Peer-Review comments and authors responses

"Effects of Walking on LDL Cholesterol and Cardiometabolic Risk Factors in Postmenopausal Women: A Scoping Review"

Dear Professor, Felipe Fregni,
Editor-in-chief, PPCR Journal

We would like to thank you for your email dated October 2nd and the opportunity to revise the document; The manuscript title: Effects of Physical Activity on Cardiovascular Risk Factors in Postmenopausal Women: A Scoping Review (2025 G1 - SR).

We would also like to take this opportunity to express our thanks to all reviewers for the insightful questions for correction or modification. The manuscript has been revised to address the reviewers' comments, which are shown alongside our responses to this letter.

The revised parts are shown with highlights and Microsoft words tracking functions in attached file.

Reviewer 1:

ABSTRACT

1. **Comment:** The flow of your writing is incorrect. Postmenopausal women face an increased risk of cardiovascular disease. Aerobic activities have been widely recommended to decrease risk factor. However, LDL cholesterol, an emerging modifiable factor. The role of LDL..
Response: The phrase has been rearranged in page 1, line 15.

INTRODUCTION

2. **Comment:** Cardiovascular disease (CVD), particularly among postmenopausal women,remains.....
Response: The phrase has been rearranged in page 3, line 1.

3. **Comment:** First paragraph: reference
Response: The paragraph was rearranged and the reference from SWAN added in page 3, line 6.

4. **Comment:** Second paragraph: Good. I think you can add the SWAN study as a reference in the above paragraph.
Response: The paragraph was rearranged and the reference from SWAN added in page 3, line 6.

5. **Comment:** Last paragraph: No. You mentioned in your summary that the real reason why you investigated this surrogate is because there is no clear evidence of LDL in postmenopausal on cardiovascular outcome
Response: It was rephrased as a "potential" in page 3, lines 21 -27.

METHODS:

6. **Comment:** First paragraph: Excellent paragraph.

7. **Comment:** Fourth paragraph: Why BMI or glucose levels? You haven't mentioned previously.
Response: The information was added in page 3, line 27.

8. **Comment:** Fifth paragraph: Why only on English. You could have expanded your population adding other languages (taking advantage that most PPCR students are from other countries).
Response: There was one paper in Korean and one in Arabic. Unfortunately, we did not have any native speakers in our group and could not rely on unofficial translations due to the risk of misinterpretation. Therefore, the papers were excluded.

9. **Comment:** Sixth paragraph: Excellent!. Bravo

RESULTS:

10. **Comment:** Fourth paragraph: This is very important definition and should be added in your introduction with reference.
Response: Added in page 3, line 4. The whole paragraph is supported by El Khoudary et al, 2019)

11. **Comment:** Eighth paragraph: Please re-phrase**.**
Response: Rephrased in Page 6, line 19.

12. **Comment:** Last paragraph: Excellent paragraph.

DISCUSSION**:**

13. **Comment:** First paragraph: Please mention that your studies were methodologically different.
Response: Added in page 7, line 14.

14. **Comment:** Seventh paragraph: And study design
Response: Added in page 8, line 29.

15. **Comment:** Eighth paragraph: excellent

16. **Comment** Nineth: agree. Please review: so this an original contribution to literature. Please use a different paragraph Previous paragraph was enhancing your contribution's strength.
Response: rearranged.

CONCLUSION

17. **Comment:** First line: Careful.

Response: *The sentence was deleted and the section rewritten as per another reviewer's request.*
Feedback: We initially received the information that reviewer 1 has accepted the manuscript. Later on, it came to our attention that it was actually a "revision needed. We had to extract the comments ourselves and they were not clear to interpret/answer without context.

Reviewer 2:

ABSTRACT

Response: *Thank you very much for your comments, as suggested we added scoping review to the title and also included the information that "Most of the included studies were judged to be at high risk of bias." in the abstract, which really added transparency to the review.*

INTRODUCTION

2. **Comment:** The last paragraph should more clearly explain why this scoping review was needed and why this design was chosen. Since the Bernal et al. (2025) meta-analysis is cited in the discussion, the introduction should bring this up earlier to highlight the gap your paper addresses. The rationale for selecting LDL as the primary outcome would fit better in the Methods rather than the Introduction.

