When athletes experience training distress, a break in training may facilitate recovery and improve performance. Conversely, when team training is interrupted, such as occurs during winter break in collegiate athletes, deconditioning may result. In the current study, physiological responses to exercise were made before and after an unstructured winter break in male collegiate rugby players.

PURPOSE: The purpose of the study was to examine detraining effects that occurred when structured training was interrupted for four weeks.

METHODS: Fourteen (n=14) male club rugby players underwent exercise testing to assess aerobic capacity (VO₂ max), strength (maximal bench press and leg squats), speed (10 yd dash), power (vertical jump), and body composition (body weight and % body fat by underwater weighing). A subject orientation of the testing was performed for all tests, and the treatment data were collected just prior to, and after the winter school break. T-tests were performed on pre- and post-winter break values.

RESULTS: There was no evidence of detraining after four weeks of unstructured training. No changes were observed in bench press strength (183 versus 188.6 lbs) or speed (1.69 versus 1.69 seconds) across the break. However, performance measures for aerobic capacity (4.055 vs. 4.057 ml/kg/min), squat strength (269.6 versus 308.2 lbs) and vertical jump (22.52 versus 23.94 inches) all showed significant improvements following the break. Additionally, there were significant increases in body weight (176.96 versus 178.63 lbs) and percent fat (12.76 versus 15.27%).

CONCLUSION: Four weeks of unstructured training over the winter school break appears to have provided a recovery period that allowed for increases in physiological function despite increases in body fat.

Sled towing is a popular method of overload training in many field sports. The initial acceleration and top speed phases are components in developing peak velocity in athletes. Acute training may lead to postactivation potentiation (PAP), which occurs when subsequent muscle performance is enhanced following a preload stimulus. However, this is highly dependent on rest time.

PURPOSE: To investigate acute sprinting in the acceleration and the maximum speed phases following different rest periods after sled towing.

METHODS: Eleven male field sport athletes (age=23.00± 2.79yrs, height=177.45± 6.34cm, mass=82.52± 8.79kg) completed a standardized warm-up then performed a baseline 30 meter (m) sprint (measured with acceleration and maximum speed splits). They were then attached to a waist harness and towed a sled equal to 30% of their bodyweight for 30m with maximal effort. Following a random rest period (2, 4, 6, 8, or 12min), they performed another maximal effort bodyweight sprint without the sled.

RESULTS: A 4x6 (split x condition) ANOVA revealed that baseline split times (split 0-5m 1.14±0.05s, split 5-10m 0.77±0.04s, split 10-20m 1.30±0.06s, split 20-30m 1.25±0.07s) were not different than split times for any rest condition (collapsed across rest conditions, split 0-5m 1.14±0.05s, split 5-10m 0.78±0.03s, split 10-20m 1.33±0.07s, split 20-30m 1.27±0.07s).

CONCLUSIONS: Sled towing did not increase or decrease acute maximal effort bodyweight acceleration or maximum speed sprint times. The different rest periods did not elicit a PAP effect, which may be attributed to less than optimal loading.

The purpose of the study was to evaluate the effect of training volume during tapering on kicking performance in college Taekwondo competitors trained under a periodization block model.

METHODS: Participants were eight men and four women of the taekwondo team at the University of Costa Rica. All individuals completed a 13-week macroncycle loading phase (10 weeks of load and 3 weeks of taper). Following the loading phase, participants were paired by gender and randomly assigned to either a condition in which they kept the same training volume or a condition where training volume was reduced by 50% using a linear pattern. Kicking motion time was measured by instructing individuals to perform a circular kick to a target located at 1.10m high followed by another kick to a target located at 1.60m high. Kicking time response was obtained by recording the time required to kick a random sequence of 10 targets. The "Fitlight Trainer system" was used to time both dependent variables. Measurements were recorded at the beginning of the loading phase, the sixth week of the load period and twice a week during each of the three weeks of the tapering phase. E

RESULTS: No significant interactions were found on kicking motion time (Pre = 1.39 ± 0.09s vs. Post = 1.28 ± 0.06s) and kicking time response times (Pre = 9.62 ± 1.01s vs. Post = 8.47 ± 0.51s) in the group following the same training volume and the group with reduced training volume (Pre = 1.35 ± 0.10s vs. Post = 1.26 ± 0.11s; Pre = 9.42 ± 1.52s vs. Post = 9.57 ± 1.78s, respectively). ANOVA results showed that regardless of the training volume, during the tapering phase improvements were observed on kicking motion time (p = 0.03) and kicking time response (p = 0.04), with the best performance observed at the end of the third week of the tapering phase. The 50% training volume reduction produced a higher ES on kicking motion time (1.50) and kicking time response (3.32) compared to no reduction in training volume (0.86 and 0.04, respectively).

CONCLUSIONS: The reduction of volume training during tapering under a periodization block model improved kicking performance on taekwondo competitors. In the analyzed conditions, tapering must extend at least three weeks.