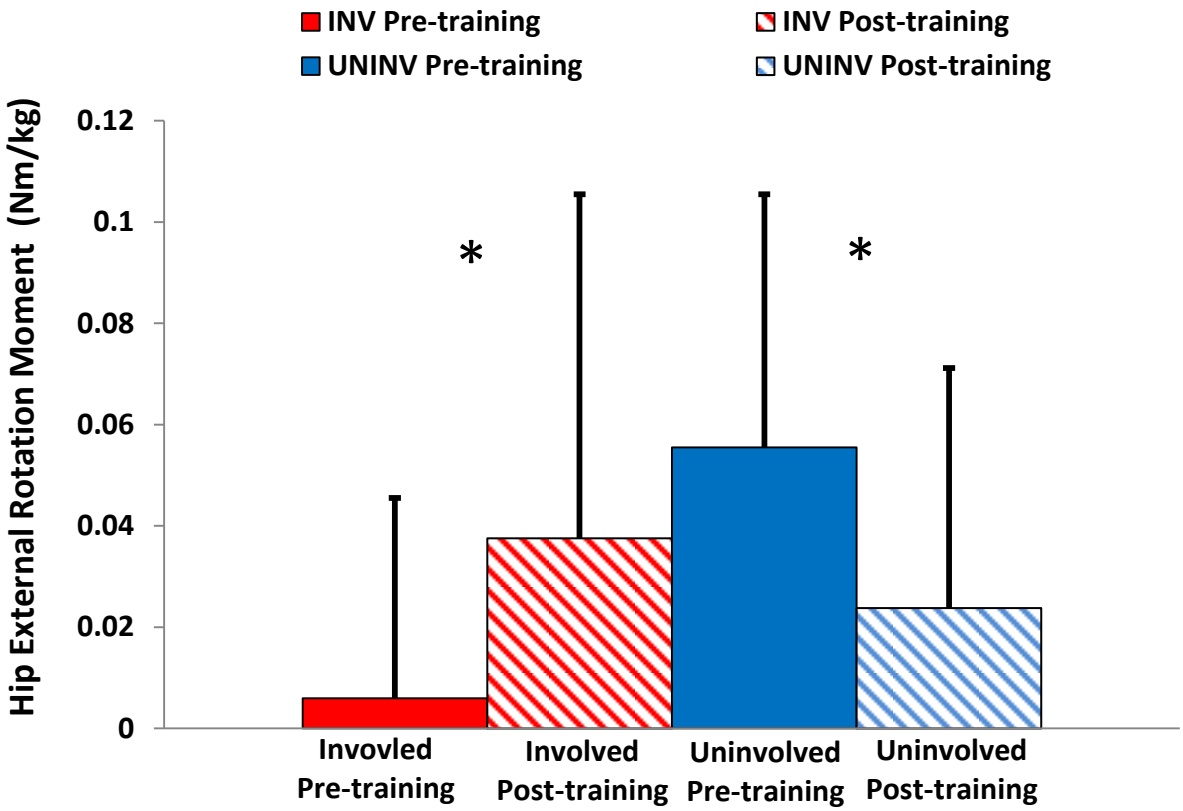
APPENDIX

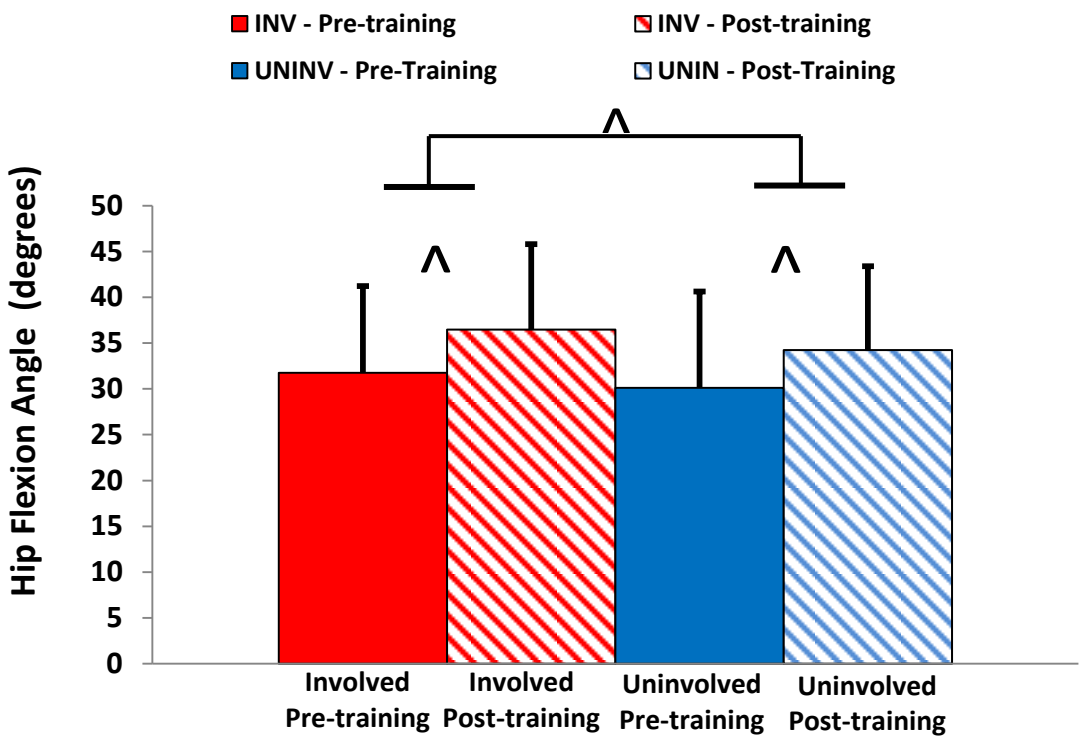
Neuromuscular Training Program:

1. Single leg hop progression (combination of single leg lateral and rotatory progression):
    - Phase I: Single leg lateral hop hold on Airex Mat
    - Phase II: Single leg 90 degree hop hold on Airex Mat
    - Phase III: Single-leg lateral BOSU (round) hop hold
    - Phase IV: Single leg 90 degree Airex hop hold reaction ball catch
2. Single leg anterior progression
    - Phase I: Step-hold
    - Phase II: Jump-single-leg hold
    - Phase III: Hop-hold
    - Phase IV: Hop-hop-hold
3. Romanian dead lift progression:
    - Phase I: Single leg dead lift
    - Phase II: Single leg dead lift on Airex
    - Phase III: Single leg dead lift on Bosu
    - Phase IV: Single leg dead lift with dumbbells
4. Lunge progression:
    - Phase I: Walking lunges
    - Phase II: Backward lunge walk
    - Phase III: Lunge jumps
    - Phase IV: Scissor jumps
5. Double leg jump progression:
    - Phase I: Box butt touch
    - Phase II: Squat jumps
    - Phase III: Single tuck jump with hold
    - Phase IV: Double tuck jumps with hold
6. Prone trunk stability progression:
    - Phase I: Bosu (round) toe-touch swimmers
    - Phase II: Bosu (round) with partner perturbation
    - Phase III: Prone bridge (elbows and knees) hip extension w/ opposed shoulder flexion
    - Phase IV: Prone bridge (elbows and toes) hip extension
7. Lateral trunk flexion progression:
    - Phase I: Bosu (round) lateral crunch
    - Phase II: box lateral crunch
    - Phase III: Bosu (round) lateral crunch with ball catch
    - Phase IV: Swiss ball lateral crunch

