

# Judo-Specific Training

Subjects: **Sport Sciences**

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Reaching peak judo performance requires the optimal development of technical-tactical, physical, physiological and psychological abilities. High-intensity interval training (HIIT), including general and specific movements, is a training method often used in judo to simultaneously improve multiple aspects of performance. Combat simulation (randori) or throwing technique exercises (uchi-komi, technique repetition without throwing the partner and nage-komi, throwing technique repetition throwing the partner) as specific training methods are regularly used in judo. HIIT using uchi-komi as exercise and performed in all-out mode improves anaerobic and aerobic fitness while allowing technical skill development for judo athletes.

combat sports

training load monitoring

randori

uchi-komi

martial arts

## 1. Introduction

Reaching peak judo performance requires the optimal development of physical, physiological and psychological abilities. High-intensity interval training (HIIT), including general and specific movements, is a training method often used in judo to simultaneously improve multiple aspects of performance. Combat simulation (randori) or throwing technique exercises (uchi-komi, technique repetition without throwing the partner and nage-komi, throwing technique repetition throwing the partner) as specific training methods are regularly used in judo. HIIT using uchi-komi as exercise and performed in all-out mode improves anaerobic and aerobic fitness while allowing technical skill development for judo athletes.

## 2. Impact

Although efficacious in promoting fitness improvements, adding HIIT into judo training regimens could increase physiological and psychological fatigue with subsequent implications for recovery and athlete well-being during different training phases. Careful monitoring of training load, recovery and changes in psychological status are important for training periodization, to improve athletic performance, and to avoid problems related to non-functional overreaching. Considering and predicting these variables can aid in planning and refining training programs and could potentially help to avoid injury and burnout. Thus, the objective of this latest research was to investigate the relationship between well-being indices (i.e., sleep, stress, fatigue, delayed onset muscle soreness (DOMS), and a composite Hooper index (HI)), total quality of recovery (TQR)), internal training load (session-RPE) and physical enjoyment over intensified and tapering periods.

Sixty-one youth judo athletes were randomized to perform HIIT with either judo-specific (randori or uchi-komi) or general (running) modalities in addition to their regular judo training, or to a no-HIIT control group. The intervention took place during four weeks of training and twelve days of tapering. Subjective measures of physiological recovery, psychological well-being, and physical enjoyment were obtained throughout the intervention.

During both training phases, self-reported recovery quality was lower and session-RPE was greater with poorer sleep quality, more stress, more fatigue, and greater DOMS. Recovery quality and session-RPE were also inversely related to each other regardless of HIIT condition. Across all conditions, recovery quality explained a significant proportion of the variance in session-RPE (~40%) during the intensified training phase and sleep in addition to composite well-being score explained a significant proportion of the variance in session-RPE (~20%) during the tapering phase.

### **3. Conclusions**

These results demonstrate that recovery and pre-fatigue states may contribute to subjective intensity during intensified and tapering periods with or without supplemental HIIT among youth judo athletes. Moreover, physical enjoyment is slightly influenced by these variables. Coaches can use simple and low-cost surveys to monitor well-being, recovery quality, and enjoyment during both intensified training and tapering periods to control and adjust the training regimens and to support positive psychological states and properly-timed physiological recovery among judo athletes.

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