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Sport and Exercise Science New Zealand
Annual Conference, 13-14 October 2017
Avantidrome, Cambridge
Proudly in association with ICPAFR (International Council for Physical Activity and Fitness Research)
Using Global Positioning System Analysis to Quantify the Movement Characteristics of Sub Elite Rugby Union Players in Training and Match Performance

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Rugby Union (RU) involves various movement patterns (MP) which include walking, jogging and sprinting. Substantial physiological differences exist between backs and forwards. The diversity of physiological requirements of each positional group results in a range of physiological stress experienced by players. Game demands and training loads need to be quantified to maximise the physiological benefits of training and improve performance. Therefore, the aim of the present study was to incorporate GPS player tracking in sub-elite (SE) RU games and training sessions to evaluate the MP. 31 SE RU players participated in the study. Players were categorised as tight or loose forwards, scrumhalves, inside or outside backs. MP was evaluated over four weeks of training and games with 23 portable GPS player tracking devices. MP was categorized as walking, jogging, cruising, striding, high-intensity and sprinting. Total distance (m), total duration (min), relative distance (m/min), and distance (m) and duration (min) covered in each speed zone were compared between training and games. Results indicated that SE RU players are not trained sufficiently. Training loads failed to meet game demands, especially in high-intensity and sprint zones, which increase injury risks. Conditioning programmes should be adjusted so that training loads equal game demands.

References


