell division Stimulate
tissue regeneration Facilitate
healing

PRP has vast uses in chronic pain management.

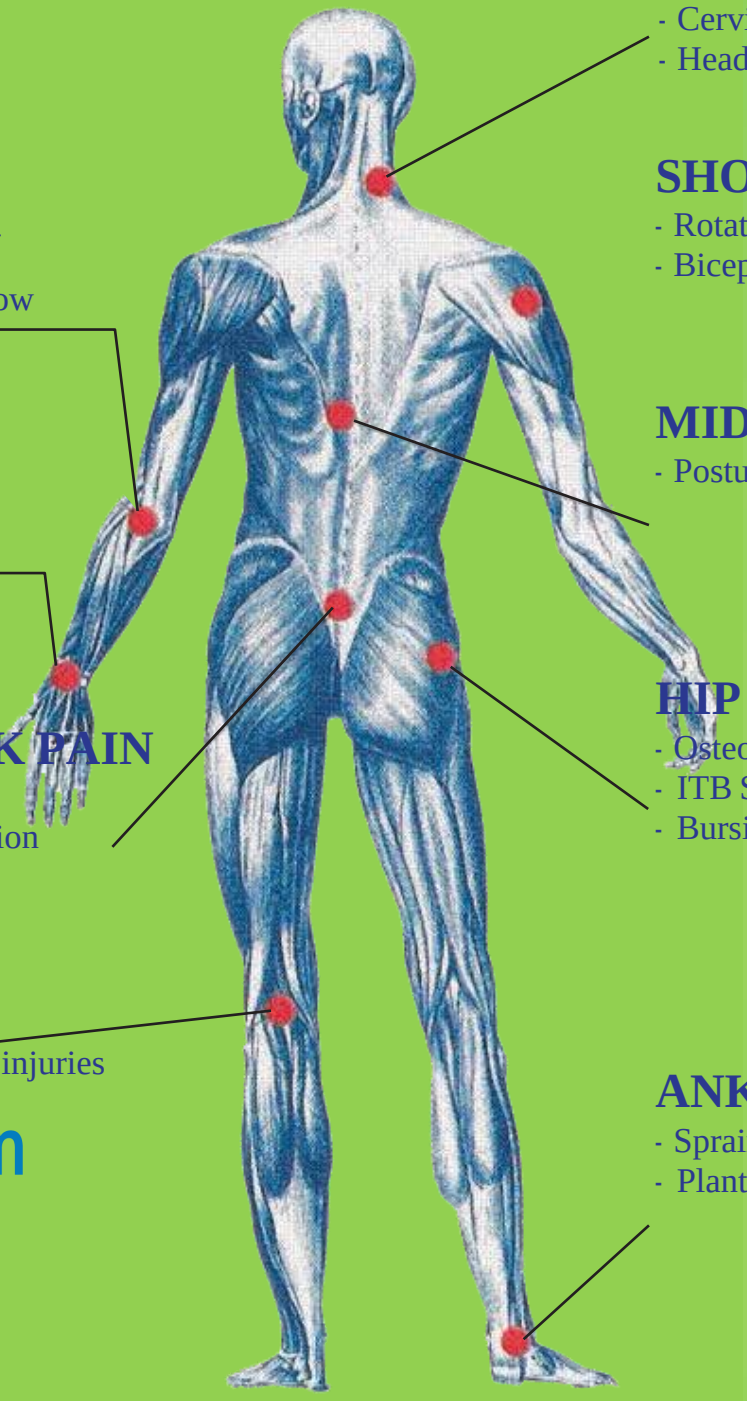
Chronic pain is a result of injury-inflammation-degeneration vicious cycle.

PRP breaks this cycle by causing regeneration.

PRP is used in tendon and ligament injuries like tennis elbow, ACL tears, plantar fascitis, knee osteoarthritis and slip disc treatment.

PRP can be the answer for all the chronic pain condition like knee pain heel pain neck pain andback pain.

PRP is Nature's own gene matched cocktail of growth factors that has wide application in medicine. So it is very safe.



