

# Postural Backache and Its Prevention

F BASHIR A U MALIK\* S A ULLAH\*\* A F KHAN\*\*\*

Physiotherapy Department, LGH, \*Department of Surgery, Services hospital, \*\*Department of Medicine, Mayo Hospital Lahore, \*\*\*, Orthopaedics Department, Lahore General Hospital.

Correspondence to: Miss Fouzia Bashir, Physiotherapist, LGH, Lahore.

This Prospective study was conducted at physiotherapy and outdoor clinic of Orthopaedics department, LGH, Lahore from April 1998 to October 1998 on 76 patients. Objective of the study was to identify the role of posture and measures to prevent recurrence of backache in daily life and at work place. The development of Low Back Pain is closely related with individual's posture, load to the back, causative factors and individual's endurance. Bad posture was the commonest predisposing factor of backache, recognized in this study (34.2%). Load to the back includes lifting of heavy objects, twisting of the waist and prolonged standing. The most common pain relieving posture identified in this study, is Lying Supine (42.10%), also postural alterations brought immediate relief in 18.42%. Long Standing and walking for a long period of time were the major pain aggravating factors (78.94%). Correction of posture brings significant relief. Socio-economic status of patients was affected in 85% cases as low back pain causes absence from work and low work performance. It is therefore concluded that posture has a vital role in the development of low back pain. Thus it is very important to prevent a worker from further episodes of Low Back Pain. Preventive measures of work related Low Back Pain should be designed according to his/her work environment. Patient should strictly follow precautions against Low Back Pain, avoid further exposure to the causative factor or postures. They should do specific Physical Exercises to increase strength and endurance of back muscles and flexibility of the back.

**Key Words:** Low back pain, Low Back Pain Prevention, Causes of backache, Back Care, Low back pain at work place, Back School.

Up to 80% of population is expected to experience Low Back Pain at least once in their lifetime<sup>1</sup>. It is one of the commonest complaint among general population. At most orthopaedics and physiotherapy clinics, this complaint accounts for 20% to 30% of outpatient clinic visitors<sup>2</sup>. Mostly, it is triggered by adopting bad posture for a long period of time or when back of the person hit by trauma, certain physical actions etc. People know little about how to protect their back in daily life and at work place. Even they do not know about consequent losses in their life caused by backache until they experience this trouble. This paper deals with recognition of the role of posture and predisposing factors causing Low back Pain, with particular emphasis on precautions against Backache in daily life and at work place in order to prevent recurrence of this trouble.

## Material and Method

Prospective study was conducted at Physiotherapy department and outdoor clinic of orthopaedic department, Lahore General Hospital Lahore on 76 patients from April 1998 to October 1998. We made a Proforma for evaluation of patients which was filled at first visit of patient. Patients were advised to follow precautions against backache.

Age wise distribution of respondents by sex is given below in table-1. Degrees of illness in this study is indicated in table-2

Work efficiency was moderately affected in 34.21%, severely in 39.47% and moderate to severe in 10.52%. While it remained unaffected in 15.78% (Table-2).

Predisposing factors/ postures as shown in table-3

Table 1

Age (Years)	Sex		n=
	Male	Female	
Below 35	12	24	36
From 35-45	18	10	28
Above 45	2	10	12
Total	32	44	76

Table 2

Degree	n=	% age
Minor	12	15.78
Moderate	26	34.21
Moderate to severe	8	10.52
Severe	30	39.47

\*Scale: Minor: Patient able to do normal routine work.

Moderate: Patient does normal routine work with difficulty.

Moderate to Severe: Patient does normal routine work with great difficulty.

Severe: Patient unable to do normal routine work.

Table 3

Factors/postures	n=	%age
Poor posture	26	34.2
History of fall/trauma	12	15.7
Long standing and walking for a long period of time	8	10.5
Lifting of heavy objects	8	10.5
Unrecognized	8	10.5
Jerky movements	6	7.8
Sudden postural change	4	5.2
Prolonged sitting	2	2.6
Sports injury	2	2.6

Table 3 illustrates that bad posture was found to be the leading cause and was found in 34.2% patients.

Table-4 Pain aggravating factors/postures.

