



PEER-REVIEW REPORT

Name of journal: *World Journal of Diabetes*

Manuscript NO: 97437

Title: Effect of Three-Week Exercise Program on Muscle Strength and Joint Mobility in Patients with Diabetic Polyneuropathy: Randomized Controlled Trial

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 08098320

Position: Peer Reviewer

Academic degree: Md

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Bosnia and Herzegovina

Manuscript submission date: 2024-05-30

Reviewer chosen by: Jia-Lin Zhang

Reviewer accepted review: 2024-07-21 16:26

Reviewer performed review: 2024-07-21 16:34

Review time: 1 Hour

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Peer Review of "Effect of Supervised Exercise on Joint Mobility and Muscle Strength in Diabetic Peripheral Neuropathy" 1) Core Content This study, conducted as a randomized clinical trial, evaluates the effects of supervised stretching, strengthening, functional, and walking exercises on joint mobility and muscle strength in patients with diabetic peripheral neuropathy (DPN). Conducted at the "Dr. Miroslav Zotović" Institute in Bosnia and Herzegovina, the trial involved 90 patients divided into an intervention group (IG) and a control group (CG). Over 15 therapy days, the IG received both alpha-lipoic acid (ALA) treatment and a specific exercise regimen, while the CG received only the ALA treatment. Key findings include significant improvements in ankle joint (AJ), subtalar joint (SJ), and first metatarsophalangeal joint (I MTP) mobility, as well as foot and ankle muscle strength (MS) in the IG compared to the CG. These improvements were maintained at a six-month follow-up, indicating the potential long-term benefits of the exercise program. 2) Limitations Retrospective Nature of Measurements Small Sample Size Short Intervention Duration Lack of Monitoring for Home Exercises Manual Measurement Techniques 3) Significance of Each Limitation Retrospective Nature of



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Measurements: The measurements were taken after the intervention, which could introduce recall bias and affect the accuracy of the data. This limitation is significant as it impacts the reliability of the reported improvements in joint mobility and muscle strength. Small Sample Size: The sample size of 90 patients, though adequate for initial findings, may not be sufficient for broader generalization. This limitation is important because it affects the statistical power of the study, potentially leading to type II errors and reducing the confidence in the generalizability of the results. Short Intervention Duration: The 15-day duration of the supervised exercise program, while practical, might not capture the full potential of long-term benefits and sustainability of the intervention. This limitation is significant because it may not reflect the full impact of a longer-term exercise regimen on joint mobility and muscle strength in patients with DPN. Lack of Monitoring for Home Exercises: The study did not monitor whether and how effectively patients continued the exercises at home after the supervised period. This limitation is crucial as it affects the understanding of the long-term adherence and effectiveness of the exercise program beyond the supervised sessions. Manual Measurement Techniques: The use of goniometers and hand-held dynamometers for manual measurements could introduce variability and potential errors. This limitation is important because it impacts the precision and consistency of the data collected, affecting the validity of the reported improvements. Conclusion In summary, this study provides valuable insights into the potential benefits of supervised exercise programs for improving joint mobility and muscle strength in patients with diabetic peripheral neuropathy. However, its limitations, including the retrospective nature of measurements, small sample size, short intervention duration, lack of monitoring for home exercises, and reliance on manual measurement techniques, must be carefully considered when interpreting the findings. Future research should aim to address these limitations through larger, prospective, and longer-term studies with standardized and



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objective measurement protocols to confirm and expand upon these results.



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Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 08222942

Position: Peer Reviewer

Academic degree: PhD

Professional title: Assistant Professor

Reviewer’s Country/Territory: Türkiye

Author’s Country/Territory: Bosnia and Herzegovina

Manuscript submission date: 2024-05-30

Reviewer chosen by: Shang Wu

Reviewer accepted review: 2024-08-06 08:21

Reviewer performed review: 2024-08-06 21:51

Review time: 13 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Diabetic neuropathy and diabetic foot ulcer is a common condition and prevention efforts are very valuable. This study reported that a combined and supervised exercise program consisting of stretching, strength, functional and walking exercises lasting 15 therapy days could improve ankle, subtalar joint and first metatarsophalangeal joints mobility and foot and lower leg muscle strength in patients with diabetic neuropathy. Therefore, this study contributes to the field. Dear Author, thank you for the opportunity to review this article. I congratulate the authors for working on a important topic. My recommendations are as follows: - The introduction was written in line with the purpose of the subject. - I presented some corrections on the file in the Materials and Methods section. - Please explain how did you chose the study setting. It was chosen among how many clinics. How many hospitals had that clinics in the city where the study is conducted? Jhow this hospital was chosen? - Please write all the inclusion and execution criteria. Did you include all nationality ? How about pregnant and ... - How about the sample Size ? How did you evaluate that it was adequate? For example G power or ... - Who researcher(s) implemented it? - “ The complete intervention protocol has been



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published elsewhere [22] " Please explain the study protocol a little for other researchers.
- " with the fact that the exercises were individually adjusted to each patient, guided and supervised by a physiotherapist. " Please state clearly how the exercise was supervised in the study. - Was financial support received for the study ? Were the instruments used for the measurements calibrated ? How ? - Analyzes were carried out appropriately in the findings. - The discussion was written in line with the purpose of the topic. - Some errors in the resources section should be corrected.



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Reviewer’s code: 08115243

Position: Peer Reviewer

Academic degree: Md

Professional title: Doctor

Reviewer’s Country/Territory: China

Author’s Country/Territory: Bosnia and Herzegovina

Manuscript submission date: 2024-05-30

Reviewer chosen by: Shang Wu

Reviewer accepted review: 2024-08-03 14:11

Reviewer performed review: 2024-08-12 10:35

Review time: 8 Days and 20 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Dear authors, Thank you for the opportunity to review this manuscript. I congratulate you on your work on this interesting topic. The paper is well written. It is widely recognized that preventing diabetic foot ulcers is of greater importance than treating them. In this manuscript, you investigate the effects of supervised stretching, strengthening, functional, and walking exercises on joint mobility and muscle strength in patients with diabetic peripheral neuropathy. Your conclusion suggests that exercise, combined with alpha-lipoic acid, can enhance joint mobility as well as the strength of the foot and lower leg muscles in patients with peripheral neuropathy. Educating patients to prevent diabetic foot ulcers is crucial to reducing the potential risks of amputation. My recommendations are as follows: In the Materials and Methods section, the study design is sound, but the final analysis sample includes only 42 participants in the intervention group (IG) and 40 in the control group (CG). The small sample size may be a limitation of this study, affecting the reliability of the results. Additionally, please explain the reason for choosing a three-week exercise intervention protocol. It is important to note that after the 15-day program, patients were advised to continue with the learned



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exercises for the next six months, without any further advice or restrictions. The lack of monitoring for home exercises is another limitation of the study. Are there any relevant references that could be recommended for this? If possible, you may consider discussing this in the manuscript's discussion section. The figures, diagrams, and tables sufficient, are good quality and appropriately illustrative, with labeling of figures using arrows, asterisks, etc. The manuscript interpret the findings appropriately. The discussion is accurate discusses the paper's scientific significance and/or relevance to clinical practice. Suggest further analyzing the limitations of the research results. In general, the quality of manuscript organization and presentation are good. Results of this study can be used in order to educate patients and medical staff to prevent diabetic foot ulcers and therefore to reduce potential risks of amputation.