

Neck and Spine Problems

Introduction –

As the statistics say and many of the general public may probably already know, back pain is a very common complaint. About three in four adults will experience back pain during their lifetime—and that number may very well rise, given our aging population and recent trend of obesity.

This back pain usually is quite common now a days in the young adults because of the huge change in the life style and lack of exercises and the postures adopted during the long working periods. This some times is caused as the primary factor affecting the bony structure of the vertebral column or as secondary factor affecting the column by the pulling of the internal organs.

Most of the cases of the back pain are usually caused as the strains or sprains of the back pain, and most of the back pain are seen affecting the cervical (neck) and lumbar (low back) regions. Low back is the area in the body which is vulnerable for acute to chronic pains, as this part of the body bears all the weight of the upper body. Complete recovery can be helped along by modest medical attention, such as the over the counter or prescription medications. Hot or Ice packs can also be used along the endurance exercises prescribed for the particular part of the musculature.

If treated in the early stages, pain is completely relieved. But if it is left ignored or neglected, this may turn to affect the curvatures of the bones permanently affecting the day to day activities.

These back pains are more prevalent and common in females to males, for they are usually subjected to stretches in the pregnancy and the numerous tendinous attachments of the uterus to the low back and obesity. Also, this is one of the most prone problem in many of the individuals who play the contact sports like Soccer, Hockey etc., like frequent twisting of the spine in the forward or backward bend kind of action, sudden jerky action of the spin are the direct causes of the back pains.

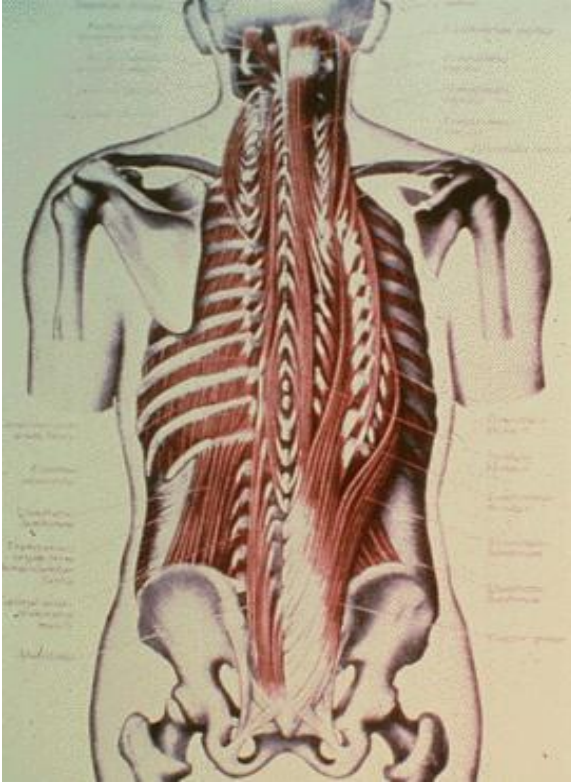
The degree and the behavior of the pain usually depends upon the involved structures in the process like the bony column, muscles, tendons, ligaments, Disc compression, spinal cord and the blood vessels within the vertebral column. It may be simple dull pain to the chronic radicular pain into the legs and losing the functions over the lower limbs and pelvic organs.

One more important cause of back pains in women is the early menopause and the calcium depletion in the bones, again the life styles and food styles have been the culprits in causing the hormone changes leading to huge physiological changes in the bones leading to osteoporosis and other degenerative disc changes.

When the homogeneity in the food and the physical activities is lost, then obviously it leads to the emergence of the bodily toxins and cause the malnourishment of the particular organ and hence cause the normal function of the system is lost. Emphasis has to be done on the diet and the physical activities which include the exercises, stretches etc.,

Spinal Anatomy –

Vertebral Spine is one of the important constituent of the skeletal structure and forms axis



of whole body by giving leverage to the shoulders and hips through the curvatures, it has, it distributes the body weight uniformly bilaterally. This also works as shock absorber because of the IVDs. Present between vertebrae. This axial element is uniformly supported by the group of erector spinae muscles which support the spine and facilitate various movements around it's axis.

