

## LETTER TO EDITOR

VIMSJPT

## DOES APPROPRIATE FOOTWEAR PREVENT KNEE PAIN?

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Every one of us on an average spend 5- 6 hours per day in standing, walking and other weight-bearing activities during the day to day work and sports. Our body weight is born by knee and foot. Using appropriate footwear helps in distributing the load to the area of the foot that meant for weight bearing. If the load is distributed equally it helps to distribute the load equally. Hence reducing the chances of pain in lower limb joints. Transference of load optimally without causing any discomfort or pain.

As the knee joint is the main weight-bearing joint the whole body weight along with the ground reaction forces creates a maximum force on the articulating surfaces. As per the literature, the forces exert compressive loading on the medial compartment of the knee joint. If the load accepting capability of the articular surfaces is over, it alters the normal anatomy and the biomechanics of the joint. Due to prolonged loading, the maintenance of healthy bone and joint nutrition is disturbed. Over a period of time, it leads to degenerative changes in the knee joint. Also causes medial knee pain due to stimulation of the pain-sensitive receptors present in the joint. This when continued for a prolonged duration, compensatory mechanics for reducing the forces at the medial knee joint occurs by pronation at the foot. Thus the normal biomechanical alignment is disturbed.

Here comes the role of the footwear and its modification. It helps in reducing the knee joint loading and thus reduces the pain and discomfort. Many recent studies have proved that lateral wedge insole with 1mm of lateral wedging height, decreases 1 % in medial joint loading. Mainly in population with medial knee pain among which medial compartment Osteoarthritis of the knee is the major cause of pain and disability. Shoes containing flat insole, flexible shoes and light weighted shoes reduced the knee joint load. But not as efficiently as that by a lateral wedge insole. In this trending fashionable era footwear with heels are most commonly used by young women. When a heel more than 1.5 inches is worn, the centre of pressure passes more anteriorly. Thereby creating more compressive forces in the patella- femoral joint. These forces create anterior knee joint pain. Wearing heels during activities such as ascending and descending stairs puts excessive compressive stress on the joint, thereby aggravating the symptoms. In some instances, while a wearing heel wedge footwear, knees assumes bending position to maintain the centre of gravity within the base of support.

Taking into account the above possible changes in the forces acting upon the knee joint and leading to painful knees. This easily available, cost-effective measure which will help in preventing wear and tear of the joint. Therefore leading to a decrease in pain and disability Thus choosing an appropriate footwear is crucial.

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