Response: Thank you for pointing out these important modifications, we explained the gap that led to the scoping review in the last paragraph and cited Bernal et al (2025) in the introduction. The rationale for selecting LDL was changed to the methods section and we also reduced the introduction as suggested by reviewer 4.

METHODS

3. **Comment:** Please state the exact search period (2010–April 2025) as you do in the abstract and explain why 2010 was chosen as a cutoff. The cutoff is fine if the justification is explicit.

Response: The required information was included in the manuscript in page 3, line 30.

4. **Comment:** Some paragraphs (e.g., the one-sentence note on the comprehensive search) should be merged so the text reads more smoothly.

Response: The section was rearranged with full paragraphs.

5. **Comment:** When mentioning "walking at the aerobic threshold," please specify what threshold was used.

Response: Information added to page 4, line 14.

6. **Comment:** References to Figure 1 should be in the Results section, not Methods.

Response: The reference was added to the Results section, page 5, line 30.

7. **Comment:** Consider adding a note that the review followed a pre-specified protocol, and if possible, include it as supplementary material for transparency. It is okay if you didn't register it for some reason.

Response: There is no registered protocol. There is a mention of PRISMA in page 3, line 32.

RESULTS

8. **Comment:** PRISMA diagram: Consider updating Figure 1 to the PRISMA 2020 template for systematic/scoping reviews. The Covidence version is fine, but using the updated version would strengthen the paper. https://www.prisma-statement.org/prisma-2020-flow-diagram

Response: The PRISMA diagram has been updated, in page 14.

9. **Comment:** Please specify how many studies came from each region (Europe, North America, Asia, South America).

Response: The requested information was included in page 5, lines 33-34.

10. **Comment:** The phrase "judgment for each study" in the ethnicity section is unclear, please rephrase.

Response: The sentence was excluded.

11. **Comment:** When describing Nordic walking, Pilates, or exergaming, briefly clarify what these modalities involve, so readers unfamiliar with them understand.

Response The information was included in page 6, lines 12-14.

12. **Comment:** The sentence "This demonstrates that walking remains the most accessible…" belongs in the Discussion, not Results.

Response: It was removed.

13. **Comment:** In the Jo et al. (2020) description, the phrase "both groups" is unclear; please specify.

Response: It was removed.

14. **Comment:** The Results section overall feels like a list. Rewriting into structured paragraphs with descriptive flow would make it much easier to read.

Response: The section was rearranged.

15. **Comment:** Table 1: You might consider marking statistically significant results with an asterisk (as you did in other tables). If space allows, adding comorbidities as a column would also be helpful.

Response: The table 1a has no significant results, thus no asterisks. I added a control group column with some comorbidities. However, the inclusion of this information would make the table too big. There is a clear paragraph about the comorbidities in page 6, lines 1-3.

DISCUSSION

16. **Comment:** The paragraph starting "To our knowledge, no scoping review…" is excellent. I would move it right after the LDL findings to emphasize novelty.

Response: The section was rearranged accordingly.

17. **Comment:** Several discussion paragraphs are very short. Expanding them into fuller 6–10 sentence paragraphs would improve flow and depth.

Response: *The section was rearranged accordingly*.

18. **Comment:** Please avoid calling the paper a "mini review." I know the program called it mini-review, but it is a full scoping review and should be presented as such throughout.

Response: *It was changed to scoping review, page 7, line 12*.

19. **Comment:** The section on race/ethnicity is strong. I'd expand it by noting disparities in LDL and cardiometabolic outcomes among postmenopausal women. This would underline the importance of better reporting in future studies.

Response: *I could not find this section in the discussion but included a sentence and example about differences in baseline characteristics in page 7, lines 27-32*.

CONCLUSIONS

20. **Comment:** Consider condensing this into a single paragraph for clarity and impact.

Response: It has been rewritten as per another reviewer's request.

Minor Points

21. **Comment:** Check references carefully for formatting (APA spacing, italics, capitalization).

Response: It has been updated.

