

ATHLETIC PROFILES OF ADOLESCENT FEMALES

RESEARCH QUESTIONS

1. Establish the reliability of strength and speed measures in adolescent female athletes
2. Explore whether athletic profile is influenced by biological maturity

133



FEMALE ATHLETES

Age (years): 13.7 ± 7.3
 Height (cm): 156.1 ± 14
 Body Mass (kg): 50.5 ± 16
 PPAH%: 93.6 ± 7.1
 Biological Age (years): 12.9 ± 2.4

N = 31 pre-PHV
 N = 21 circa-PHV
 N = 81 post-PHV

BASELINE SOMATIC MATURITY; ISOMETRIC MID-THIGH PUL; 5 & 40M SPRINT; 1000M RUN
ATHLETES CATEGORISED AS FAST, HYBRID OR SLOW DOMINANT BASED ON ANAEROBIC SPEED RESERVE



ANTHROPOMETRY

Correlation between PPAH% & BAU Sport
 PPAH% - $r = 0.94$
 PAH - $r = 0.61$
 Biological Age - $r = 0.92$



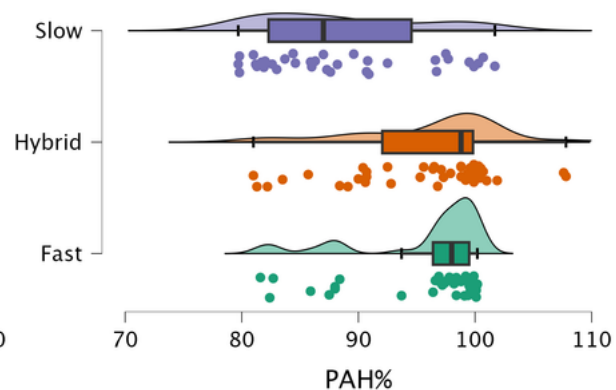
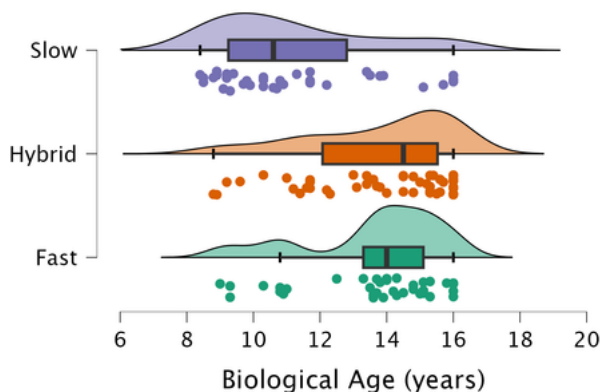
IMTP

Within session reliability ICC (CV%)
 Peak Force - 0.98 (4.9%)
 Relative Peak Force - 0.90 (4.7%)
 Force @50ms - 0.92 (12.4%)
 Force @100ms - 0.92 (15.5%)
 Force @200ms - 0.90 (18.5%)



SPRINT TESTING

Within session reliability ICC (CV%)
 5m - 0.82 (3.8%)
 40m - 0.97 (1.0%)
 MSS - 0.95 (3.2%)



PRACTICAL APPLICATIONS

- Biological maturation leads to a greater proportion of fast dominant athletes and will impact performance and recovery
- Individualise (or group) training prescriptions to prevent excessive fatigue developing in fast-dominant athletes