IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, June 2022
Impact Factor: 6.252

Back Pain Disorder and Yogic Management

Lohit Chandra Boro
M. Sc Yogic Science
Shri Guru Ram Rai University, Dehradun Uttarakhand, India

Abstract: *Yoga is a comprehensive and precisely live turned process. Yoga is a total science of strengthening and improving the physical, mental and spiritual state of being. Back is one of the most common conditions in modern society. Most of us have suffered from some time or other in our life. Yoga eases lower backpain by stretching and strengthening the muscles of the lower backpain. It increases blood circulation, which brings healing nutrients to the injured tissues. Yoga also helps maintain a natural curvature of the spine that is crucial in avoiding lower backpain. Backpain is not a disease. It's a symptom. Due to some defect in spinal column, inter-vertebral dice or muscles. The present aim of this article studied the yogic management of Back ache.*

Keywords: Yogasanas, Pranayama, Meditation, etc.

I. INTRODUCTION

The disorder of the spine backache is commonly observed. The disorder symptoms start with simple pain in particular area. The basic cause is vertebral degeneration. It may be due to wrong posture or rupture. The commonest type of back pain is caused by some kind of mechanical stress or damage within the back which gets better fairly quickly. Poor posture, excessive stresses (physical and psychological), aging problems and mechanical damage may all contribute to back pain. The highly complex organization of various anatomical structures such as bones, discs, ligaments, tendons, nerves, blood vessels and strong muscles. Anyone of these structures could be injured or affected by diseases or subjected to excessive stresses and strains thus contributing to pain in most mobile parts of the spine namely the neck and the lumber region.

II. STRUCTURE AND FUNCTIONS OF SPINE

The spine or back bone is known medically as the vertebral column. Its role is to support the whole body, be capable of bending and twisting in all directions and at the same time protect the vital structures, such as nerves, that run it.

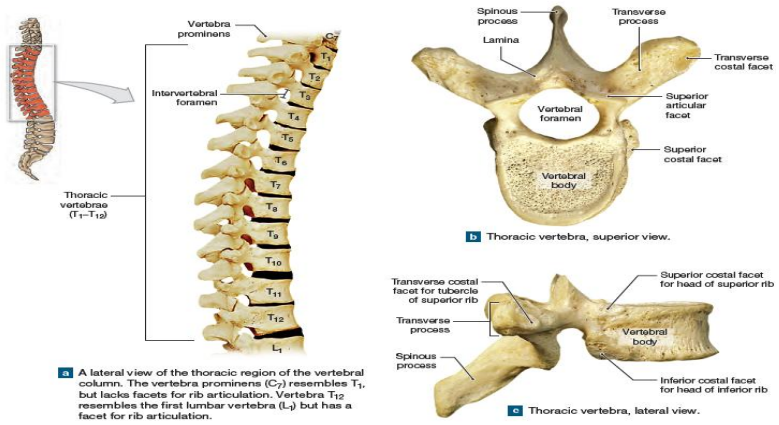
2.1 Spinal Column

The human spine has a double S-shape and consists of a column of 33 bony blocks known as vertebrae, which sit one on top of another to form the vertebral column.

The spine can be divided into five regions-

1. C-7- Which support the head and allow the move in all direction.
2. T-12-The thoracic part of each of them attached to two ribs, forming a rib cage to protect the vital organs such as the heart and lungs. Because the ribs in turn are connected to the sternum or breastbone, which is relatively rigid, these vertebrae are quite stable and not very mobile.
3. L-5- The lumber spine broader and heavier than the other vertebrae since they have to support the large mass of the upper body. These lower vertebrae allow our body to bend forward and backward.
4. S-5- The sacrum that fuse to form a single immobile structure. This broad, triangular structure is attached at the top to the lumbar section and on the side to pelvis, forming the solid bony pelvic ring, which is very strong and relatively immune to injury. This strong pelvic ring (girdle) is designed to transmit the body weight to both lower limbs and also protect the vital organs such as urinary bladder, ovaries and the uterus.
5. C-4- The coccyx is a small bone at the base of the spine.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, June 2022
Impact Factor: 6.252



a A lateral view of the thoracic region of the vertebral column. The vertebra prominens (C_7) resembles T_1, but lacks facets for rib articulation. Vertebra T_{12} resembles the first lumbar vertebra (L_1) but has a facet for rib articulation.

b Thoracic vertebra, superior view.

c Thoracic vertebra, lateral view.

2.2 Functions of Spinal Column

Basically, the spine has three main functions:

1. The spinal cord it houses, the vital cable linking the brain to all other parts of the body.
2. It is the body's principal scaffolding, supporting the skull and anchoring ribs, pelvis and shoulder bones.
3. It provides broad, bony areas for the attachment of the muscles, tendons and ligaments that permit body movement.