Reviewer 3

Recommendation: Revisions Required

Overall, this is a well-prepared and relevant manuscript that addresses an important and timely topic. The methodological rigor is appropriate, and the review is conducted in accordance with accepted standards. The search strategy, inclusion criteria, and risk of bias assessment are clearly described and well executed. The Results and Discussion sections, however, would benefit from greater clarity and conciseness. In several places, the writing is overly detailed, which makes it harder for the reader to follow the main findings and interpretations. Summarizing key information in tables and streamlining the narrative would significantly improve readability and impact.

With these revisions to improve structure and writing style, the manuscript has strong potential to make a valuable contribution to the literature.

I have also uploaded a separate file with more detailed, section-by-section comments and suggestions for revision.

INTRODUCTION

1. **Comment:** peaking in developed countries (Roeters van Lennep et al., 2023), avoid using this term.

Response: *Rephrased in page 3, line 3.*

2. **Comment:** The introduction would benefit from being more concise — some of the detailed background information could be moved to the Discussion section, where it would strengthen interpretation of the results. Additionally, there are too many citations clustered together, which makes it harder to follow the main argument. Finally, the section does not clearly articulate the study hypothesis or objective. I recommend structuring it more explicitly following a standard framework: broad context → key background → knowledge gap → hypothesis/objective.

Response: *The section was rewritten in 3 paragraphs.*

METHODS

3. **Comment:** The sentence referring to the work as being conducted by a "group of students from the Principles and Practice of Clinical Research (PPCR)" is not necessary for the scientific content of the paper. I suggest removing this information to maintain a more neutral and professional tone.

Response: *Information removed. Page 3, line 30.*

4. **Comment:** When referring to Covidence, please include the company details in parentheses — for example: Covidence (Covidence Pty Ltd., Melbourne, Australia).

Response: *Added accordingly.*

RESULTS

5. **Comment:** I recommend condensing the information in these four paragraphs into a summary table. Presenting this content in a structured format would greatly improve clarity, reduce repetition, and help readers quickly compare the characteristics of the included studies. The table could include the following columns:

- Study / Year – Author and year of publication.
- Intervention Type – e.g., structured walking, Nordic walking, exergaming, Pilates.
- Supervision – Fully supervised, partially supervised, or unsupervised.
- Duration – Total intervention length (e.g., 10 weeks, 24 weeks, 17 years).
- Frequency & Intensity – Sessions per week and intensity level (low, moderate, moderate-to-vigorous).
- Meets WHO Guidelines – Yes/No (≥150 min/week).
- Sample Size / Population – Basic participant info (e.g., n, comorbidities if relevant).

This structure would capture all the key methodological elements now scattered across the text, making it easier for readers to interpret intervention characteristics at a glance and improving the overall flow of the Results section.

Response: *A table 2 was added in the appendices, page 12, with intervention aspects of the studies. Some of the mentioned columns are already found in tables 1a and 1b.*

DISCUSSION

6. **Comment:** The Discussion repeats a lot of information already presented in the Results section (e.g., which studies showed significant LDL or BMI changes). I recommend condensing these parts and focusing more on interpretation rather than restating findings.

7. **Comment:** Some conclusions are stronger than the evidence supports — for example, statements suggesting walking "appears effective" should be phrased more cautiously given the small number of studies, heterogeneity, and inconsistent LDL results. Last paragraph Comment: This paragraph is too long and difficult to follow as written. I recommend breaking it into shorter, more focused sentences and making the content significantly more concise to improve clarity and readability.

Response: The whole section was rewritten accordingly.

CONCLUSION

8. **Comment**: The manuscript claims that no previous review has examined this topic. Could you provide a more explicit comparison with existing systematic or scoping reviews on walking interventions in postmenopausal women to clearly demonstrate how this review advances the field or fills a distinct gap?

Response: Added to Discussion. Page 7, lines14-16.

9. **Comment:** Considering the limited number of studies, methodological heterogeneity, and inconsistent LDL outcomes, how confident can we truly be in recommending walking as part of clinical guidelines? Should these clinical implications be framed more tentatively to reflect the strength of the evidence?

Response: The section was rewritten and these claims removed as it is a scoping review and the current evidence does not support recommendations.

10. **Comment:** The recommendations directed at policymakers are broad and ambitious. Which findings from your synthesis are robust enough to directly inform policy decisions, and which should instead be presented as preliminary or hypothesis-generating?

Response: The section was rewritten and these claims removed as it is a scoping review and the current evidence does not support recommendations.

