



DIFFICULTY in TRAINING LOAD AND MESOCYCLE CONCEPT

Prof. Dr. Caner Açıkkada

European University of Lefke, School of Physical Education and Sport
Leke, KKTC , Mersin 10, Turkey

It is important to calculate the training load (TL) correctly in training (Wallace et al., 2008). In correct calculation it is important to note the volume and intensity of TL (Wallace et al., 2008). In calculation of training volume it is used kilogram or tons (Egan et al., 2014), sometime hours, minutes and/or seconds (Brink et al., 2014; Moriera et al., 2015), and sometimes it is seen as repetition (Murphy et al., 2014). Similarly, training intensity is expressed as lifted percentage (%) of lifted maximal kilograms (1 maximal repetition: 1MR), sometime it is expressed as % of hours, minutes and seconds, and sometime it is expressed as the % of repetition number or heart rate (HR) (Wringley et al., 2012; Murphy et al., 2014; Coutts et al., 2009). Maximal intensity value may change according to the level of fatigue and psychological state. Calculation of maximal value of an athlete is calculated according to the last maximal measurement in training (Baechle and Earle, 2008). The application of maximal can be more or less than the measured 1MR in training. This situation may influence the calculation of TL.

The training provided by the coach and the athlete performed, is called external training load (EL), and the performed training and its physiological influence that subjectively the athlete anticipates is called internal training load (IL) (Wallace et al., 2008). The EL that the athlete should complete seen as independent variable that athlete should complete. This is seen as IL that influences the athlete to have a physiological adaptation. Therefore, the EL and IL are suppose to be equal but according to the influencing factors there is a difference between the loads. Therefore, the classic approach is more problematic approach in calculation of the training load (Wallace et al., 2008).

Therefore, there is a need for a new test to calculate the TL in a reliable way in volume, intensity, frequency, duration, and type. The research shows that modified Borg scale (CR 10-Skala) that shows IL between 0-10 is the current test to the problem (Borg et al., 1985; Coutts, 2003; Day, 2004; Foster, 1998; Foster et al., 2001). Therefore, a mesocycle of team sport and an individual sport are going to give as an example of this model.

References

Borg GAV, Hassmen P, and Langerstrom M. Perceived exertion in relation to heart rate and blood lactate during arm and leg exercise. *Eur J Appl Physiol* 65: 679–685, 1985.

Baechle TR, and Earle RW. *Essentials of Strength Training and Conditioning*. Champaign, IL: Human Kinetics, 2008.

Brink MS, Frencken WGP, Jordet G, and Lemmink KAPM. Coaches' and Players' Perceptions of Training Dose: Not a Perfect Match. *International Journal of Sports Physiology and Performance*, 2014, 9, 497-502.

Coutts AJ. Validity of the session-RPE method for determining training load in team sport athletes. *J Sci Med Sport* 6: 525, 2003.

Coutts AJ, Rampinini E, Marcorac SM, Castagnad C, Franco M. Impellizzeri Heart rate and blood lactate correlates of perceived exertion during small-sided soccer games. *Journal of Science and Medicine in Sport* (2009) 12, 79–84.

Day M. Monitoring exercise intensity during resistance training using the session-RPE scale. *J Strength Cond Res* 18: 353–358, 2004.

Egan AD, Winchester JB, Foster C, and McGuigan MR. Using Session Rpe To Monitor Different Methods Of Resistance Exercise. *Journal of Sports Science and Medicine* (2006) 5, 289-295.

Foster C. Monitoring training in athletes with reference to overtraining syndrome. *Med Sci Sports Exerc* 30: 1164–1168, 1998.

Foster C, Florhaug JA, and Franklin J. A new approach to monitoring exercise training. *J Strength Cond Res* 15: 109–115, 2001.

Murphy AP, Duffield R, Kellett A, and Reid M. Comparison of Athlete-Coach Perceptions of Internal and External Load Markers for Elite Junior Tennis Training. *International Journal of Sports Physiology and Performance*, 2014, 9, 751-756.

Moreira A, McGuigan MR, Arruda AFS, Freitas CG, and Aoki MS. Monitoring internal load parameters during simulated and official basketball matches. *J Strength Cond Res* 26(3): 861–866, 2012.

Wallace L, Coutts A, Bell J, Simpson N, and Slattery K. Using Session-RPE to Monitor Training Load in Swimmers NSCJ, December 2008;30(6): 72-76.