2.3 Common Causes of Back Pain

- Back Injuries
- Nerve Problem
- Spondylitis
- Akylosing Spondylosis
- Non-Specific Back Pain (Functional causes)
- Lifestyle, Stress & Back Pain

2.4 Back Injuries

Backache is one of the most common reasons why people have to take time off from work especially in heavy manual industries. At particular risk are workers in the building industry and nurses, as in both cases they often have to undertake heavy lifts in awkward postures. The back is a very complicated structure that it is clear. When there has been some injury, back pain may arise due to several different reasons. Fortunately, most acute episodes of back pain get better without the need for specific forms of intervention. As a result, very detailed tests to determine the particular injuries causing problems are generally not required.

Pain can develop in the back itself as a result of direct injuries to the ligaments, tendons, joints and other structures in and around the vertebral column, but because the same nerves that supply these tissues also supply the legs, patients may experience the pain as if it is arising from the legs.

A serious accident with major injury of vertebral column and the enclosed spinal cord, may lead to paralysis of the limbs. The number of limbs paralyzed i.e., whether they can move their arms and not their legs, or whether all four limbs are paralyzed, depends on where the spinal cord has been damaged. If the injury is in the neck, paralysis and loss of sensation can affect both the arms and the legs.

However, if the injury is in the thoracic or lumbar segments below the arm level then only leg muscles are affected. In most back problems the nerves are damaged, but not the spinal cord.

Slipped discs – Most people have heard of a slipped disc but it is a rather inaccurate name because discs cannot actually slip. They can wear out, split or burst.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, June 2022
Impact Factor: 6.252

2.5 Nerve Problems

Nerves easily get squashed, within the vertebral canal and as they emerge from the sides of the vertebral column, by damaged discs, facet joints or vertebrae. When a nerve is squashed its ability to pass messages is affected. When this happens, you may experience pain or a sensation of numbness or tingling in the area supplied by the nerve, and the muscles that it controls in your leg or foot may become weak. The spinal cord transmits these sensations to the brain.

2.6 Sciatica

As the greatest weight and bending forces are experienced in the lower part of the lumbar spine, the nerves most often damaged are the fifth lumbar nerve root emerging out between the fourth and fifth lumbar vertebrae and the first sacral root which leaves the spine between the fifth lumbar vertebra and the sacrum. Pain arising because of damage to this nerve is known as sciatica.

2.7 Spondylosis

Spondylosis or wear and tear of the spine is very common. Indeed, these changes are the normal aging changes that start around the age of about twenty-five in all the mobile joints of the body.

The lower back bears the weight of your whole body as well as anything that you are carrying and does most of the bending and twisting. This is why wear and tear changes of the spine are most common in the lumbar region and this condition is called lumbar spondylosis.

Lumbar spondylosis is most likely to occur at the lower levels, particularly between the fourth and fifth lumbar vertebrae (L4/L5) and the fifth lumbar vertebra and the first segment of the sacrum (L5/S1) and may lead to sciatica. It affects both the discs and the facet joints.

2.8 Ankylosing Spondylitis

This is an uncommon disease affecting males more than females. The salient feature of this disease is the chronic stiffness in the hips and entire spine. The cause of this disease is not clearly established.

2.9 Non-specific Back Pain (Functional Causes)

Non-specific low back pain is defined as low back pain not attributable to a recognizable, known specific pathology (e.g., infection, tumour, osteoporosis, lumbar spine fracture, structural deformity, inflammatory disorder, radicular syndrome, or cauda equina syndrome). Many people who have trouble with their backs experience brief episodes of acute pain that may spread to the buttocks or thighs from which they make a full recovery.

2.10 Life Style Stress and Back Pain

Back pain is becoming more and more common in modern man. Mainly there are four major factors that go with modern life style that are responsible for this increasing problem of back pain. Muscles are weaker than our ancestors- Modern technological advances has made life easy with tools. Aids, gadgets and ever renewed transport facilities (cars and airplanes) that have drastically reduced the need for physical activity.

Today's life style can be managed most efficiently without using our muscles. Once the physical activity level reduces the muscles start becoming weaker and weaker. Wrong muscles are overworked –Bad postures during standing or sitting (sloppy chairs) or sleeping (cushiony beds) are responsible for allowing the spine to go crooked. Wrong postures and curvatures of spine alter the line of weight transmission. Repeated injuries due to unused exercise- This happens when you turn to the same life style of sedentary working in wrong postures full of psychological tensions.