Factors/postures	n=	% age
Long standing and walking for along period of time.	60	78.94
Long sitting and suddenly rising from sitting position.	14	18.42
Lying supine.	2	2.63
Fatigue.	2	2.63

certain physical actions or when load placed on the back of the individual exceeds individual's threshold level. However, this threshold varies from individual to individual. Constant strain on back muscles by assuming poor posture for a long period of time trigger low back pain. Once a patient develops backache, he losses some endurance and no longer able to work in the same capacity. So due considerations should be given to one's work-environment that requires certain modifications in order to prevent further episodes of backache. Poor posture constitutes 34.2% cases of back pain (commonest) but Doi.T in 1993, reported lifting of heavy weight as the main cause of backache and unusual posture as least common, in Japanese population<sup>8</sup> Another report of the same country, showed standing as the chief cause of this problem.<sup>2</sup>

These variations are probably because people are not well aware about the back care and safety precautions are not usually followed in our setup as compared to that in Japan or any other advanced country e.g., use of safety belts in lifting weight etc. When a person changes his/her posture, his/her center of gravity alters accordingly with subsequent reduction of weight on the back. Altering the pelvic tilt significantly changes the angle of lumbar lordosis.<sup>7</sup> Therefore; people should interrupt their posture at regular intervals prior to fatigue arises. So posture has a definite role in backache. It also affects on working capacity of the patients. Missing work means loss of income for the worker<sup>2</sup>. Hence patients also suffer socio-economically. The direct cost of medical care and the indirect costs to society of absenteeism are huge<sup>4,5</sup>. Once a patient develops backache, appropriate steps should be taken to prevent further episodes of this complaint along with its proper treatment. Therefore, preventive measures should be based on the analysis of causative factor and appropriate modifications in work environment and daily life.

Low Back Pain was increased by long standing and walking for a long period of time in 78.94% patients, by long sitting and suddenly rising from sitting position in 18.42% and by Lying supine in 2.63% patients. In two patients, fatigue and long standing were together pain aggravating factors (table 4).

Table 5 Pain Relieving Factors/Postures

Factors/postures	n=	%age
Lying Supine.	54	71.54
Alteration in postures i.e.,	14	18.42
Lying supine if pain in standing and sitting up if pain in lying supine.	2	
Stop walking if pain occurs during walking.	2	
Tailor sitting from standing position.	2	
Side Lying.	2	
Sitting up from lying supine.	2	
Sitting from standing position.	2	
Sitting if pain occurs during walking.	2	
Anti-inflammatory drugs.	6	7.89
Manual pressure at painful site and exercises.	4	2.15

Back pain was relieved in 71.54% patients by simply lying supine.

**Results**

Study shows that, it is more common in females as compared to males, incidence is higher below 35 years of age group in both sexes. Bad posture as the most common cause of back pain, identified (34.2%patients), then trauma (15.7%), lifting of heavy objects (10.5%) and long standing (10.5%). It is aggravated by long standing and walking for a long period of time (78.94%), then prolonged sitting (18.42%). However, simply lying Supine (71.54%) relieved it. But in 2.63% patients, Lying Supine increased pain. Postural alterations significantly relieved pain (18.42%). In 7.89% patients, only anti-inflammatory drugs relieved pain. So posture has a definite role in backache. Work efficiency was affected in 85% patients from moderate to severe degree. They were unable to do their normal work and have to be absent from their work due to backache. Hence patients also suffer socio-economically. Patients should follow back school in daily life and at work place.

**Discussion**

Backache develops when a person assumes bad posture,

**Preventive Measures<sup>3</sup>**

*Proper standing position*

Stand in a proper way when ever required, with your feet apart so that your weight evenly distributed on both feet, shoulders braced and back straight.

*Techniques of improving standing tolerance.*

Increase standing tolerance by; maintain your pelvic square, now alternately raise one foot 2to 3"from the floor while resting on the other foot. Then shift weight from side to side. Stand against a wall with back straight and feet apart. Wear shoes with minimal heels. Heels should neither be too high or too low.

*Proper sitting position*

For correct sitting position, Use a firm (not soft) chairs that sufficiently support your vertebral column. Sit with back straight, maintaining a relaxed posture, feet firmly touching the floor. Weight should be evenly distributed on both feet. Knees should be at the same level as hips. Use

