

# THE IMPACT ON KNEE AND FOOT: COMPARISON OF BAREFOOT, MINIMALIST SHOD AND TRADITIONAL SHOD RUNNING

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Participation in sports and physical activity provides physical, mental, social and economic benefits to both the individual and the society. Among the different types of physical activities, walking, jogging and running are the most popular ones. Since the latter part of the 20<sup>th</sup> century, running has become a popular sport around the world. In the last few decades, the number of people finishing a marathon has increased significantly. The main reasons for the increasing popularity of running is its accessibility and low participation cost. Humans are habituated for barefoot running for millions of years. Earliest recorded evidence of foot wear usage dates back to 8300 years ago where as the modern running shoes were invented around 1970s. Yet we don't know with this sudden shift to foot wear running caused any changes in injuries in running cohort. Recently, there is an increased interest among the runners for minimalist shoe and barefoot running. Hence it is imperative know whether this trend is mere a fad or with evidence. It has been found that there is difference in foot strike patterns for barefoot running (more of fore and mid foot strike) and shod running (more of hind foot strike). They cause difference in load and injury patterns in lower limb especially knee and foot. The paper is a review comparing 3 categories of runners for the kinetics, kinematics, injury patterns, difference in foot muscle volumes and economy of running from scientific studies.

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