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**WORLD CONGRESS ON
SCIENCE & FOOTBALL**

4-7 JUNE | MELBOURNE CONVENTION
AND EXHIBITION CENTRE



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CARNEGIE SCHOOL OF SPORT

BIGGER, STRONGER, FASTER: THE DIFFERENCES IN PHYSICAL QUALITIES BETWEEN PLAYER DEVELOPMENT GROUP AND ENGLAND ACADEMY PLAYERS IN YOUTH RUGBY UNION

**Padraic J. Phibbs, Dale Read, Cameron Owen, Kevin Till, Mark Atkinson,
Sean Williams, Keith Stokes, Simon Kemp, & Ben Jones**



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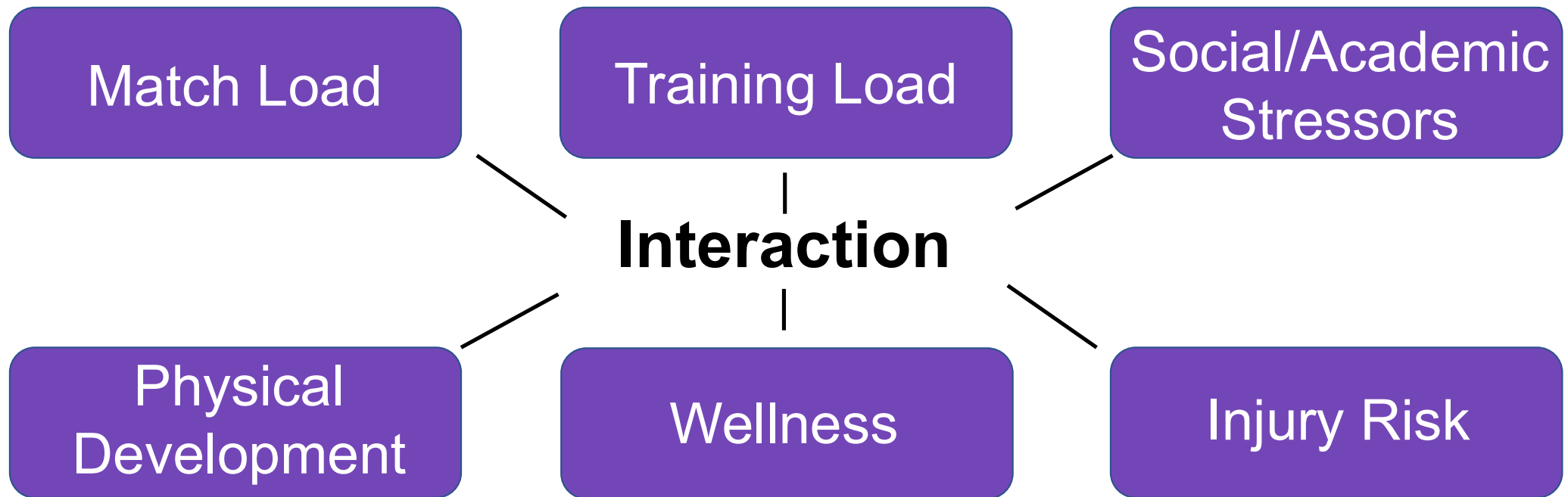


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Talented Developing Player Project





777 Players



1,089 Observations



35 Academy Visits



7,865 km Driven



SARACENS





PDG

**"Entry Point to the
Academy System for
Talent Identified
Developing Players"**



EAP

**"Designation Given to
Players Demonstrating
the Greatest Potential
at Each Age Group"**

**Senior
Academy (18+)**

**Junior
Academy (16-18 years)**

**Development
Squads (15-16 years)**

**Developing Player
Programme (13-16 years)**

School & Club Participation

How do Player Development Group
and England Academy Players
Differ in Anthropometric and Physical
Characteristics?



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178 U18 Players



359 Observations



EAP

$n = 41$

17.3 ± 0.6 years

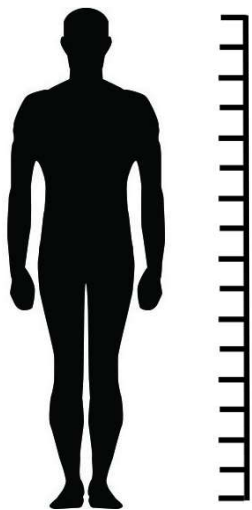


PDG

$n = 137$

Likely Trivial





Stature



Body Mass



Body Fat %



CMJ



IMTP



40 m Sprint



30-15 IFT



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**Talented Developing Player Project
Standardised Physical Testing Battery**

