

CORRELATIONS BETWEEN COUNTERMOVEMENT JUMP, DROP JUMP AND HORIZONTAL DECELERATION ABILITY IN NCAA DIVISION 1 FEMALE SOCCER ATHLETES

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Purpose

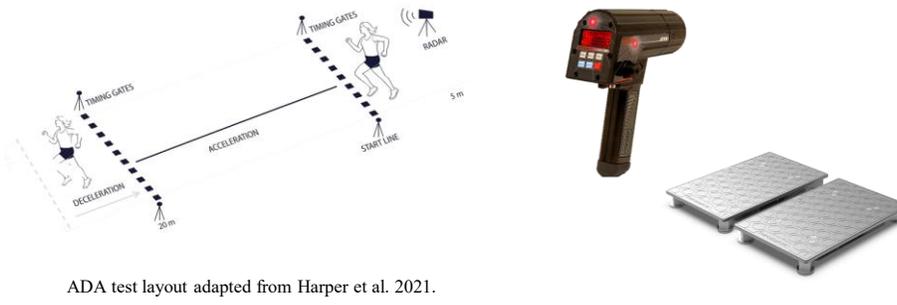
Examine the relationships between countermovement jump (CMJ), drop jump (DJ) and average early (EDEC) and late (LDEC) horizontal deceleration (DEC) ability in NCAA Division 1 female soccer athletes.

Participants

Thirty-three Division 1 female soccer players volunteered to participate in this study (18-22 yrs, 145.8 ±14.3 lbs).

Materials and Methods

Two maximal sprint times were recorded over 20m. Participants then completed three acceleration deceleration ability (ADA) tests. Post field testing, participants completed two CMJ trials and six DJ assessments on dual-force plate platforms.



ADA test layout adapted from Harper et al. 2021.

Practical Application

DEC is a critical and highly demanding action in soccer. To train and improve deceleration ability, incorporating DJ training might be beneficial for female soccer athletes.

Conclusion

Selected DJ variables showed moderate to large correlations to EDEC and LDEC providing insight into potential underpinning qualities of late-stage deceleration and deceleration profiles in female athletes.

Results

Key Findings:

- Moderate positive correlation between average LDEC and DJ RSI (0.48) and DJ peak drive off force (0.55)
- Moderate negative correlation between average EDEC and DJ RSI (-0.33) and DJ peak drive off force (-0.33)

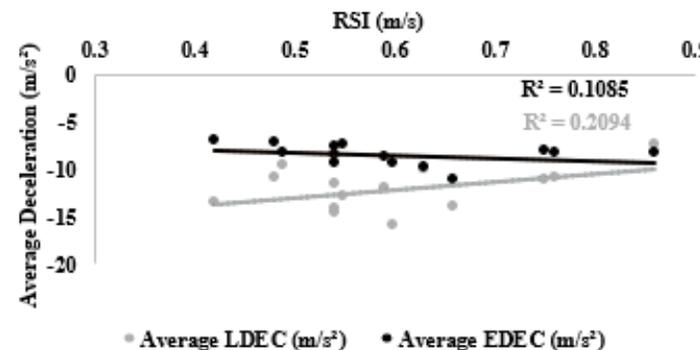


Figure 1. DJ RSI and Average EDEC and LDEC

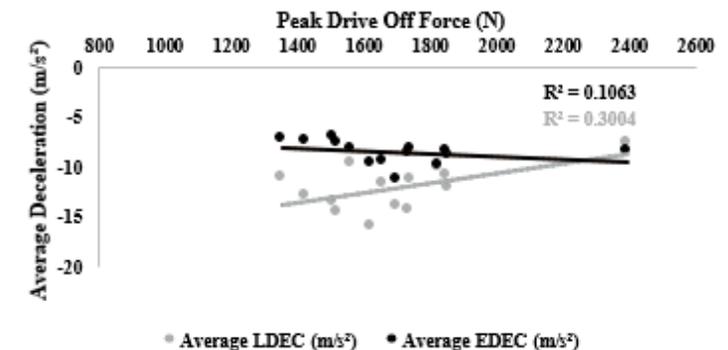


Figure 2. Peak Active Force and Average EDEC and LDEC