Vertebral spine also provides shelter for the spinal cord, which sends of it's branches called spinal nerves through the vertebral foramina supplying the respective areas.

This set of 33 vertebrae supported by the ligaments, intrinsic segmental and polysegmental muscles [erector spinae]

and extrinsic muscles together stabilise the spine and distribute the body weight uniformly into the legs through hips.

Important functions of the Vertebral column:

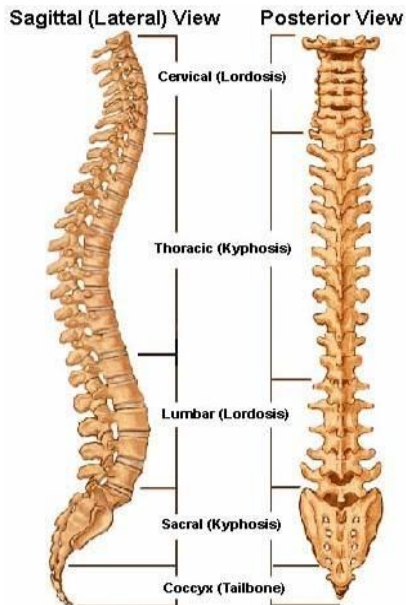
- a. Protection - Spinal Cord, Nerve roots and Many internal organs.
- b. Attachment – Gives attachment for the Ligaments, Tendons and Muscles.
- c. Structural support - Head, shoulders, chest

Connects upper and lower body

Balance and weight distribution

d. Mobility – Causes different movements like Flexion, Extension, Rotation, Side bending etc.

e. Also forms important store house of the minerals and produces RBC.



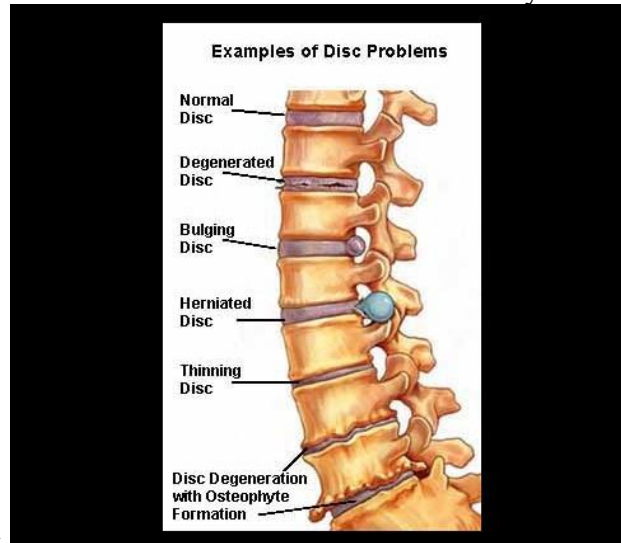
The adjacent figure shows the natural curvatures of the vertebral column which alternate with each other.

- a. Cervical & Lumbar – Convex anteriorly
- b. Thoracic & Sacral – Concave anteriorly

Causes –

As said before, the cause of the pain over the back may be of simple muscle strains to chronic inflammatory to degenerative changes that occur over the skeletomuscular structure of the back. Few are quoted as below:

- a. IVD problems – This can be called in different ways according to the severity of the



disc present

between two consecutive

vertebrae ranging from disc bulge, sac, herniation and prolapse causing the compression of the outgoing nerve out of vertebral foramen.

- b. Degenerative Disc Disease.
- c. Facet or Zygapophyseal Joint Arthropathy
- d. Coccydynia
- e. Spondylosis
- f. Spondylolisthesis
- g. Sacro-iliac joint syndrome
- h. Postural pain
- i. Trauma – Fracture etc.,

Though the maximum cases are attributed to the poor body postures apart from the systemic or traumatic cases, sedentary life style, lack of exercises and mechanical day to day activities for the majority of the back problem. Because of the above stated causes or reasons, individual's spinal component undergoes series of changes from disc bulge to disc prolapse which lead to nerve compression and inturn causing the serious damage of the functions of the lower limbs and pelvic organs.

