## 1. Basic Reporting

The article is written in clear and professional English.

The introduction presents the context and motivation of the study, highlighting the gaps in the literature on gait symmetry at different inclinations and how this may influence future training.

The article makes appropriate and relevant use of references to substantiate its hypotheses and discuss the results, including classic and recent studies on CPG (Central Pattern Generator) and internal models.

The article structure complies with PeerJ standards and disciplinary norms. The organization facilitates reading and understanding the objectives, methods, results, and discussions.

Figures are relevant, high quality, well labeled, and adequately described.

The raw data was provided following PeerJ policy.

## 2. Experimental Design

The study is original research and is within the scope of the journal.

The research question is well-defined, relevant, and meaningful. The study addresses a knowledge gap in the existing literature on gait symmetry at different inclinations.

The research was carried out to a high technical and ethical standard, with methods described in sufficient detail for replication.

The study was approved by the Institutional Review Board of the University of Nebraska Medical Center, and all participants signed an informed consent.

## 3. Validity of the Findings

All underlying data were provided and are robust, statistically sound, and controlled. The use of ANOVA and Bonferroni correction in post-hoc testing is appropriate.

The conclusions are well formulated, linked to the original research question, and limited to the results obtained.

The study concludes that downhill walking increased vertical gait symmetry but reduced anterior-posterior symmetry, suggesting implications for sensorimotor training.

## 4. Additional Comments

The sample of participants is well-described and adequate for the study.

The methodology is rigorous and detailed, allowing the replication of the study.

The discussion is robust, connecting the findings to CPG concepts and internal models, with clear implications for clinical practice.

The sample includes only young, healthy adults, limiting the generalization of the results to other populations, such as the elderly or individuals with pathologies.

The PWS (Preferred Walking Speed) for level and uphill walking was not recorded, which could offer a more complete comparison.

Consider including a discussion of the limitations mentioned and how future research could address these gaps.

**Conclusion** I recommend accepting the manuscript with minor revisions, addressing the limitations discussed, and further strengthening the discussion of the results.