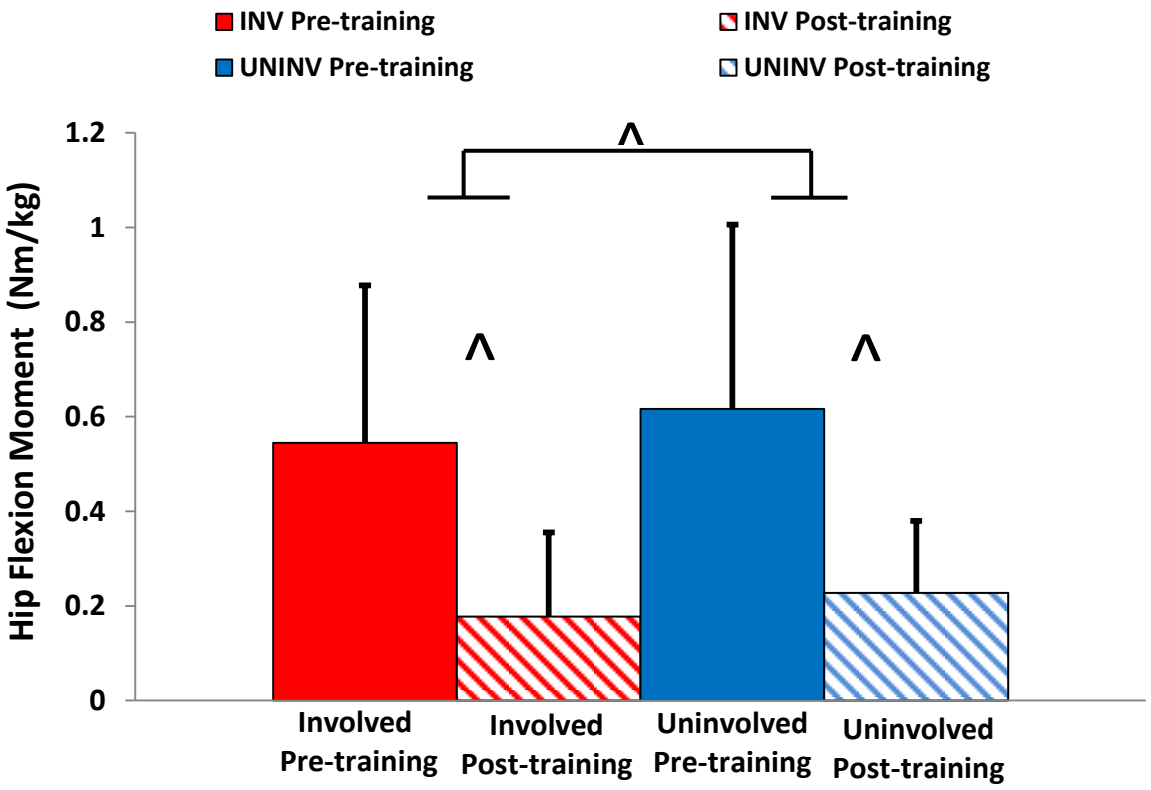
Primary hip biomechanical variables presented as bar graphs



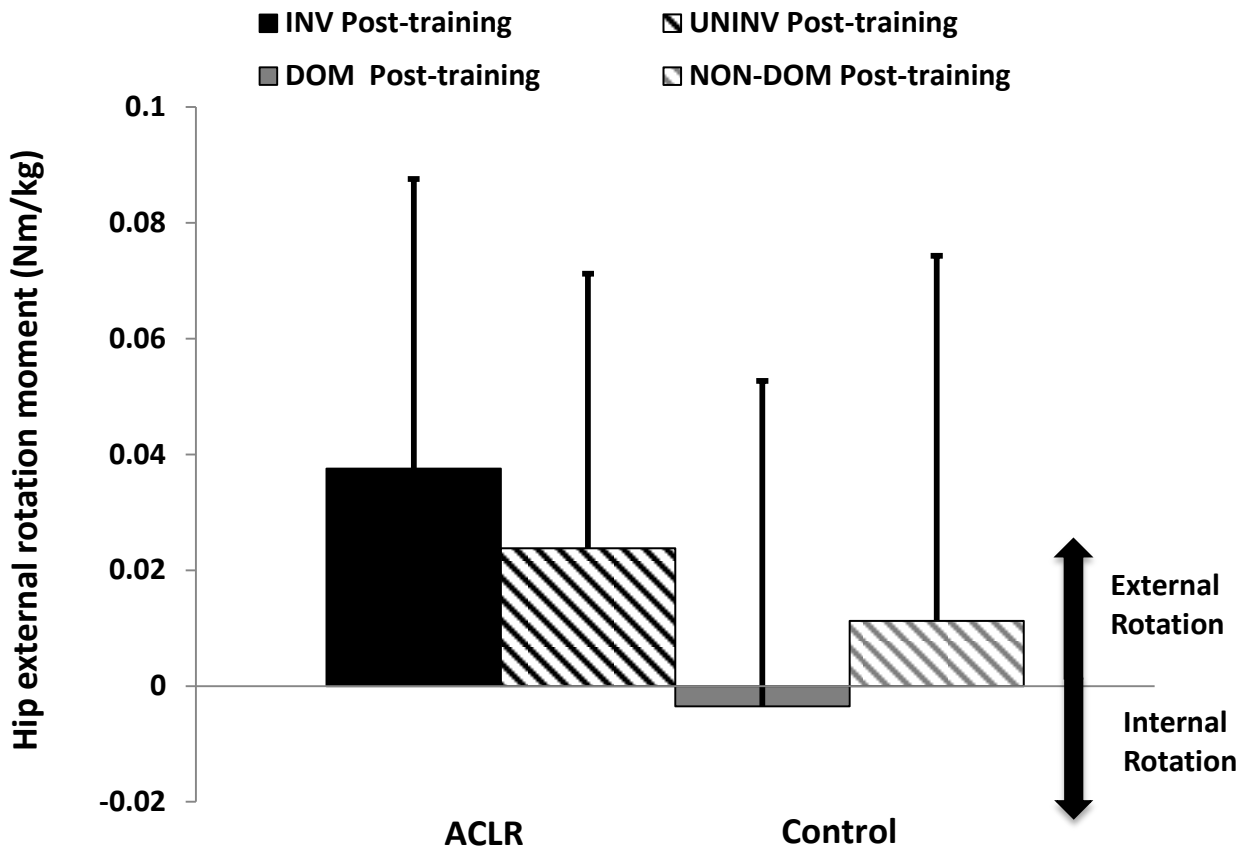
Appendix Figure A1: Change in hip external rotation moment at initial contact from pre- to post-training for the ACLR group. A significant session-by-limb (p=0.015) interaction was observed. *Post-hoc* testing revealed a significant increase of the involved (INV) limbs from pre- to post-training (p=0.039) and a significant decrease of the uninvolved (UNINV) limbs from pre- to post-training (p=0.04). Significant differences are denoted by *.



