

Slackline : NS-LBP Ms# 61188

To The Editor-in-Chief,
World Journal of Orthopaedics

Jan 6 2021

Dear Editors;

Thank you for the review of our manuscript submitted to World Journal of Orthopedics. We are pleased to provide the following response to the Reviewers on our manuscript.

Journal title: World Journal of Orthopedics. **Manuscript NO:** 61188 **Column:** Mini-Review

Title: Slacklining as Therapy to Address Non-Specific Low Back Pain in the Presence of Multifidus Arthrogenic Muscle Inhibition

Authors: Charles Philip Gabel, Hamid Reza Mokhtarinia, Markus Melloh and Sébastien Mateo

2 Peer-review report

Reviewer #1: This study investigated the slacklining as therapy to address non specific low back pain in the presence of multifidus arthrogenic muscle inhibition. The manuscript is well written, easy to read, and describes an investigation about the strategic indirect-involuntary therapeutic exercise of Slacklining on facilitate the activation of MF-AMI deficient muscles. I have only a suggestion that I hope will be useful to improve the scientific quality of the study: please provide possible practical therapeutic exercise derived from the findings of the study. In this sense, although the results of the study are discussed from a theoretical viewpoint, I believe that extending the discussion by considering a practical point of view would add value to the manuscript, thus suggesting strategies for clinicians and practitioners.

RESPONSE: We have provided an additional sentence as recommended by the reviewer (highlighted in yellow below) and also a table taht provides teh operational Definition of Slackliing as previously published and is now cited

A practical implementation of therapeutic slacklining exercises can be derived from the operational definition of 20 steps over 5 stages provided in previous publications^{1, 2}. These progressive stages enable the patient and clinician to both document and sequentially progress the slackline exercise capacity as an adjuvant to other incorporated and multi-modal and multi-practitioner approaches in a manner that is both self-taught and self-progressed. The sequence of steps and stages act as a guide and can be followed or altered for the individual.

And the following Table: Adapted from *Gabel 2014, A Novel Exercise to Enhance Quadriceps Recruitment, Core Strength and Balance Control. J Nov Physiother. 2014 4(229). Table 1*

Table 2: Slacklining progressive competency phases - 5 Stages and 20 steps

Stage and Steps	Description of Position
1 - Beginner: Stand	Each description of stages 1 -4 are for the slackliner standing on a slackline of 3 meters length at strong tension anchored at each end 25 cm above soft terrain such as sand or grass.
1	Single leg stand – on the dominant leg
2	Single leg stand – on the non-dominant leg
3	Single leg stand on dominant leg, other foot touching the side of the line 1 foot length in front of the weight-bearing foot
4	Single leg stand on dominant leg, other foot touching the side of the line 1 foot length behind of the weight-bearing foot
5	Single leg on non-Dominant leg, other foot touching the side of the line 1 foot length in front the weight-bearing foot
6	Single leg on non-dominant leg, other foot touching the side of the line 1 foot length behind of the weight-bearing foot
2 - Moderate: Walk	
1	Walk forward along the line with minimal to no pause between steps
2	Walk Backward along the line with minimal to no pause between steps
3	Tandem Stance with the dominant leg back or closest to the anchor point
4	Tandem Stance with the dominant leg forward or furthest from the anchor point
3 - Intermediate: Tandem	
1	Tandem Stance with the dominant leg behind - then turn or pivot 180 degrees on both feet to the natural side so that the dominant then becomes forward
2	Tandem Stance with the dominant leg forward then turn or pivot on both feet to the non-natural side so that the dominant leg is behind
3	Tandem Stance with the dominant leg behind - then turn or pivot 180 degrees on the dominant foot to the non-natural side so that the non-dominant foot crosses over and returns to the forward position
4	Tandem Stance with the dominant leg in front - then turn or pivot 180 degrees on the non-dominant foot to the non-natural side so that the dominant foot crosses over and returns to the forward position
5	Side Stand ‘Surf posture’ – feet perpendicular to Slackline and balance
4 - Advanced: Squats	
1	‘Surfer’ position and Squat down feet perpendicular to the line approaching buttocks to the line
2	Squat in Tandem, dominant leg behind - feet along the line approaching buttocks to the line
3	Squat in Tandem dominant leg in front - feet along the line approaching buttocks to the line
4	Single leg Squat all weight on the dominant leg - approaching buttocks to the line
5	Single leg Squat all weight on the non-dominant leg- approaching buttocks to the line
5 - Extreme	Without using arms. Without sight. Bouncing.
Other – Tricks: Performance	Heel lifts, walking on toes, jumps, spins, somersaults on line or as dismounts. External focus (eg throwing ball, juggling ball). Surfing (on very slack line) with oscillations or swinging perpendicular to the line.

Slackline length and tension can be changed to modify the difficulty level.

REFERENCES:

1 Gabel CP, Mendoza S. Slacklining - a self-generated, graded training program for lower limb rehabilitation. IJATT. 2013; 14 10.1123/ijatt.18.4.14: 10.1123/ijatt.18.4.14]

2 Gabel CP. Slacklining: A Novel Exercise to Enhance Quadriceps Recruitment, Core Strength and Balance Control. J Nov Physiother. 2014: 10.4172/2165-7025.1000229: 10.4172/2165-7025.1000229]

(1) Science editor:

1 Scientific quality: The manuscript describes a review of the slacklining as therapy to address non specific low back pain in the presence of multifidus arthrogenic muscle inhibition. The topic is within the scope of the WJO.

- 5 Issues raised:
 1. The "Author Contributions" section is missing. provide author contributions;
 - The Author Contribution section is now complete
 2. The authors did not provide original pictures. provide original figure docs. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed;
 - Figures are now originals and Power Point compatible
 3. PMID and DOI numbers are missing in the reference list. Please provide PubMed numbers and DOI citation numbers to the reference list
 - References include all PMID and DOI where available and are in the WJO format
 4. List all authors of the references.
 - All authors listed
 5. Please revise throughout.
 - The manuscript has been thoroughly revised throughout

- Recommendation: Conditional acceptance.

We trust that the manuscript is now acceptable to the Editorial team.

However, if any areas require additional editing or work please advise us at your convenience.

Sincerely

Dr C Philip Gabel

Corresponding Author