NECK PAIN
- Cervical Strain/ Sprain
- Headaches

SHOULDER PAIN
- Rotator Cuff Strain
- Biceps Tendonitis

ELBOW PAIN
- Tennis / Golfer's Elbow
- Overuse / Repetitive strain injuries

MID BACK PAIN
- Postural Strain / Overuse

WRIST PAIN
- Carpel Tunnel Syndrome
- De Quervain's Tenosynovitis

HIP PAIN
- Osteoarthritis
- ITB Syndrome
- Bursitis

LOWER BACK PAIN
- Mechanical LBP
- Disc Bulge / Herniation

KNEE PAIN
- Osteoarthritis
- Jumper's Knee
- Ligament / Meniscal injuries

ANKLE PAIN
- Sprain / Strain
- Planter Fascitis

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3. Prolotherapy:

Inflammation increases blood flow and attracts cellsthat can repair and heal damaged tissues. Sports injuries usually cause inflammation, but in some cases inflammation subsides before the injury has healed.

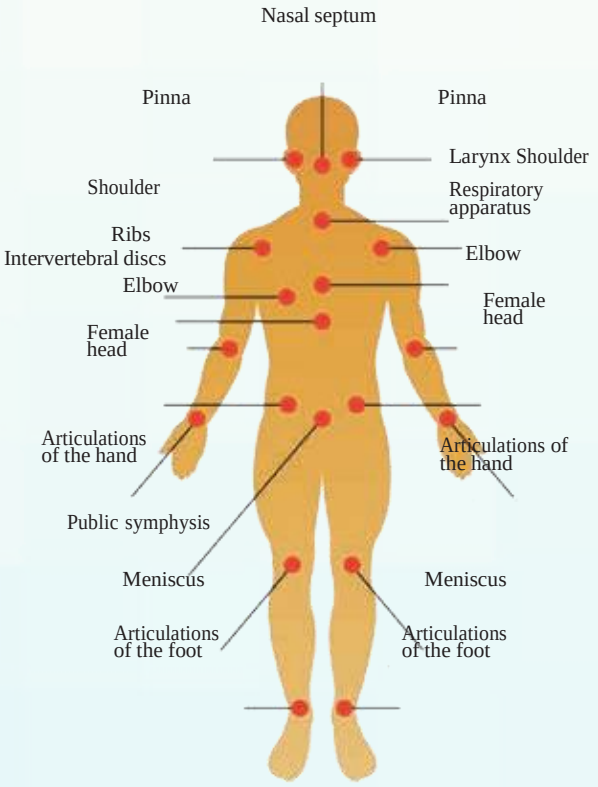
During prolotherapy, a physician injects an irritant intothe injured area, which temporarily increases inflammation. The hope is that the additionalinflammation will facilitate further healing.

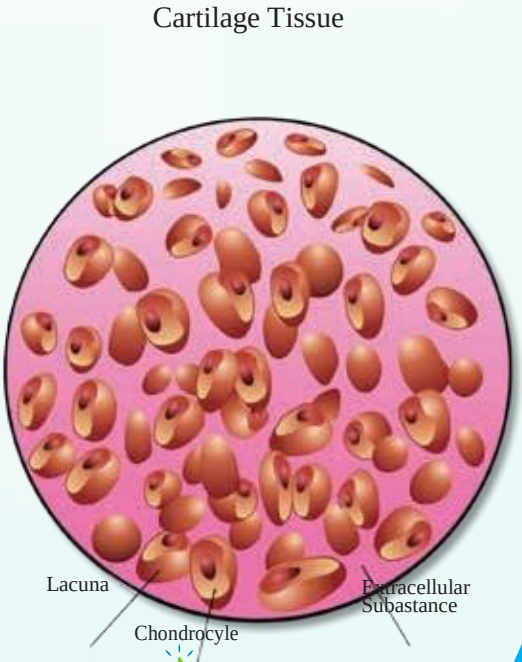
Prolotherapy sometimes uses PRP as an irritant, but prolotherapy is not by definition a cellular therapy. In fact, the most commonly used irritant is dextrose, a simple sugar. Substances such as glycerine or salinemay also be used.

4. Surgeries for Cartilage Regeneration:

Because cartilage does not contain blood vessels, it does not have a reliable blood supply, which preventsdamaged cartilage from healing well naturally.
Different techniques may be used to try to repair cartilage, including but not limited to:

Making small cuts or abrasions in the bone directly below the cartilage injury. The aim is that the blood from the damaged bone will facilitate new cartilage cell growth.





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