



A Study on Spiked Shoes and Flat Shoes affect Ball Speed in Fast Bowlers

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Abstract

Aim: The aim of the study was to observe how spiked shoes and flat shoes affect ball speed in fast bowlers. **Materials & Method:** A randomized crossover study involved sixty (n=60) male fast bowlers, with an average age of 24.5 ± 3.1 years. Participants bowled three deliveries in each session, wearing either spiked or flat shoes on different days. The order of conditions was assigned randomly. A calibrated SUPIDO radar gun measured ball speed, while participants rated their comfort and performance satisfaction on a 5-point Likert scale. Paired-samples t-tests and Pearson correlations were used for the statistical analysis. **Results:** Spiked shoes led to a significantly higher average ball speed of 128.8 ± 2.8 km/h compared to flat shoes, which had an average of 126.3 ± 2.4 km/h. The mean difference was 2.48 km/h (95% CI: 1.79-3.18; $t_{59} = 7.16$, $p < 0.001$, Cohen's $d = 0.93$). More bowlers reported being "Very Satisfied" with spiked shoes in terms of comfort (25% compared to 13.3%) and performance (25% compared to 18.3%). However, the correlations between ball speed and subjective ratings were not statistically significant (all $p > 0.05$). **Conclusion:** When compared to flat shoes, spiked shoes significantly boost ball speed for fast bowlers in cricket. This improvement is not just in perception; it is biomechanical. Coaches and athletes who want to improve performance should consider spiked footwear while balancing comfort and injury prevention techniques.

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Introduction

Cricket is a global sport where fast bowling is an essential part of cricket. Ball release speed is a key factor that determines how well a player performs in competition (Ramachandran et al., 2024 ;