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Cliodhna O'Connor

Strength & Conditioning for Female Athletes

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St Mary's University Twickenham London

Cuala

What informs my perspective…

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Research/Theory..

International Journal of Sports Physiology and Performance, 2019, 14, 1157-1158
https://doi.org/10.1123/ijspp.2019-0703

Human Kinetics
EDITORIAL

Exercise and Sport Science Failing by Design in Understanding Female Athletes

Sophia Nimphius

"Reflecting on research investigating differences in athletic performance and risk of injury in male and female athletes, I question whether a lack of control or consideration of physical capacity (e.g. strength) or skill (e.g. sports specific or movement skill) potentially confounds much of this research. As a result, one or more variables that are modifiable through training (e.g. strength, sporting and movement skill) likely explain conclusions attributed to gender/sex."

"Although strength and neuromuscular adaptations to resistance training are broadly similar in men & women, it could be hypothesized that if belief is not present the subsequent ability to learn to use this strength for a transfer to performance may not occur as readily in female athletes"

"well- intended research on female athletes, through lack of control or description of modifiable factors such as strength, skill, and training age, has mostly perpetuated conclusions that overly prescribe the idea of female athletes' having an inherent 'issue'. It is a broad brush stroke that does a disservice to not only our science but also the athletes that we seek to support"

"OUR CONCLUSIONS & USE OF LANGUAGE ARE POWERFUL…."

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When she matched like for like..

©Journal of Sports Science and Medicine (2019) **18**, 101 - 108

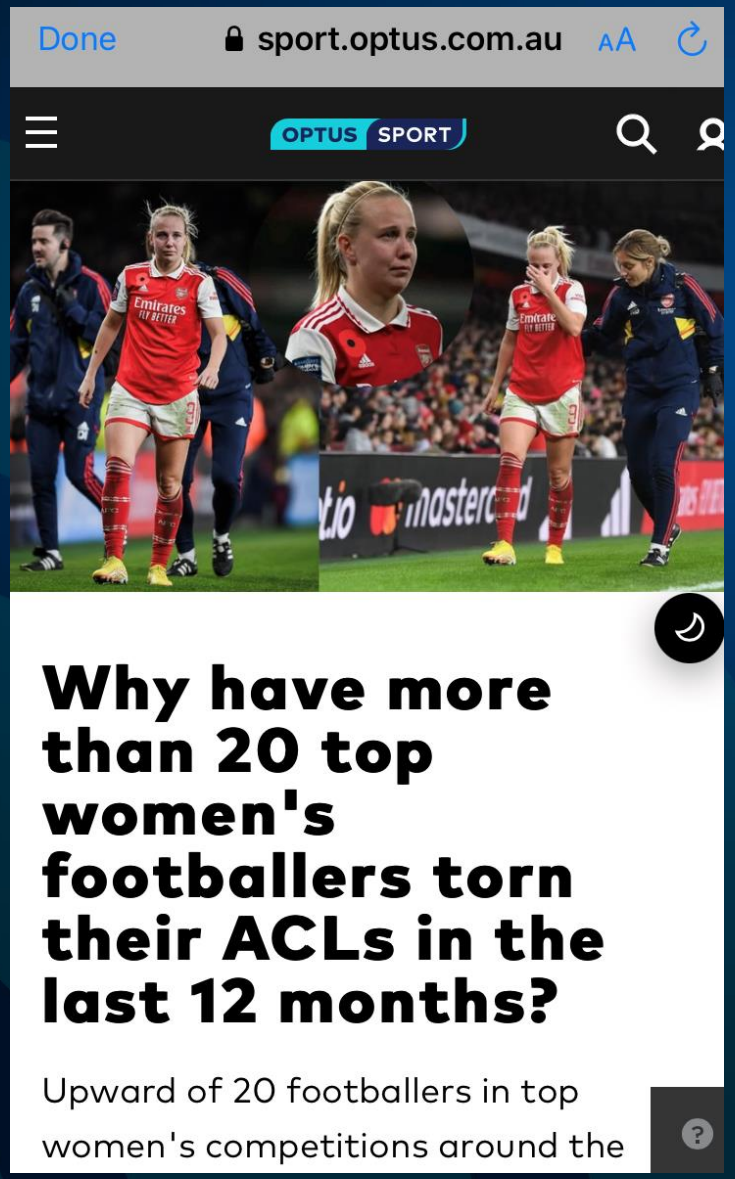
Research article

Comparison of Quadriceps and Hamstring Muscle Activity during an Isometric Squat between Strength-Matched Men and Women

Sophia Nimphius[1], Jeffrey M. McBride[2], ✉, Paige E. Rice[1,2], Courtney L. Goodman-Capps[2], Christopher R. Capps[2]

32 Participants Men (n=16) Women (n=16)
Primary Purpose: 'determine whether strength –matched men & women exhibit a different magnitude and ratio of leg muscle activity during a maximal voluntary isometric squat."
Secondary Purpose: "To assess the effect of normalisation method on differences in strength between men & women"

Results: "The investigation indicates that the magnitude of muscle activity and the ratios examined are not significantly different between men and women in a maximal voluntary isometric squat when matched for normalized strength. Future investigations should consider subject strength and normalization procedures in the experimental design to elucidate possible sex differences in neuromuscular performance capabilities"



Training Load?