Apart from the bony changes, pain may also be caused because of the nerve lesions like in fibromyalgia

Symptoms –

The pain referred into the limb depends on degree of irritation provoked in structure in canal.

SLR may show various degree of limitation of range of motion.

Usually, back pain may start with simple discomfort and involuntary spasm of the muscles adjacent to the spine may lead to the disfiguration or loss of the curvature of the spine or torsion of the pelvis etc.,

Irritation may vary from localised pain, stiffness, burning sensation radiating pain numbness over affected region [dermatome] where the affected nerve is supplied, heaviness over the both the legs or one leg.

Neurological changes can be seen.

Acute low back pain may be due to muscle pull like sudden wrong twist, improper lifting of heavy objects, falls sports injuries like playing shots with spine flexed or extended.

Vertebral column is a multi curved bony component which help in stabilizing the body sheltering the spinal cord, supporting and protecting the internal viscera etc. All the problems with neck and spine are not just associated with bony column alone but also is caused by malnourishment of the bone, lack of exercises ie., sedentary life styles and last but not the least is the pain due to trauma.

In case of Acute low back pain, there is a reflex spasm of paravertebral muscles, trigger points are quite tender.

In systemic problems like Spondylolysis, which signifies the stress fracture of the vertebra, there is severe pain and inability to move the whole body.

Back pain or referred pain into the legs can be caused because of the displacement of the intervertebral disc material into the spinal or vertebral foramen like in a case of Spondylolisthesis, which can be traumatic, congenital, degenerative or spondylolytic.

Pain around the coccyx, may suggest arthritis of Sacrococcygeal joint or the perineal muscle strain, post surgical rectal prolapse, chronic constipation, continuous sitting over the hard saddle suggesting Coccydynia.

Treatment –

Emphasis in treating the back pain should be mainly to restore back the normal function of the spine.

In case of acute back pain, take complete bed rest for first two days, if it does not come down then consult the doctor.

In order to getting rid of the factors responsible in creating a specific pain or disfiguration of the spine (Torsioned pelvis, Stiffened muscles of one side of the back etc, Lumbar lordosis etc.), the physical body has to be brought back to the original consistency, so that the bony column has the enough strength to tolerate the body weight and maintain the posture of the body. And to restore back the original consistency (properly nourished bone, properly toning of the paravertebral muscles, tendons and ligaments, proper blood supply, proper passage of the spinal nerves), regularize the body weight, ayurveda's time tested panchakarma therapies have been successful.

Panchakarma therapies which tend to detoxify the body and rejuvenate and harmonise the various functions in the human body, have been now considered as the ultimate choice of the people who are seeking healthy future.

Keraleeya therapies in Back problems:

a. Uthsaadana – Gentle applications of the powders over the back and the legs. Helps in stimulating the dermatomes and has got a good nervine activity.

b. Patra pinda swedana – A kind of fomentation therapy mainly designed to relax the stiffened musculature of the back and provide enough lubrication in the intermuscular septi and improve the muscular movements, gradual removal of the compression over the Intervertebral discs.

c. Choorna pinda swedana – Again a kind of fomentation done in a obese personalities, to melt down and sweat out the excessive free radicals or toxins in between the muscles, tendons and ligaments of the paravertebral musculature, scrapes extra fat deposits around the dependent part, improve the muscular movement, gradual removal of the compression over the intervertebral discs.

d. Udwartana – Usually suggested in the back pain because of the obesity and a part of the detoxification. Regular udwartana in spontaneous days results in the gradual melt down and sweat out the excessive free radicals or toxins in between the muscles, tendons and ligaments of the paravertebral musculature, scrapes extra fat deposits around the dependent part, improve the muscular movement, gradual removal of the compression over the intervertebral discs. This is usually done exclusively in the Weight reduction programme.

e. Dhanyamladhara – This is an exclusive keraleeya therapy, mainly intended to remove the intermuscular, intervascular and many other toxins existing between the skin and deep fascia causing inflammations of the disc, ligaments. Many back pains without particular cause are the direct indications for this therapy. This is done as a part of detoxification and rejuvenation too.

f. Kati basthi, Greeva basthi & Prushta basthi – These are the treatments intended mainly to:

1. Improve the strength of the Paravertebral muscles, tendons and ligaments.
2. Lubricate the intervertebral joints.
3. Correct the curvatures of the vertebral column.
4. Check any degeneration of the bony vertebrae.
5. Facilitate easy passage of the spinal nerves out of the vertebral canal.
6. Remove the inflammation of the affected organs of the skeleton muscular complex of the back.