2.11 Psychological Stress

The role of psychological stress in chronic low back pain is in a survey conducted amongst sufferers of chronic low back pain of greater than three months, it was observed that the contribution to the degree of disability in low back pain by the psychological distress with abnormal illness behavior was about 43% and the contribution by the actual physical problem was only 67%. Sikorski et al in 1996 published their studies on the role of psyche in 131 subjects with chronic low back

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, June 2022
Impact Factor: 6.252

pain in which they concluded that the demonstrable bone or soft tissue structural problems accounted for only 38% of the pain and the rest of it was all due to the psychological stress as assessed by a psychiatrist.

2.12 Basis of Yoga for Back Pain

Yoga is not a magic or a rope trick. It is not merely a set of Yogasanas or Pranayama or Meditation but it is a Science of Holistic Living consisting of a Holistic Value System featured by health and wealth, bliss and poise, harmony and efficiency. According to yoga the causes of back pain can be classified as Adhija or Anadhija ,i.e., functional or organic. The Anadhija (organic) causes include trauma, toxins, nutritional deficiencies and infections which contribute to only a small percentage of the cases of chronic back pain.

The Adhija causes (functional causes) begin at the mind (Manas) level. Majority of the chronic cases of low back pain are due to non-specific causes (related to modern life style-adhija vyadhis). The stresses that begin at the mind level settle down in the body we need to know the concept of five aspects of our body and the defination of stress according to yoga. The five aspects of our body are- Annamaya kosa, Pranmaya kosa, Manomaya kosa, Vijnanamaya kosa, Anandamaya kosa.

III. YOGIC MANAGEMENT OF BACK PAIN

3.1 Prayer

Om sahanavavatu, Sahanou bhunaktu,
Saha viryam karavavahai,
Tejasvinavadhitamastu, ma vidvisavahai
Om Santih, Santih, Santih.

3.2 Asanas

Asanas essentially work to lubricate the muscles, joints, ligamants and other parts of the body. This helps to increase circulation and flexibility. And especially helpful to the muscles that support the back and spine. Increase muscle strength and tone and helps repair damaged muscles, relieves inflammation and improves back stiffness and can help relieve back pain.

3.3 Microexercise

1. Hands Stretch Breathing,
2. Hands in and Out Breathing,
3. Folded Legs Lumbar Stretch,
4. Crossed Legs Lumbar Stretch

3.4 Asanas

1. Pavanamuktasana Lumbar Stretch,
2. Setubandhasana Lumbar Stretch-1,2,
3. Dorsal Stretch,
4. Tiger Breathing,
5. Rabbit Breathing,
6. Sasankasana Breathing,
7. Bhujangasana Breathing,
8. Ardha Salabhasana Breathing,
9. Straighting Leg Raise Breathing,
10. Side Leg Raising,
11. Side Lumbar Stretch,
12. Instant Relaxation Technique (IRT),
13. Quick Relaxation Technique (QRT),
14. Deep Relaxation Technique with Folded Legs (DRT)

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, June 2022
Impact Factor: 6.252

3.5 Instant Relaxation Technique (IRT)

Sthiti: Savasan. Bring your legs together, join the heels and toes together and place the palms by the side of the thighs. Keep the face relaxed with a smile all through the practice. Start tightening from the toes. Tighten the ankle joints, and calf muscles. Pull up the kneecaps. Tighten the thigh muscles. Compress and squeeze the buttocks. Breathe out and suck the abdomen in. Make fists and tighten the arms. Inhale and expand the chest. Tighten the shoulders, neck muscles and compress the face. Tighten the whole body from toes to the head. Tighten; tighten; tighten. Release and let go the whole body instantaneously. Legs and arms go apart with the open palms facing the roof. Collapse the whole body. Enjoy the instant relaxation.

3.6 Quick Relaxation Technique (QRT)

Sthiti: Savasan

Phase 1: Feel the abdominal movements. Observe the movements of abdominal muscles going up and down as you breathe in and out normally. Observe 5 cycles.

Phase 2: Synchronize the abdominal movements with deep breathing. The abdomen bulges up with inhalation and sinks down with exhalation. Observe 5 cycles.

Phase 3: As you inhale deeply and slowly, energize the body and feel the lightness. As you exhale completely collapse all the muscles, release the tension and enjoy the relaxation. Observe 5 cycles.

Chant 'AAA' in a low pitch while exhaling. Feel the vibrations in the lower parts of the body.

Slowly come up from either the right or the left side of the body.

Benefits - Improves the tone and strength of the abdominal muscles and thigh muscles. Contraction of abdominal muscles produces a pressure on the abdominal organs thereby improving their function. Strengthens the lower back, pelvic and perineal muscles. Helps in the production of digestive juices and the process of excretion.

