

**Original article:**

## Effect of yogasana on non – specific low back pain

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### Abstract:

**Background:** The lifetime prevalence of low back pain is reported to be as high as 84%, and the prevalence of chronic low back pain is about 23%, with 11–12% of the population being disabled by low back pain. Approximately  $\geq 90\%$  of patients who present to primary care has non – specific LBP. Yoga therapy is a holistic practice and form of therapy that uses breathing techniques, movements, and exercises from traditional yoga, Ayurveda, and western science, and other therapy methods, to assess, treat and assist patients in regaining wellbeing.

**Aims and objectives:** To study the “Effect of Yogasana on Non – Specific Low Back Pain”.

**Procedure:** Total 40 samples were selected based on inclusion and exclusion criteria. Assessment Performa were filled. Patients were asked to mark on Visual Analogue scale for the pain intensity & Oswestry disability index for back, subjects were told to fill the form as per their perception. Therapeutic modality was given. Then all the asana were taught to the patient and ask to perform for 10 times with 30sec holding with 10sec rest period in each repetition. Patient was asked to perform the procedure for 2 weeks. After that again ask patient to fill the forms according to their perception.

**Result:** Study showed there is reduction in post – intervention pain intensity as well as improvement in post – interventional functional ability after 2 week of yoga therapy.

**Keywords:** NSLBP, Therapeutic modality, Yogasana.

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### Introduction

The lifetime prevalence of low back pain is reported to be as high as 84%, and the prevalence of chronic low back pain is about 23%, with 11–12% of the population being disabled by low back pain. Approximately  $\geq 90\%$  of patients who present to primary care has non – specific LBP<sup>(1)</sup>. This structure of lumbosacral spine is such that predisposes it to mechanical injury causing low back pain. Divided into 3 types of severity: Acute, subacute, and chronic<sup>(2)</sup>. Also subdivided into different types, specific low back pain and non – specific low back pain<sup>(3)</sup>. Non – specific low back pain is defined as low back pain not attributable to a recognizable, known specific pathology<sup>(4)</sup>. Non-specific low back pain means that the pain is not due to any specific or underlying disease that can be found.

### Aim

- To know the effect of Yogasana on subjects' with Non – Specific Low Back Pain.

### Objectives

- To find out the effect of yoga therapy on pain in patients with non – specific low back pain.
- To find out the effect of yoga therapy on functional disability in patients with non – specific low back pain.

### Methodology

The Study was conducted at Padmashree Dr. Vithalrao Vikhe Patil Memorial Hospital, Physiotherapy OPD, Ahmednagar. Study design experimental study & sampling was done by simple random sampling method. Total sample size was 40, outcome measures were visual analogue scale, & Oswestry

disability index. The Ethical clearance was obtained from IEC, PDVVPF'S, College of Physiotherapy. Proper procedure was explained to all subjects. Written informed consent was obtained from all subjects. Patient was asked to mark on Visual Analogue scale for the pain intensity. Then patients were given Oswestry disability index for back, subjects were told to fill the form as per their perception pre intervention. The asana were

taught to the patient and asked to perform for 10 times with 30sec holding with 10sec rest period in each repetition. Asana were Paschimottanasana, Bhujangasana, Trikonasana. Procedure was performed for 2 weeks. Post intervention patient was asked to mark on Visual Analogue scale for the pain intensity & to fill the forms according to their perception.

### Observations & results

**Table No.1 Distribution of Non-Specific Low Back Pain in Males and Females.**

SR NO.	MALES	FEMALES
	17	23
PERCENTAGE (%)	43	57

**Table No.2 Pre-Intervention VAS score & Post-Intervention VAS score**

SR NO.	Pre-treatment VAS score	Post-treatment VAS score
	7.175	4.39
PERCENTAGE (%)	62	38

**Table No.3 Pre-Intervention ODI score & Post-Intervention ODI score**

SR NO.	Pre-treatment VAS score	Post-treatment VAS score
	20.45	13.08
PERCENTAGE (%)	61	39

### Discussion

It is thought that in some cases the cause may be a sprain of a ligament or muscle. In other cases the cause may be a minor problem with a disc between two vertebrae, or a minor problem with a small facet joint between two vertebrae. Non-specific low back pain is mechanical in the sense that it varies with posture or activity<sup>(6)</sup>. There are numerous methods of intervention strategies which a therapist can use for low back pain are: medication, cognitive therapies that help pain management, complementary therapies, orthotics, physical therapy, electrotherapy, exercise, education, back school and yoga therapy. Yoga therapy is one of the options which help in

improving the functional status in case of low back pain. Signifying the yoga as a great source of health and fitness, Dr. Salk, Noble Prize Winner rightly said, "Medicine is Science of disease and Yoga is the Science of health". Asana forms only one of the basic components of complete astanga yoga. Each asana is a series of scientifically developed slow, rhythmic and graceful movements of various joints and muscles of the body aimed at attaining a definite posture as related to that particular asana. Various studies have confirmed the usefulness of yogic asana in preventing as well as curing many ailments and diseases. The primary goal of Yoga therapy for low back pain (LBP) is the relief of pain and functional

limitation caused by a chronic lower back disorder. This is achieved by minimizing, healing, and ultimately correcting underlying physical malfunctions through a series of anatomically correct postures. Yoga therapy works to correct underlying internal malfunctions that contribute to mechanical causes of non – specific LBP. It is through the process of helping people with LBP to rest the area of pain and then educating them in proper alignment of bones, muscles, and connective tissue and movements that the healing occurs and changes the underlying root cause of the discomfort<sup>(7, 8)</sup>. Iyengar Yoga is noteworthy because this particular method incorporates props such as ropes, benches, bolsters, blankets, weights, straps, blocks, and other devices to provide support during performance of the postures<sup>(9)</sup>.

The study demonstrated that after application of two weeks yoga therapy program there was reduction in non – specific low back pain. The pain intensity as per VAS was reduced because of yoga therapy. The study also shows the reduction in functional disability which was measured by Oswestry disability index in the non – specific low back patients. The mean score was 20.45 per intervention and it falls to 13.08 after the treatment.

### **Conclusion**

The study concludes that “The Yoga Therapy can significantly reduce pain and increase functional ability in non – specific low back pain patients”.

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