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# The influence of Body Mass on the 30-15 Intermittent Fitness Test in Rugby Union players

Josh Darrall-Jones, Ben Jones & Kevin Till

[j.darrall-jones@leedsbeckett.ac.uk](mailto:j.darrall-jones@leedsbeckett.ac.uk)

@J\_Darrall\_Jones



Institute for Sport, Physical Activity & Leisure

Leeds Beckett University, Institute for Sport, Physical Activity & Leisure, Leeds, UK

## Introduction

Rugby union is a physically demanding intermittent contact sport, characterised by high-intensity efforts, followed by incomplete recovery. High levels of contact during match-play favour players with increased body mass, whilst momentum is considered an important physical quality for successful performance

## Purpose

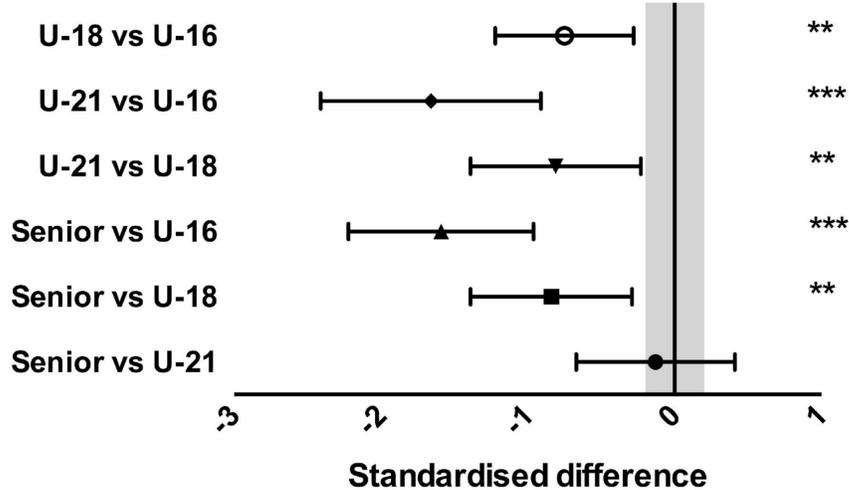
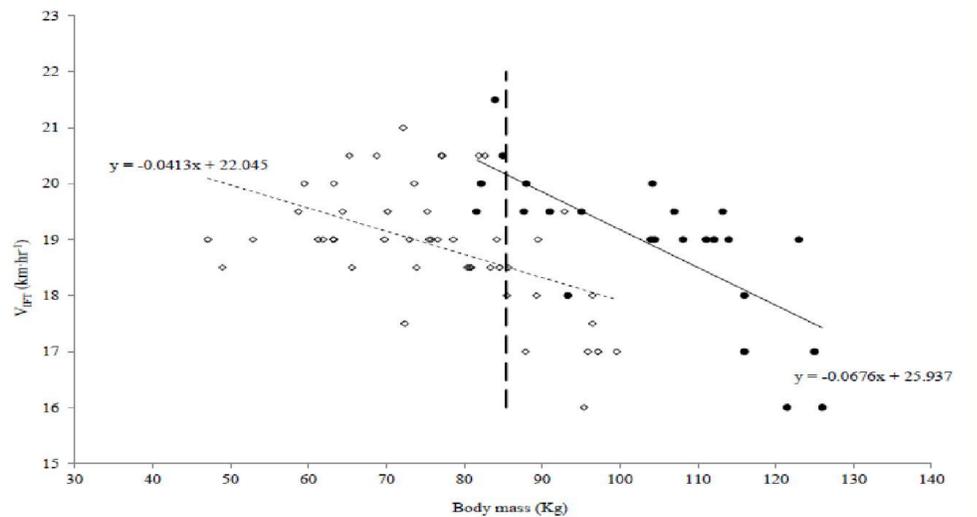
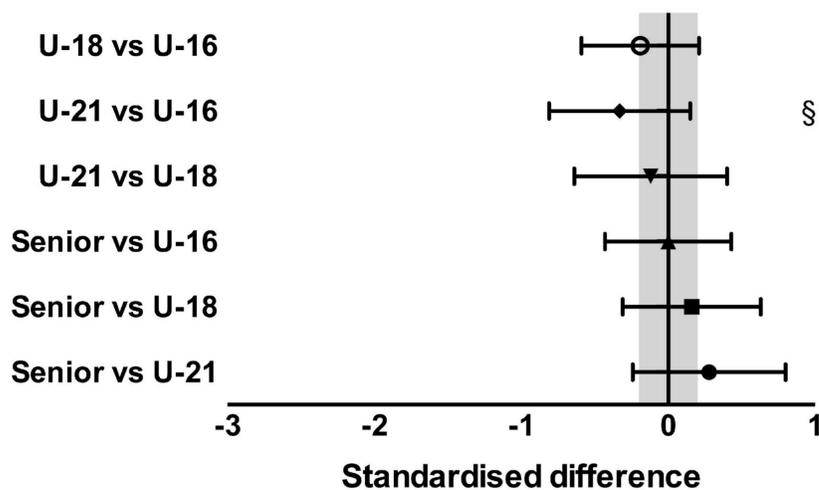
To determine the influence of body mass on the end speed ( $V_{IFT}$ ) of the 30-15IFT

## Method

114 male rugby union players from four squads (i.e., U16s, U18s, U21s and Senior's) completed the 30-15<sub>IFT</sub> mid-season following institutional ethics approval.  $V_{IFT}$  ( $\text{km}\cdot\text{hr}^{-1}$ ) and body mass were collected from all participants. Data were analysed using magnitude based inferences to determine if differences between squads were greater/similar/lower (%/%/%) than the smallest worthwhile change or difference ( $ES \geq 0.2$ ) based on Cohen's  $d$  effect size principle.



## Findings



Absolute  $V_{IFT}$  differences were possibly (§) lower in U16s vs. U21s. When covariate of body mass was applied differences were very likely (\*\*) and almost certainly (\*\*\*) greater than the smallest worthwhile difference ( $ES > 0.2$ ) in squads with lower body mass.

## Conclusions

There appears to be a ceiling in absolute  $V_{IFT}$  in rugby union players irrespective of age. Despite this, the results suggest that players attaining the same  $V_{IFT}$  as body mass increases, improve their ability to perform high-intensity running. The interaction of increased body mass is likely beneficial as this impacts upon momentum which is beneficial during match play.