

Title [times new roman 12]

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Word Count: 3074 [count from introduction to conclusion]

Abstract

Times New Roman [9]

The Abstract should provide a clear and concise summary of the manuscript, covering the background, objective, methods, results, and conclusion. It should be written in a single paragraph, accurately reflect the content of the manuscript, and should not exceed 250 words.

Authors are expected to write the abstract in clear academic English and ensure consistency with the main text. References, tables, figures, and unexplained abbreviations should not be included in the abstract.

Background: Exercise reduces chronic complications in individuals with diabetes and peripheral vascular diseases. In clinical practice, the use of air insole may reduce peak plantar pressure (PPP), and risk for diabetic foot ulcers. However, there is no guideline on selecting air insole pressure for effectively reducing PPP. Therefore, this study aimed to investigate the effects of different air insole pressure on PPP at different walking durations. **Methods:** We tested 13 participants using repeated measures study design, including 3 air insole pressures (80, 160, and 240 mmHg) and 2 walking durations (10 and 20 min) for 6 walking conditions. PPP values at the first toe, first metatarsal head, and second metatarsal head were calculated. **Results:** The one-way ANOVA showed significant pairwise differences of PPP at 20 min duration in the first metatarsal head between 80 and 240 mmHg ($p = 0.007$) and between 160 and 240 mmHg ($p = 0.038$); in the second metatarsal head between 80 and 240 mmHg ($p = 0.043$). The paired t-test confirmed that walking duration significantly has lower PPP at 10 min than 20 min with 240 mmHg air insole in the first metatarsal head ($p = 0.012$) and the second metatarsal head ($p = 0.027$). **Conclusion:** People at risk of foot ulcers are suggested to wear shoes with 80 mmHg of air insole for reducing PPP in the first metatarsal head and the second metatarsal head. Moreover, people may avoid wearing the stiffer insole (240 mmHg) for more than 20 min.

Abbreviations:

PPP = peak plantar pressure, DM = diabetes mellitus, IDF = International Diabetes Federation, DNA = Deoxyribonucleic Acid, ADA = American Diabetes Association, DFUs = diabetic foot ulcers.

Keywords: insole stiffness, air insole, walking duration, forefoot, diabetic foot ulcers

1. Introduction

Authors are expected to ensure that the manuscript submitted to MNJ is written in clear, academic, and grammatically appropriate English. The manuscript should present a well-structured argument, a clear research focus, and sufficient scholarly relevance to the field addressed by the journal. Authors are encouraged to prepare their work carefully before submission to facilitate the editorial and peer-review process.

The introduction section should clearly describe the background of the problem, the significance of the topic, relevant recent evidence, and the specific objective of the study. Each paragraph should be logically developed so that the rationale of the study can be understood clearly by readers. Authors are advised to avoid overly broad statements that are not supported by evidence.

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2. Method

In the Methods section, authors should provide a concise yet sufficiently detailed account of how the study was designed and conducted. The manuscript should clearly specify the research approach, study setting, participant selection, sampling strategy, research instruments, data collection procedures, and methods of data analysis. The information presented in this section should enable readers to understand the methodological rigor of the study and to evaluate its appropriateness in relation to the research objectives.

Authors should also report ethical approval, informed consent, and institutional permission whenever applicable. For studies using established instruments, relevant references should be provided, and evidence of validity and reliability should be stated when necessary. Overall, the Methods section is expected to reflect clarity, transparency, and scientific consistency.

2.1 Research Design

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2.2 Participant

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2.3 Experimental Procedures

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2.4 Data Analysis

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The PPP was calculated during a stance phase of the gait cycle (Figures 1B and 1C) by the equation 1.^[31]

$$PPP = (p) \quad (1)$$

Where p is the plantar pressure distribution of the three plantar regions.

2.5 Statistical analysis

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3. Results

The Results section should present the main findings of the study in a clear, objective, and systematic manner. Authors are expected to report the results in a logical sequence that aligns with the study objectives or research questions. Findings should be presented without interpretation, as the meaning and implications of the results should be discussed in the Discussion section.

Data may be presented in the form of text, tables, or figures, but unnecessary repetition should be avoided. If results are shown in tables or figures, the main points should still be highlighted in the text. Authors should ensure that all reported findings are accurate, consistent, and directly relevant to the aims of the study.

For quantitative studies, statistical findings should be presented clearly, including relevant values and levels of significance where applicable. For qualitative studies, authors should describe the identified themes, categories, or patterns in a coherent manner, supported by appropriate evidence from the data. Overall, the Results section should reflect clarity, precision, and alignment with the study design.

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4. Discussion

The Discussion section should interpret the main findings of the study and explain their relevance to the research objectives, existing evidence, and current practice. Authors are expected to discuss how and why the results emerged, rather than merely repeating the findings presented in the Results section. The discussion should demonstrate the scientific contribution of the study and its implications for the relevant field.

Authors should relate their findings to previous studies and clearly explain points of similarity, difference, or novelty. Interpretations must be supported by appropriate references and should remain consistent with the data presented. Overstatement, unsupported claims, and repetition of numerical results without analysis should be avoided.

The Discussion section should also address the significance of the findings, their practical or theoretical implications, and the limitations of the study. Where relevant, authors may provide recommendations for future research or practice. Overall, this section should reflect critical analysis, scholarly depth, and a clear connection between the results and the broader context of the study.

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5. Conclusions

The Conclusion section should briefly summarize the main findings of the study and their relevance to the research objectives. Authors should emphasize the contribution and implications of the study without repeating detailed results or introducing new information.

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Author Contributions:

The Author Contributions section should state the specific contribution of each author to the study and manuscript. Contributions may include study conception, research design, data collection, data analysis, manuscript drafting, critical revision, and final approval. All authors must have made substantial contributions and must agree to take responsibility for the content of the manuscript. Conceptualization, F.H. and C.-W.L.;

Methodology, C.-W.H. and W.-C.S.;

Writing—original draft, F.H.;

Writing—review and editing, Y.-K.J. and C.-W.L.;

Supervision, Y.-K.J., B.-Y.L., C.-C.T and Y.-H.S.;

All authors have read and agreed to the published version of the manuscript.

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Patient and Public Involvement: No patient involved.

Data Availability Statement: The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest: The authors declare that they have no conflict of interest.

6. Reference

References should follow the JAMA citation style using superscript numbering. Citations must be numbered consecutively according to their first appearance in the text, and the reference list should be presented in numerical order. Authors must ensure that all references are accurate, complete, and consistently formatted.

1. Mealy RN, Richardson LA, Miller B, Smith M, Juvancic-Heltzel JA. Exercise is Medicine®: Knowledge and awareness among exercise science and medical school students. *International Journal of Exercise Science*. 2019;12(3):505. doi:<https://doi.org/10.1177/1559827620963884>
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Table Legend

Table 1. Title of table 1.

Table 2. Title of table 2.

Figure Legends

Figure 1. Title of figure 1.

Figure 2. Title of figure 2.

Figure 3. Title of figure 3.

Figure 4. Title of figure 4.

Figure 5. Title of figure 5.

Figure 6. Title of figure 6.