BACKGROUND & PURPOSE:
An estimated 55% of athletes return to competitive sports post Anterior Cruciate Ligament Reconstruction (ACLR) and of those who do return to sport, only 13% of them meet all the recommended cut off scores for strength, function and performance.\textsuperscript{1,2} Physical therapists use TRX® suspension training may be used in rehabilitation of ACLR; however there is no research on its effectiveness or outcomes with these patients.

The purpose of this case report is to describe the combination of TRX® suspension training with a functional lower extremity rehabilitation program in an ACLR patient whose lacking dynamic knee control and lower extremity strength and endurance.

CASE DESCRIPTION:
- 16 year old female high school soccer player 13 weeks post ACLR
- Previous therapy focusing on open kinetic chain exercises with no exposure to functional or closed kinetic chain activities for the first ten weeks post-operative
- Lacked single leg lower extremity strength and endurance, impaired knee neuromuscular control and decreased confidence in her knee function
- Unable to jog, run, hop or begin sport specific training

INTERVENTIONS:
2 times a week for 3 weeks TRX® sequence and functional CKC exercise

RESULTS:

<table>
<thead>
<tr>
<th>Examination Outcome Measures</th>
<th>Initial (s/p 13 weeks)</th>
<th>Three weeks (6 sessions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manul Muscle Test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hip Flexors</td>
<td>4/5</td>
<td>4+5</td>
</tr>
<tr>
<td>Gluteus Medius</td>
<td>4+/5</td>
<td>5/5</td>
</tr>
<tr>
<td>Quadricep</td>
<td>4/5</td>
<td>5/5</td>
</tr>
<tr>
<td>Hamstrings</td>
<td>4/5</td>
<td>5/5</td>
</tr>
<tr>
<td>Single Leg Squat Test</td>
<td>0/3**</td>
<td>3/7***</td>
</tr>
<tr>
<td>Lower Extremity Functional Scale</td>
<td>53/80 points</td>
<td>72/80 points</td>
</tr>
<tr>
<td>ACL-RSI</td>
<td>55/100 points</td>
<td>68/100 points</td>
</tr>
</tbody>
</table>

** The first number represents the number of squats completed without any deviations such as touching the floor with the contralateral leg, using their arms to keep balance and the absence of knee valgus. The second number is the total number of squats they performed regardless if they had any deviations.

REFERENCES:

- Predicted LEFS score for a patient in this stage of rehabilitation is 63/80.\textsuperscript{3}
- At the end of 16 weeks post-ACLR the patients LEFS score was 72/80.
- Research suggests ACL-RSI scores as early as 4 months post-op can predict if the athlete will return to their preinjury level at 12 months post-ACLR.\textsuperscript{4}
- At 4 months post-ACLR those who did return to sport had the average score of 57.3/100 on the ACL-RSI.\textsuperscript{5}
- At the end of treatment (4 months post-ACLR) the patient scored 68/100 on the ACL-RSI.
- This case report demonstrates the possible benefits of using TRX® suspension training as a part of a comprehensive rehabilitation program for ACLR patients and athletes to help aid in the recovery of strength and endurance deficits.
- TRX® suspension training can also assist in improving the psychological factors regarding a patients knee, giving them the support they need to learn to trust their knee again in function and with returning to sport.

CONCLUSION:

- TRX® Suspension Training in Improving Single Leg Strength and Confidence in a Female Soccer Player Post ACL Reconstruction
- Allison Evron, SPT and David Kempfert DPT, L/ATC, SCS, FAAOMPT

MCID LEFS- 9 points
No current MCID for ACL-RSI