Forwards



EAP

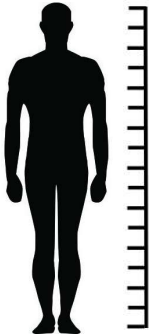


PDG

186 ± 4 vs. 183 ± 7 cm

EAP *Almost Certainly* Greater ($d = 0.8 \pm 0.3$)

Stature



Body Mass



102 ± 12 vs. 95 ± 12 kg

EAP *Very Likely* Greater ($d = 0.5 \pm 0.3$)

Body Fat %



24 ± 5 vs. $22 \pm 7\%$

EAP *Possibly* Greater ($d = 0.3 \pm 0.3$)

Backs



EAP



PDG

181 ± 6 vs. 178 ± 6 cm

EAP *Very Likely* Greater ($d = 0.6 \pm 0.4$)

85 ± 12 vs. 79 ± 8 kg

EAP *Likely* Greater ($d = 0.5 \pm 0.3$)

18 ± 4 vs. $17 \pm 5\%$

EAP *Possibly* Greater ($d = 0.2 \pm 0.4$)

Forwards



EAP



PDG

32 ± 5 vs. 34 ± 5 cm

EAP *Possibly Lower* ($d = -0.3 \pm 0.4$)

1973 ± 252 vs. 1865 ± 219 N

EAP *Likely Greater* ($d = 0.4 \pm 0.3$)

20 ± 3 vs. 20 ± 3 N·kg⁻¹

Unclear ($d = 0.1 \pm 0.3$)

Backs



EAP



PDG

38 ± 6 vs. 38 ± 6 cm

Unclear ($d = 0.0 \pm 0.4$)

1764 ± 276 vs. 1664 ± 250 N

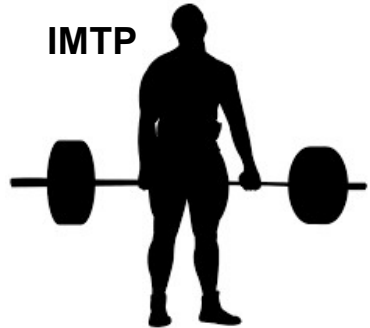
EAP *Likely Greater* ($d = 0.4 \pm 0.4$)

21 ± 3 vs. 21 ± 3 N·kg⁻¹

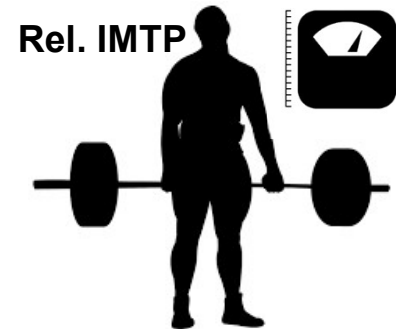
Unclear ($d = 0.1 \pm 0.4$)



CMJ Height



IMTP



Rel. IMTP

Forwards



EAP



PDG

Backs



EAP



PDG

Max Speed



8.1 ± 0.5 vs. 8.2 ± 0.6 m·s⁻¹

EAP *Possibly* Lower ($d = -0.2 \pm 0.4$)

8.8 ± 0.3 vs. 8.6 ± 0.4 m·s⁻¹

EAP *Likely* Greater ($d = 0.4 \pm 0.4$)

10 m Mom



560 ± 53 vs. 524 ± 57 kg·m·s⁻¹

EAP *Very Likely* Greater ($d = 0.7 \pm 0.4$)

486 ± 67 vs. 454 ± 44 kg·m·s⁻¹

EAP *Likely* Greater ($d = 0.5 \pm 0.4$)

30-15 IFT



18.2 ± 1.4 vs. 18.2 ± 1.4 km·h⁻¹

Unclear ($d = 0.0 \pm 0.4$)

19.4 ± 1.0 vs. 19.6 ± 1.1 km·h⁻¹

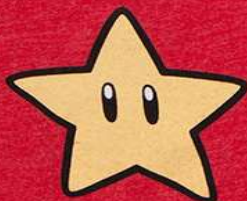
EAP *Possibly* Lower ($d = -0.3 \pm 0.4$)



