

Ankle Joint Contact Force Profiles Differ Between Those with and Without Chronic Ankle Instability During Walking

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Dear Editor,

We read with intense curiosity the article by Jaeho Jang entitled "Ankle joint contact force profiles differ between those with and without chronic ankle instability during walking." [1]. This manuscript was engaging to read, and the authors should be commended for their efforts. However, despite our accord with their conclusions, it is essential to share additional information that would enhance the brilliance of this article.

According to Nicholas [2] A. Ferran, External ankle supports used in conjunction with functional rehabilitation, an essential component of nonsurgical management for patients with chronic ankle instability, were omitted. The Brostrom technique, which forms the basis for other forms of anatomic repair techniques, was a crucial variable because it had excellent results with over a 26-year follow-up and could have provided additional insight into this study. Furthermore, the investigation of feed-forward motor control during a maximal jump landing/cutting group of CAI, as stated by Seunguk Han [3], could have further elaborated this study along with the use of motion capture and force plate data using wireless surface electrodes (1200 Hz; Delsys, Boston, MA, USA) could have assisted in achieving this objective with finesse and precision. The authors did not specify whether the study included Lateral Ankle Sprain (LAS) Copers [4], despite a previous study from August 2022 indicating its potential impact. In addition, whether the participants had neurological conditions, such as peripheral neuropathy, concussions, or trunk injuries, is unknown. [4] These variables can significantly impact the outcomes and contribute to abnormal walking mechanics. Clarification on these aspects is necessary for a complete comprehension of the study's results. In an August 2018 study, it was determined that both kinesiotaping and athletic taping [5] affect ankle movement. The technique utilized in this research could have been applied to investigate how kinesiotaping and athletic taping impact the forces experienced at the ankle joint in individuals with Chronic Ankle Instability (CAI) and those without it, particularly during the act of walking.

Lastly, it is essential to note that the sagittal and frontal movements [6] of the ankle and foot were not included in this

study. These factors must be considered in conjunction with the hip joint. According to studies, Chronic Ankle Instability (CAI) impairs hip-ankle coordination during the stance phase of walking [6]. Moreover, all of the participants in this study wore running shoes. A more inclusive approach would include participants with and without shoes. Additional research is required to clarify the relationship between the ankle joint and proximal joints, particularly during shod and barefoot walking. It is also essential to note that this study focused exclusively on walking and did not include running. Therefore, it is recommended to conduct additional research on running biomechanics [6] for a comprehensive understanding.

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