These therapies are named after the area where it is performed.

g. Picchu – This is again another kind of back strengthening. Done in cases where the patient is not co-operative or his/her body can't stay still for the treatment, we usually follow this therapy. Advantages of the therapies are almost the same as Kati, Greeva and Prushta basthi. But this therapy can be done over any affected and indicated part of the body.

h. Pizhichil – This is an absolute rejuvenative therapy for whole of the back. This helps in strengthening the skeleton muscular complex of the back, detoxify the intervascular and intermuscular system and nourish the nervous system, checks early degeneration of the vertebral column.

i. Navarakizhi – This is an exclusive therapy intended to strengthen the muscular system and nourish the nervous system. This is a kind of fomentation therapy which also helps in detoxifying the fascial system beneath the skin, nourish the nervous system by improving the conductivity of the nerve impulses, checks the tissue emaciation.

j. Patti Vestana – This is a small therapy done mainly to improve the consistency of joint ligaments, lubricate the joint, remove the stiffness around or over affected part of an organ, checks the inflammation within the joint. Usually done in immobile patient, where he or she is not able to sit or lay down for a long time.

Panchakarma therapies:

These include a package of invasive therapies which help in instant removal of the toxins from the body and rejuvenate the system.

a. Nasya – This is an important therapy which is done to strengthen the nerves passing from the neck into the arms, chest and shoulders, checks degeneration of the cervical vertebral disc, facilitate easy movement of nerves from the vertebral foramen of the cervical vertebrae. Very helpful in Brachial plexus syndrome, DDD (Degenerative disc disease)

b. Virechana – This is an important and mostly done therapy done usually to detoxify the body from the digestive system and the lymphatics. Helps in checking obesity, excessive accumulation of fat around and regularizes the metabolism, detoxifies the blood system.

c. Matra basthi – This therapy intends to increase the strength of the bony column, muscles, fascia, ligaments and tendons associated with the back, checks the inflammation around the IVDs, promotes the normal growth of the bone, checks the degeneration of the bone. Very helpful in Osteoporosis and arthritic conditions.

d. Yoga basthi/ Kala basthi / Karma basthi – This is able therapy to check the inflammation of the joints of the bone. All the three therapies are only extension of the no. of the days taken in the ascending order. Again, detoxifies the skeleton muscular

complex of the back, checks the degeneration of the bony column, checks the inflammation of the bones, ligaments and tendons like in Ankylosing spondylitis, Rheumatic arthritis, Sacro iliac joint syndrome, obesity with back pain, Lumbar lordosis, excessive compression of the IVDs etc.,

Along with all the above said therapies, ayurveda strongly advocates the kind of the diet to be taken and kind of the life style to be adopted for a particular individual.

Diet – This forms the integral part of life which forms the nourishment to the physical body. As advised, the food should be properly taken which is instantly prepared and served warm, which is always satwic, which digests easily. One should not indulge in too much of cold, like drinking chilled water, washing with cold water, eating cold food are strictly prohibited with the back problems. Food should be properly chewed and ingested into the food tube. Should not have food too late.

Life style – For the harmonious and healthy life, exercises are the very important entities of life style for an individual. One should regularly adopt the yogasanas, or indulge in exercises like joint rotations, stretches and work outs.

One should keep changing the postures when at work. Should not stand or sit for a longer durations which may lead to the stiffness of the muscle which may trigger any time in the future according to the severity. So, one should be following ergonomics during the day to day activities.

Ergonomics are the rules and regulations to be followed by an individual to keep the postural pains to any chronic back pain at bay.

Yogasanas which help in strengthening the back:

- a. Bhujangaasana
- b. Pavana mukthasana
- c. Navakaasana
- d. Dhanuraasana
- e. Shalabhaasana
- f. Parvathaasana