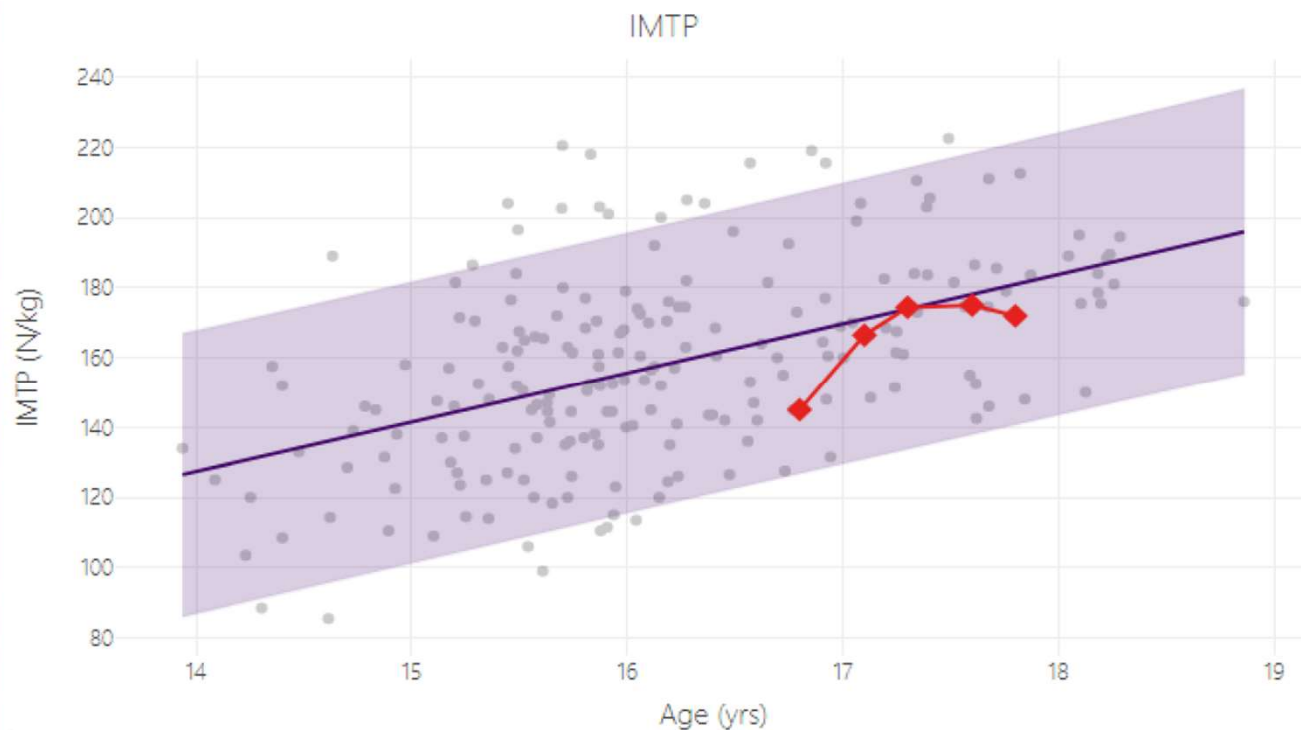
BIGGER



STRONGER



FASTER

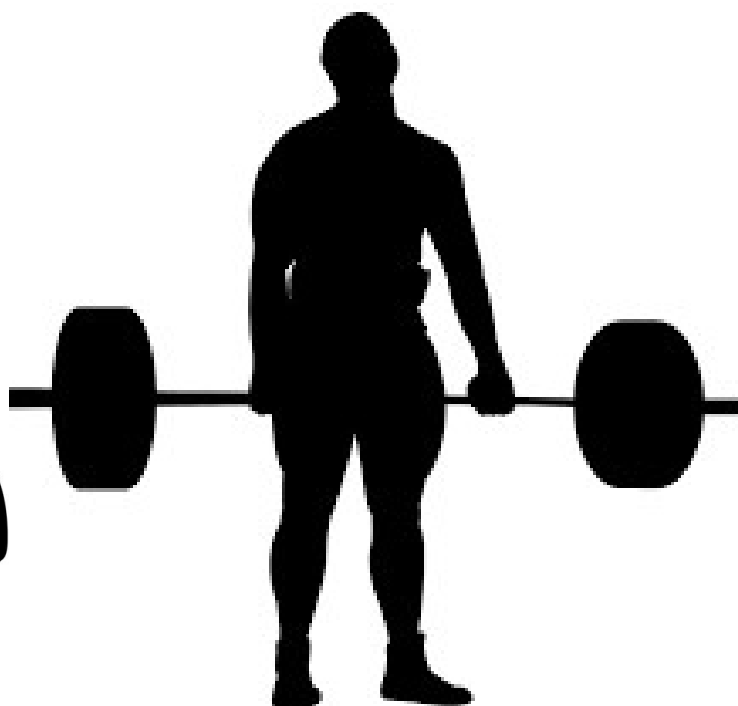


Caution





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Carnegie Applied Rugby Research Centre



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Thank you

Any questions?

