



LEEDS
BECKETT
UNIVERSITY

Citation:

Read, D and Jones, B and Till, K (2016) The influence of possession on the movement and physical demands in adolescent rugby union match play. In: 10th Annual Conference of British Association of Sport and Exercise Science, 28 November 2016 - 29 November 2016, East Midlands Conference Centre, UK.

Link to Leeds Beckett Repository record:

<https://eprints.leedsbeckett.ac.uk/id/eprint/3701/>

Document Version:

Conference or Workshop Item (Accepted Version)

The aim of the Leeds Beckett Repository is to provide open access to our research, as required by funder policies and permitted by publishers and copyright law.

The Leeds Beckett repository holds a wide range of publications, each of which has been checked for copyright and the relevant embargo period has been applied by the Research Services team.

We operate on a standard take-down policy. If you are the author or publisher of an output and you would like it removed from the repository, please [contact us](#) and we will investigate on a case-by-case basis.

Each thesis in the repository has been cleared where necessary by the author for third party copyright. If you would like a thesis to be removed from the repository or believe there is an issue with copyright, please contact us on openaccess@leedsbeckett.ac.uk and we will investigate on a case-by-case basis.

The influence of possession on the movement and physical demands in adolescent rugby union match play

*Dale Read^{1,2}, Ben Jones^{1,2} and Kevin Till^{1,2}

¹Leeds Beckett University, Leeds, LS6 3QS, United Kingdom

²Yorkshire Carnegie Rugby Union Football Club, Leeds, LS6 3BR, United Kingdom

*Corresponding author: d.read@leedsbeckett.ac.uk
@DaleRead4

The whole match demands of rugby union are well established, however it is unclear how these vary during specific phases of play within a match. For example, the influence of phases of play (attacking or defending) on the movement and physical demands are yet to be quantified. Therefore, the aim of this study was to investigate the influence of attacking and defensive phases of play on the movement (e.g., running) and physical (e.g., accelerometer activity) demands for forwards and backs. With institutional ethics approved, 50 male academy rugby union players (age: 17.6 ± 0.6 years; stature: 183.0 ± 6.8 cm; body mass 89.4 ± 10.9 kg) from one regional rugby union academy were tracked during match-play using microsensor technology (Optimeye S5, Catapult Innovations, Melbourne, Australia). 260 observations were collected over 2 seasons (12 matches). Differences in maximum sprint velocity (V_{\max}), relative distance and PlayerLoad™ (PL.min⁻¹) were assessed using magnitude based inferences. The mean length of matches were 74.8 ± 3.3 min, whilst the mean amount of time the ball was in play was 27.4 ± 2.9 min. The mean amount of time spent attacking per match was lower than defending (12.7 ± 3.1 vs. 14.7 ± 2.5 min). There were a lower number of attacking phases (27 ± 9) compared to defensive phases (31 ± 10) whilst the mean phase was similar in length (26 ± 17 vs. 26 ± 18 s). The demands were *almost certainly* greater when defending compared to attacking for forwards; V_{\max} (3.3 ± 1.8 vs. 4.1 ± 1.5 m.s⁻¹), relative distance (97.9 ± 53.7 vs. 121.8 ± 48.8 m.min⁻¹) and PL.min⁻¹ (10.6 ± 5.3 vs. 12.7 ± 4.6 AU.min⁻¹). When defending, relative distance was *very likely* greater (101.6 ± 66.4 vs. 121.4 ± 60.9 m.min⁻¹), and V_{\max} (3.7 ± 2.1 vs. 4.2 ± 1.8 m.s⁻¹) and PL.min⁻¹ (10.7 ± 7.6 vs. 12.4 ± 7.4 AU.min⁻¹) were both *likely* greater compared to attacking for backs. The movement and physical demands were consistency greater when defending for both positional groups, although a smaller disparity between phases was observed for backs than forwards. This indicates backs have greater movement demands during attacking phases, which was also reflected in the higher V_{\max} . The greater PL.min⁻¹ for the forwards during defending suggests a greater involvement in tackles and rucks. These data provide practitioners with reference data when replicating match specific phases of play.