

Tackle limb preference in Women's rugby union during match-play and training

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AIM

To determine if limb preference affects tackle performance during match-play and to identify differences in horizontal acceleration exist in a tackle in training.

METHODS

Match Analysis

- 4 Women's Premiership matches were video recorded
- Each match was analysed using Longomatch
- All tackles were identified and coded based on tackler side and successful/unsuccessful based on the classification outlined by Burger et al [1]
- Players were asked to identify if right or left sided dominant based on writing handedness

Tackle Acceleration

- 13 Elite female rugby players (Age 26 ± 5 years; Height 168.3 ± 7 cm; Weight 73.1 ± 9 kg); 6 forwards/7 backs. All were right-side dominant
- Pasco accelerometer mounted in a pouch inside a Centurion tackle bag, with Bluetooth link to laptop
- Each player completed three tackles on each side in a self-selected random order, with a 1 m run-up.
- Maximum horizontal acceleration of the tackle bag on tackle impact recorded from the spike of the acceleration-time curve

Data Analysis

- Total and mean values for tackle counts and horizontal acceleration were calculated and differences between side preference identified

RESULTS

- Preferred side tackles produced a greater successful outcome (77.6%) than the non-preferred side (66.8%) (Table 1)
- Horizontal accelerations were higher in the preferred side (125 ± 15.7 m·s⁻²) than the non-preferred side (118.2 ± 14.2 m·s⁻²)

Table 1. Number of successful (✓) and unsuccessful (X) tackle during match-play.

Game	Total Tackles	Dom (✓)	Dom (X)	Dom Total	Non-Dom (✓)	Non-Dom (X)	Non-Dom Total
1	111	47	16	63	33	15	48
2	77	46	6	52	21	4	25
3	110	56	22	78	24	8	32
4	166	107	9	116	37	13	50
Total	460	256	52	308	112	40	152
Mean	115	64	13	77	28	10	38

CONCLUSION

Players attempted a greater number of tackles and were more successful with their preferred limb in a match
The preferred side produced a high horizontal acceleration as a result of its increased strength and skill due to the greater habitual use of the dominant muscles [2].

REFERENCES

- [1] Burger, N. et al. (2016). *British Journal of Sports Medicine*, 50(15), 932-938.
[2] Ditroilo, M. et al. (2010). *Journal of Sports Sciences*, 26(8), 667-77.