11. **Comment:** The statement that "consistency is more important than intensity" is compelling but requires stronger support. Can this conclusion be backed by quantitative evidence from the included studies, or is it better presented as a theoretical interpretation or direction for future research?

Response: The section was rewritten and these claims removed as it is a scoping review and the current evidence does not support recommendations.

12. **Comment**: Beyond adherence and population diversity, which specific methodological improvements (e.g., standardized LDL measurement protocols, dietary control, longer follow-up, or stratification by baseline risk) do you view as most critical for advancing research in this area?

Response: Long-term studies, exercise intensity, frequency, duration, supervision, modality and consistent evaluation of LDL-C are mentioned as key features for future research on this topic.

Reviewer 4

TITLE AND ABSTRACT

1. **Comment:** The title is clear and accurately reflects the scope and population. Suggestion: Consider including "scoping review" explicitly in the title (e.g., "A Scoping Review of…").

Response: The title has been updated.

2. **Comment:** Abstract is concise and informative but could clarify the search period, inclusion/exclusion criteria, and key future directions. I would also suggest defining any abbreviation in the first time it is cited in the abstract (e.g. LDL-C, low density lipoprotein cholesterol).

Response: Thank you for the comments, as suggested we reported inclusion and exclusion criteria in the abstract, as well as the search period and abbreviations.

INTRODUCTION

3. **Comment:** It is a comprehensive background and justification. However, you could be slightly more concise. Clearly define the scoping review's purpose near the end. Some author's guides suggest that a good introduction is organized in three paragraphs:
   1. The context of the problem.
   2. What is already know about it.
   3. What is the gap you identified and what are you doing to address it.

Response: Thank you for the comment, we reduced the introduction to three paragraphs as suggested and tried to be clearer and concise. The context of each paragraph shared helped a lot for us to focus on the most important information, thanks!

METHODS

4. **Comment:** The section is well-structured and PRISMA-compliant. You should add the date of last search, summarize inclusion/exclusion criteria, and explain inclusion of different study types.

Response: The section was rewritten with this information added.

RESULTS

5. **Comment:** Good description of included studies. You could try to clarify heterogeneity and standardize outcome reporting to support your discussion.

Response: The section was rearranged accordingly.

Figures, Tables, and Supplementary Materials

6. **Comment:** Useful visual elements. However, tables are used to being submitted as tables (text files, DOCX for example), not images. Also, ensure proper labeling and consider a summary figure of evidence and gaps.

Response: The summary was included as figure 4, page 16, and the tables will be available in an excel version.

7. Comment: In the summary of RCTs results, you need to mention what was the control group in each study for a better interpretation of the results.

Response: *It was added to table 1b, page 11.*

8. Comment: In both summary tables (RCTs and observation studies), if possible, add a change collum (pre vs. post exercise) for the each outcome – for example, in each RCT, what was the mean variation of LDL-c in each group? It would be more easy to understand the impact of the intervention.

Response: *The results are interpretable by the asterisk on the statistically significant results. That was how most of the studies in this field reported the differences.*

DISCUSSION

9. Comment: The discussion is thoughtful and contextualized. You should emphasize the scoping nature and maybe try to organize your findings better (e.g. discuss impact on LDL-c, then BMI etc.)

Response: *The section was rearranged accordingly.*

10. Comment: You did a transparent discussion of the limitations of your review; this is a strength to be pointed out.

Language and Style

11. Comment: The manuscript is generally well-written. You should check for minor edits for clarity and shorter sentences. If available, a native-speaker review would be helpful, although it is not mandatory. Please check the text for consistency (e.g. if you use 'LDL-C', standardize it, do not use 'LDL' or 'LDL cholesterol' in the sequence or 'glucose' versus 'blood glucose').

Response: *It was reviewed and standardized in "LDL-c" and "glucose".*

REFERENCES

12. Comment: Comprehensive and current. However, you need to double-check formatting and citation consistency. Some citations into the text are not adequate to APA format.

Response: *Checked and updated.*

We believe that positive feedback and critical comments from reviewers have significantly improved the manuscript, which you will find uploaded on the website. We very much hope the revised manuscript is accepted for publication in your Journal.

Sincerely yours,
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