Author's response to reviews

Title: Dynamic navicular motion measured using a stretch sensor is different between walking and running, and between over-ground and treadmill conditions

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Dynamic navicular motion measured using a stretch sensor is different between walking and running, and between over-ground and treadmill conditions

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We would like to thank the editor and reviewers warmly for reviewing our manuscript again. Changes in response to each comment are outlined below, and where changes have not been made, our reasoning is explicitly described.
I thank the authors for taking time to address my comments in such a thorough manner. It has certainly greatly improved the manuscript. Some discretionary considerations for you to consider to further strengthen the manuscript.

1. In response 8: It is fundamentally important in the manuscript that you highlight it provides insight into the tri-planar movement of the navicular. This does not give insight into individual rotations.

   Response: To further highlight the point made by the reviewer, two sentences have been modified. The first is in the background section where the stretch sensor is first mentioned, which now reads:

   “Christensen et al [13] proposed the use of a ‘stretch-sensor’ as an easy and efficient method to measure and provide insight into shod and barefoot tri-planar navicular motion.”

   The second is the second last sentence of the limitations section, which now reads:

   “Due to the anatomical placement of the stretch sensor over the navicular, it is thought to provide insight into tri-planar talonavicular (midfoot) motion during gait.”

2. In response 9: How did you determine clinically important?

   Response: In our response we use the term “potentially” before “clinically meaningful differences.” Further research is now needed to determine if this is in fact the case (i.e. differences are clinically meaningful), and what changes in navicular motion measured using the stretch sensor might be clinically important.

3. Suggestions: That you mention the need to test this method against the individual trajectories of a marker placed on the navicular tuberosity. This surely has to be your next study in an attempt to validate your method.

   Response: We agree, this is an important next project to further validating the stretch sensor.
I would like to thank the authors for their considered responses to the comments provided. Explanations and clarifications are on the whole clear, and the paper adds to the on-going debate regarding the assessment of foot motion. I look forward to further work being produced on the validity and reliability of the technology, so that its role can be further elucidated.