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Review Article

IMPORTANCE OF WEARING FOOTWEAR FOR HEALTHY LIVING: AN AYURVEDIC PERSPECTIVE

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ABSTRACT

Recently, the human foot is increasingly being studied as a multi-segmental structure with complex three-dimensional kinematics. In Ayurveda the ancient Acharyas considering the importance of foot have specially emphasized about foot care. Comfortable, properly fitted footwear is essential in maintaining good health. Wearing footwear is recommended mainly to protect the foot and to avoid any injury to Marma or vital points situated there. It is very important that the selection of footwear should be based on the comforts and natural structure of the foot and not on the fashion and styles especially for those who need to be on their foot for long period. The present review gives a comprehensive idea about the importance of Padatra Dharana (wearing footwear) for healthy living from Ayurvedic perspective.

Keywords: Ayurveda, Padatra Dharana, Footwear, Marma, Healthy living

INTRODUCTION

“The human foot is a masterpiece of engineering and a work of art”

Leonardo da Vinci

From a biomechanical point of view, the foot is one of the least understood structures of the human body. It is very complex and highly redundant, with 26 skeletal elements and numerous ligaments, tendons, intrinsic and extrinsic muscles and is, therefore, a challenging study subject. Nevertheless, pioneering experimental work has been carried out since the early 20th century^{1,2}. Recently, the human foot is increasingly being studied as a multi-segmental structure with complex three-dimensional kinematics³⁻⁷. Comfortable, properly fitted footwear is essential in maintaining good foot health. In Ayurveda the ancient Acharyas considering the importance of foot have specially emphasized about foot care. While describing Abhyanga (application of oil on the body) also foot is mentioned as specific and important part for oil application⁸. Padatra Dharana (wearing footwear) is recommended mainly to protect the foot and avoid any injury to Marma or vital points situated there. Walking bare foot in unsafe places may be dangerous to life and health and is also attended with the danger of impaired vision⁹⁻¹².

Functional Definition of Footwear

Footwear is one of the clothing accessories and as such today it is an indispensable part of the human outfit. From the functional point of view; footwear can be defined as “personal protective equipment.” It serves as a container

designed to cover the foot, providing protection from external forces and debris. The footwear must also provide support to allow the foot to function adequately in both dynamic and static conditions¹³.

Benefits of Padatra Dharana (wearing footwear)

In Ayurvedic classics use of foot wears is mentioned as conducive to eye sight and skin (of feet); it protects the feet from stones, thorns, reptiles etc; it gives strength and facilitates the display of physical force and is libidinal stimulant¹⁴. Along with above benefits it gives good look to the feet, the right kind of foot wear will also help in curing the diseases of the feet, it makes walking easy and pleasant.⁹⁻¹²

Effect of Footwear on Health

Shoes are mainly designed to protect the feet during their primary functions of mobility and support. Over the past century, fashion has frequently interfered with the original purposes of protection from injury and exposure. In today's society, fashionable footwear designs are now becoming increasingly complex and incorporating high heels. Footwear purchase is dictated by fashion and not a sense of comfort; for many people fashion surpasses the need of comfort¹⁵. Biomechanical studies showed that walking in high-heeled shoes may alter lower-extremity joint function¹⁶ raise the peak pressure in the fore foot¹⁷ and alter the load distribution on the media foot region¹⁸. It has been shown that heel height change could adjust lower limb musculature differently during locomotion¹⁹ conversely; the variety in lower limb muscular activity²⁰ could change the energetic requirements. In a study done