LTAD?

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INTENT

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IN THE GYM ENVIRONMENT…

1: Unaware of the ceiling….

2: Gulf with development athletes….

3: No peacocking!

Strategies to DRIVE INTENT

Velocity Measures

Leaderboards (Teams/Individual) – Framing can be tricky

Language “Lash It” | Humour “Are you for real?”

Shine a light on outliers - (Different Reactions)

Positioning – Sled Sprints

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Heavy v Lighter Conversation…

COC: So Jonny I've been thinkin…
JHW: Go on..
COC: We both agree that these players have a lot more in the tank that they are not accessing..
JHW: Agreed

COC: Do we need to try and access that or could our time be better spent?
JHW: Well I have been taking the approach that they aren't accessing their upper limits so they can tolerate a bit more volume

COC: But what if we went lighter and focused more on intent
JHW: Yes – but then would we be in danger of not giving them enough stimulus?
COC: Are we just living in the middle ground and not really hitting either end?

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← Thread Open app

Eamonn Flanagan
@EamonnFlanagan

Master Velocity Based Training in minutes with 4 quick, actionable use cases for S&Cs, athletes & coaches

Any tech in the weightroom has to potential to be a distraction as much as an addition

Read below to limit the distraction & maximise the impact
👇

← Thread Open app

Replying to @EamonnFlanagan

Drive Athlete Intent

If I only had 1️⃣ use for VBT it would be this

Power & speed-strength training relies on "intent of effort"

Maximise intent = maximise adaptation

Giving velocity feedback increases athlete intent. Some studies also suggest it ⬆️ transfer of training

1 1 8

Eamonn Flan... @EamonnFla... · Dec 1
Feedback options:

- Between reps:: "beat your last rep"
- Between sets: "beat your last set"
- Between athletes: "beat your teammate"
- Between weeks: "beat last week"

All be used to significantly increase athlete buy-in, intent, absolute outputs & transfer of training

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ON THE PITCH

Things I have heard - from people with very good intentions…

“Why won’t they go for the ball”

“they just don’t want it enough”

“Are they willing to put their bodies on the line?”

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1: Physical Contact
Need to build confidence in this – get over the giggles!

2: Struggle to “push” – (Intent …Force)

3: Changes of Gear.. (VW & SG)

4: Hitting the Ball Hard (Where are the coaches in this)

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First Attempt…

Second Attempt

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Strength and Conditioning Recommendations for Female GAA Athletes: The Camogie Player

Duggan, John David MSc, CSCS[2]; Moody, Jeremy PhD[2]; Byrne, Paul J. PhD[3]; Ryan, Lisa PhD[1]
Author Information

Match-Play Running Performance and Exercise Intensity in Elite International Women's Rugby Sevens

Malone, Shane[1]; Earls, Marian[2]; Shovlin, Aidan[1]; Eddy, Anthony[2]; Winkelman, Nick[2]
Author Information

The running performance of elite ladies Gaelic football with respect to position and halves of play

Shane Malone[1,2] · Aideen McGuinness[1] · John David Duggan[3] · Amy Murphy[1] · Kieran Collins[1,2] · Cliodhna O'Connor[1,4]

Peak Running Intensity of Elite Female Field Hockey Players During Competitive Match Play

McGuinness, Aideen; Passmore, David; Malone, Shane; Collins, Kieran

Journal of Strength and Conditioning Research 2022; 36(4): 1064-1070.

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SHE Research Group – Dr Aoife Lane.

Dr David Nolan – Training Adaptations/Menstrual Cycle

synapseperfor... @David_sy... · Nov 9

Very interesting.

Do we overfocus on the physiological effects of the menstrual cycle & theoretical impact it has on muscle function & recovery?

Physiology influences psychology. We must consider MC effect on mood, perceived effort etc. & how this may impact sport performance.

> **Jacky Forsyth** @JackyForsyth · Nov 8
> The Effect of Menstrual Cycle Phases on Approach-Avoidance Behaviors in Women: Evidence from Conscious and Unconsci...
> pubmed.ncbi.nlm.nih.gov/36291350/

synapseperfor... @David_sy... · Nov 8

Very important point I continuously make.

We observe large amounts of inter-individual & inter-cycle variation in phase lengths, hormone concentrations & symptomology.

This is 1 reason why group level, blanket recommendations around training & nutrition are not appropriate.

> **Carla vdB** @CarlavdB_ · Nov 8
> Menstrual cycle phase definitions are often based off the assumption that ovulation occurs on day 14… but Grieger&Norman show that this only occurred in 13% of cycles.
> Figure shows +LH test days across 18,761 cycles
> THIS is why research needs to define cycle phases objectively

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So What.....

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