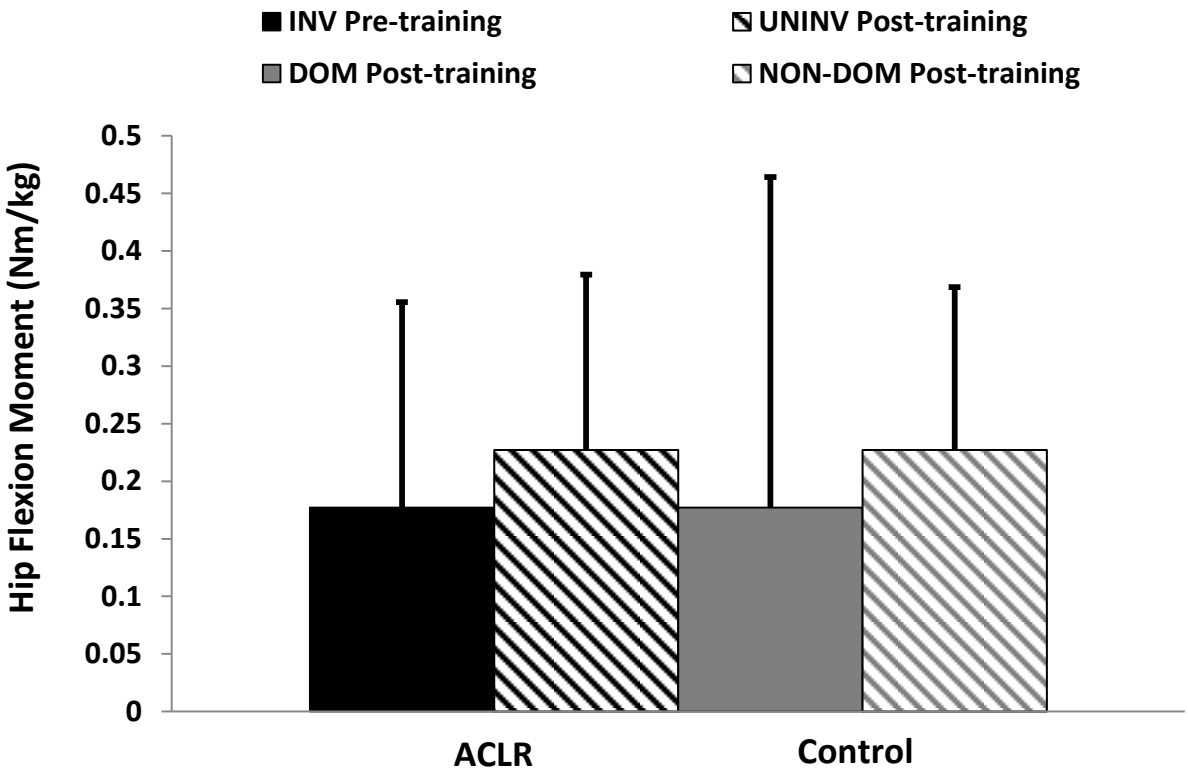
Appendix Figure A2: Changes in hip flexion angle at initial contact from pre- to post-training for the ACLR group. Significant main effects of session (p=0.049)* and limb (p=0.027)* were observed. The ACLR group landed with greater hip flexion angle after training, and the involved (INV) limbs demonstrated greater hip flexion angle than the uninvolved (UNINV) limbs. Significant main effects are denoted by ^.



