Knowledge Transfer: Basic Training as a Platform for Research

Schram, Ben; Orr, Rob Marc; Canetti, Elisa

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Changes in Training Load in Army Basic Training over an eight year period.

Ben Schram¹, Robin M Orr¹, Elisa Canetti¹
¹Tactical Research Unit, Bond University, Queensland, Australia.
bschram@bond.edu.au

Purpose: Basic training is a crucial stage of training in which injuries occur at a higher rate than at other stages of a trainee’s career. Basic training is constantly changing based on reviews of ongoing injuries, equipment changes and performance requirements. Given that most injuries are overuse and due to cumulative loads, it is important to quantify training loads during basic training. The purpose of this investigation was to compare a basic recruit training course across two time periods (2018 and 2010) with a specific focus on distances walked and run, loads carried and lifted.

Results: Along with an increase in PT sessions from 37 in 2010 to 40 in 2019, a decrease in running distance of 12.6km (-42.52%) was found from 30.1km in 2008 to 17.3km in 2018 with a concurrent increase in walking distance of 17.58km (+4.4%) from 396.3km in 2010 to 413.9km in 2019. The amount of load lifted increased by 303,257.3kg/reps (+194%) from 156,261.3kg/reps in 2010 to 459,518.5kg/reps in 2018. Loads carried also increased by 518,742kg/hrs (+13.9%) from 372,381.5kg/hrs in 2010 to 424,256kg/hrs in 2018. ACWRs above and below the desired 0.8-1.3 were seen at multiple times in both courses.

Conclusions: Despite changes to training being important to ensure the updating of material, the downstream effect and its relationship to injury should be acknowledged. Changes to one domain in response to injury prevalence, may inadvertently affect another domain and be associated with a different injury, i.e. decreased running load with a concurrent increase in walking load. The relationship between training load during basic training and subsequent training should be explored further.

Operational Relevance: Efforts to decrease one aspect of training may increase overall training load inadvertently. Efforts to decrease training volume may lead to increased training intensity without any subsequent changes in overall injury risk.