3.7 Pranayama

Pranayama helps in clearing of the nasal passages. With regular and long practice, flow of breath through each of the nostrils becomes smooth and slow. And soothes the nervous system and calms the mind. Pranayama is balancing where imbalance lies physical and mental body. It massages the spine and relieve the pain. It lowers the levels of stress and anxiety by harmonising the pranas.

1. Vibhagiya Svasana (Sectional Breathing)- Abdominal Breathing (Diaphragmatic Adhama), Thoracic (Intercostal) Breathing (Madhyama), Upper Lobar (Clavicular) Breathing (Adya), Full Yogic Breathing,
2. Nadisuddhi Pranayama,
3. Cooling Pranayama- Sitali Pranayama, Sitkari Pranayama,
4. Bhramari Pranayama

3.8 Meditation

Meditation is a yogic process of providing deep rest to the system by allowing the mind to calm down to its basal states. Mind dwells on a single thought of choice. Deep relaxation of all parts of the body. Reduce metabolic rate by slowing of breath. Freshness, lightness and a feeling of expansion at mental level. Calmness, peace and serene bliss. Continuous awareness.

3.9 AUM Meditation

AUM Meditation- Sthiti- Sit in any comfortable meditative posture feeling completely relaxed. Close your eyes and start chanting AUM mentally. Allow the mind to repeat AUM continuously without break. If there are distractions, you chant AAA faster, not giving any chance for distractions. After a while the chanting slows down. Consciously slow it down further. If the mind jumps to distractions, again increase the speed of japa of AUM kara. Thus, by increasing and allowing the speed to slow down, you should be able to have an unbroken stream of the japa in your mind.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, June 2022
Impact Factor: 6.252

3.10 Yoga Nidra

Yoga indra is a systematic method of inducing complete physical, mental and emotional relaxation.Yoga indra is a powerful technique in which you learn to relax consciously. Yoga Nidra is a superlative relaxation tool. One hour of effective yoga nidra is equivalent to over 4 hours of sleep.

Lie down in Savasana with legs apart and hands beside the body while palm facing upward. Head neck and spine should be in one line. Close your eyes and relax the body. During the practice of yoga nidra you don't have to fall in sleep and don't have to move the body.

Just feel that you are in complete rest for sleep but you don't have to sleep. Observe the body parts, observe the bodily condition and observe the outer environment. Observe the sounds coming from outside the room.

Samkalpa- The practice includes resolution (samkalpa). Take a positive resolution related to the goal of life. Repeat it three times mentally. Resolution should be short and simple.

IV. RESULT

In this view evaluate the use of yoga as a treatment for backpain like asanas, kriyas, pranayama, mantra chanting etc. The asanas for back pain are to relax and relieve the strain in the muscles of the back. The posture also helps strengthen the entire back and aids in relieving back pain. For low back pain, yoga can be especially helpful to the muscles that support the back and spine, such as the paraspinal muscles that help you bend your spine, the multifidus muscles that stabilize your vertebrae, and the transverse abdominis in the abdomen, which also helps stabilize your spine.

V. CONCLUSION

Yoga appears effective in reducing pain and disability in a low back pain and in part works by increasing flexibility and core strength. Yoga appears as effective as other treatments in reducing the functional disability of back pain. It appears to be more effective in reducing pain severity or CLBP. Yoga has a positive effect on depression and other psychological. Yoga appears to be an effective and safe intervention for chronic low back pain. Yoga appears to relax the spinal muscles, strengthen the spinal muscles, Mobilise the stiff back and reduce stiffness of the spine. The practice of yoga can decrease pain and increase functional ability in patients with spinal pain. And also encourage the population to practice yoga; thus, subsequently leading to lifestyle modification.

REFERENCES

[1] https://www.physiopedia.com/Non_Specific_Low_Back_Pain#:~:text=for%20integrative%20%E2%80%A2-, Definition, %2C%20or%20cauda%20equina%20syndrome).
[2] https://www.google.com/search?sa=X&rlz=1C1FHFK_enIN994IN994&hl=en-US&q=Spine+images&tbm=isch&source=iu&ictx=1&vet=1&biw=1034&bih=620&dpr=1#imgrc=KfuoDHrTxN8--M&imgdii=gHd--Eg8-s1NfM
[3] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6746048/
[4] Yoga for back pain, SVYASA, Dr HR Nagendra and Dr R Nagendra.
[5] Yoga for Bronchial Asthma, SVYASA, Dr HR Nagendra and Dr R Nagendra.
[6] Super Science of Yoga, Dr Kamakhya Kumar and Dr Ishwar V Basavaraddi.
[7] Yogic Management of common Diseases, Dr Swami Karmananda.
[8] Gheranda Samhita, Yoga Publications Trust, Munger, Bihar, India.