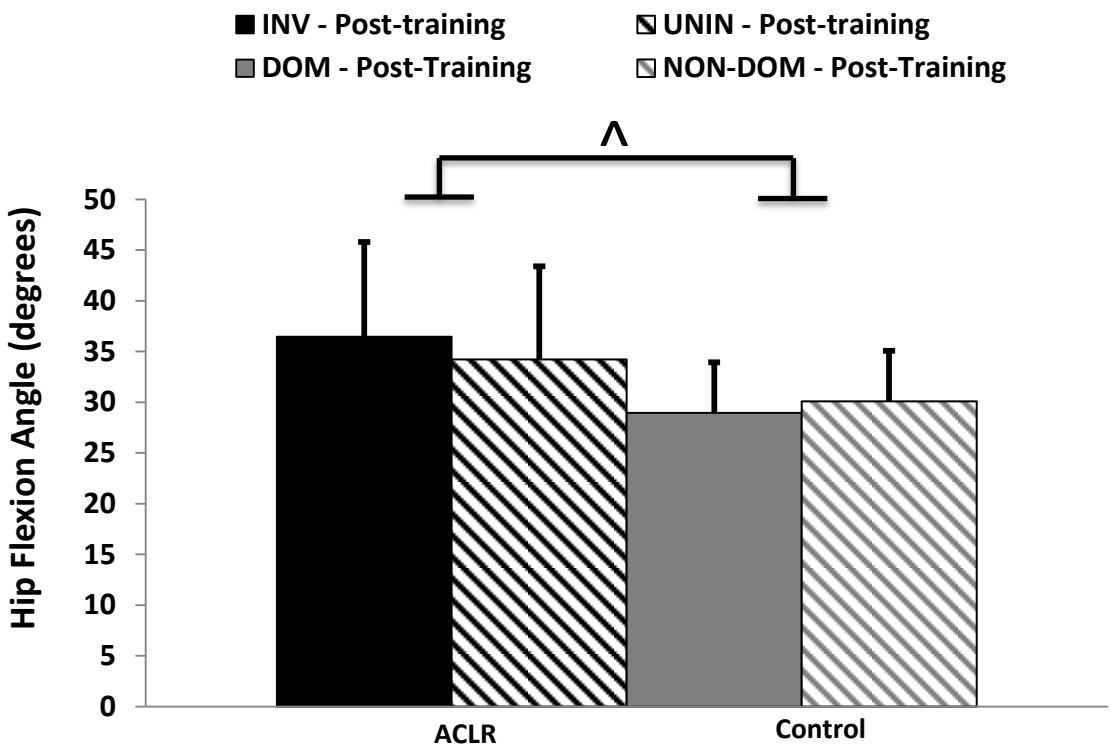
Appendix Figure A3: Changes in hip flexion moment at initial contact from pre- to post-training for the ACLR group. Significant main effects of session ($p<0.001$)^ and limb ($p=0.027$)^ were observed. The ACLR group landed with lower hip flexion moment after training, and the involved (INV) limbs demonstrated lower hip flexion moment than the uninvolved (UNINV) limbs. Significant main effects are denoted by ^.



Appendix Figure A4: Post-training differences in hip external rotation moment of the ACLR and Control group after training. There were no significant interactions or main effects observed between the groups.



Appendix Figure A5: Post-training differences in hip flexion moment at intital contact between the ACLR and Control groups after training. There were no significant interactions of main effects observed between the groups. Significant main effects are denoted by ^.



Appendix Figure A6: Post-training differences in hip flexion angle at initial contact between the ACLR and Control groups after training. A significant main effect of group ($p=0.02$) was observed. The ACLR group demonstrated greater hip flexion angle after training than the control group.