

Postural adjustments during single-leg drop landing in subjects with chronic ankle instability

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INTRODUCTION

Chronic ankle instability (CAI) involves **deregulation of postural control mechanisms** and is estimated to occur in 70% of the individuals after ankle sprain.

But what are the **biomechanical determinants** revealing postural control dysfunction that lead to the perpetuation of CAI in conditions close to the mechanisms of injury?

Assess bilateral postural adjustments during single-leg drop landing on an unstable surface in a dual task context in CAI

METHODS

Cross-sectional study

Ethical approval number – 0900

28 athletes

Modalities with increased risk for CAI

Without CAI (n=14)

With CAI (n=14)

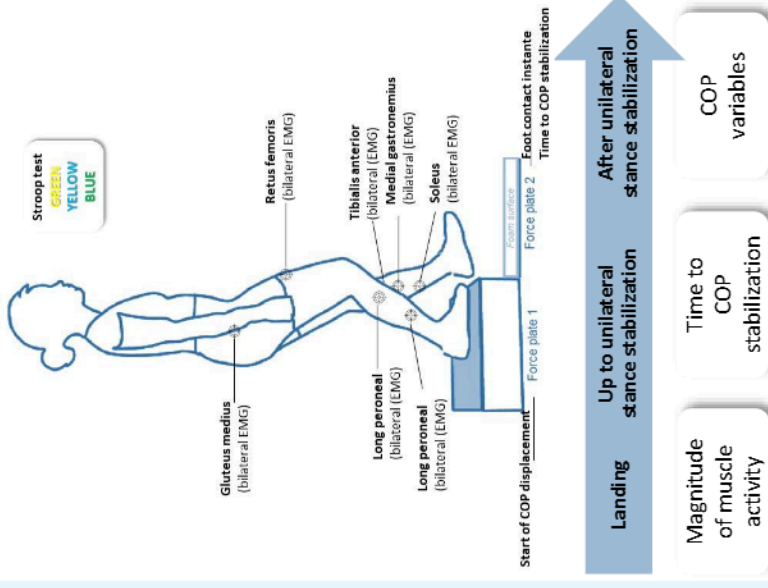


Figure 1: Experimental setup

RESULTS

Table 2: Participants characterization

	Without CAI	With CAI	P-value
Gender	F57.1%; M42.9%	F57.1%; M42.9%	
Age	22.36 ± 2.68	23.57 ± 3.55	P>0.05
BMI	22.9 ± 1.80	22.7 ± 1.71	

Regarding CAI participants:

- Almost half reported moderate pain and other symptoms and moderate limitations in sports and quality of life (FAOS).
- More than half presented their last giving away episode in the last year.

When compared with the control group, the CAI group presented:

Landing

- Ipsilesional limb**
- Gluteus medius
 - Rectus femoris
 - Tibialis anterior
- Contralateral limb**
- Rectus femoris

Up to stabilization

- Ipsilesional limb**
- Time to stabilization
 - CoP AP displacement

After stabilization

- Ipsilesional limb**
- Gastrocnemius medialis
 - Short peroneal
- Contralateral limb**
- Long peroneal

CONCLUSION

Individuals with unilateral CAI present deregulation in postural control mechanisms in both ipsilesional and contralateral lower limbs expressed through failure in proximal and distal lower limb muscles activation.

Neuromotor rehabilitation after unilateral ankle sprain should consider both lower limbs in a global limb approach.

REFERENCES

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