in USA, it was reported that 88 % of the healthy women surveyed were wearing shoes smaller than their feet, and that 80 % of them had some sort of foot deformity²¹. The study done by K.D. Aout *et al.*, suggest that frequent barefoot walking, especially in children, can help to preserve natural foot function. When the substrate does not allow for barefoot locomotion, footwear should be worn that protects the foot from injury, but that is unrestrictive, enabling the foot to function as much as possible²². Acharya Sushruta in Sharira Sthana has mentioned 107 very important vital points of the body known as Marma²³ injury to which may prove fatal and, so it is important to protect those points from any injury. In foot the Marma (vital points of the body), known as 'Kshipra', is situated in the region between the first and the second toes (Tarsal articulation), Tala Hridaya, is situated in the middle of the sole of the foot in a straight line drawn from the root of the middle toe, and the Marma (vital points of the body) known as Kurcha is situated just above the Kshipra marma one on each side of the foot, the Marma called Kurchasira is situated under the ankle-joints (Gulpha sandhi), one on each side of the foot²⁴. Any injury to these vital points may cause extreme pain, shivering, convulsion, bending or deformity of the foot and may be endanger for life also²⁴. Today's manufacturers attempt to design and develop footwear so that they provide a covering for the foot while exhibiting fashion or style. Studies have shown that the Footwear that fails to respect natural foot shape and function will ultimately alter the morphology and the biomechanical behaviour of the foot. Major issues such as structural fatigue, slipper bumps, hammer toes, bunions, blisters, abrasions, ingrown nails, calluses, fungus, hallus valgus, achilles tendon inflammation, back problems, body column chance, knee discomforts, sprains and ligament injuries, heel spur etc. are all side-effects of footwear on the market designed for the fashion concepts disregarding the human footwear interface and interaction¹³.

Guidelines for correct footwear

Ill-fitting footwear can be detrimental to foot health. Right footwear not only protect the foot and makes walking easy but minor foot ailments can also be relieved with properly fitted and carefully selected shoes^{25,26}. The following points must be considered before selection of shoes

- The size of our feet changes. As we get older; our feet tend to get larger, so get them measured periodically. The best time to measure our feet is at the end of the day, when the feet are largest.
- Most of us have one foot that is larger than the other, so fit your shoe first to your larger foot and always try on both shoes before finalising.
- Always have both feet measured because they may not be the same size and don't select shoes just by the size marked inside select it by how the shoe fits to your foot.
- When choosing new shoes, take time to test them out, and walk around to ensure maximum comfort.
- Select a shoe that is shaped like your foot.
- During the fitting process, Make sure there is around 1cm space between your longest toe and the end of the shoe when you are standing up. Ensure there is

enough room at the front of the shoes to allow for the natural movement of your toes when walking – your toes should be able to wiggle.

- When choosing shoes, the length, width and depth of the shoes are important. Make sure the ball of your foot fits comfortably into the widest part of the shoe.
- Don't buy shoes that feel too tight and expect them to stretch to fit.
- Your heel should fit comfortably in the shoe with a minimum amount of slipping - the shoes should not ride up and down on your heel when you walk.
- Walk in the shoes to make sure they fit and feel right. Then take them home and spend some time walking on carpet to make sure the fit is a good one.
- Upper part should be made from soft, flexible and natural materials such as leather or a breathable man-made fabric. Shoes made of leather can reduce the possibility of skin irritations. Some leather has a plastic coating to repel water and allow the shoe to be wiped clean.
- The Lining should be a breathable material to keep the foot fresh. Linings need to be smooth and seam-free.
- The Insole of shoe should be preferably removable to allow easy insertion of padding or orthoses.
- The Heel should have a broad base and be no higher than 4 cm. If worn for long stretches they should be no more than 2 cm in height. Low-heeled shoes are more comfortable, safer, and less damaging than high-heeled shoes
- A good fit doesn't necessarily mean high expense.

It is important to ensure that the footwear is appropriate for the task for which it is intended. Based on the different occupations and stages of life footwear requirements may also be different but in almost all of situations there is a need for good fitting supportive footwear.

CONCLUSION

Wearing footwear is very important to protect the foot from any injury and for comfortable walk. It has a social and sexual expressing role and it directly interacts with the human body. A lot of problems are caused by inadequate footwear so it is very important that the selection of the footwear should be based on the comforts and natural structure of the foot and not on the fashion and styles especially those who need to be on their foot for long period.

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