



Category: Fitness and Lifestyle Management



MAXIMIZING RECOVERY AND PERFORMANCE OF YOUR ATHLETES DURING REGIONAL SOCCER CAMP

Dr.Y.KALYAN KUMAR¹, V.JAGANNATHA REDDY²

¹Physical Director, Government Degree College, Nandikotkur, Kurnool,A.P.,India.

²Physical Director,Govt.Degree College, Banaganapalle, Kurnool,A.P. India.

What is RECOVERY?

- Often referred to as restoration and regeneration – Allows athletes to reach their full potential in relation to their training loads – Makes athletes Less likely to suffer from overtraining or burnout • “ the process the athlete goes through to return to a state of performance readiness” (Benardot, 1998, p.2) • “Involves physical and mental restoration” (Maughan, 1998)

When do we use Recovery Strategies for Sports Performance?

- Usually to assist with rehabilitation or recuperation?
- We need to use recovery strategies constantly
- Before, during, after every training session and every game.

What are the benefits of a good RECOVERY program?

- Accelerated adaptation and maximal performance
- Reduction of fatigue late in the game with the use of Training, nutritional, and tactical strategies (Reilly T 1997).

What are the roles of Recovery Strategies for Sports Performance?

- Two Primary Roles: – Monitoring the athletes adaptation to training and stress so that appropriate recovery strategies can be determined
- Selection of specific recovery techniques and strategies to minimize any residual fatigue from training and competing

What is the goal of Recovery strategies?

- Coaches can help educate athletes to understand, plan and use recovery strategies with a view to athletes learning to manage this for themselves.
- Effective monitoring and recovery management will enable both the coach and athlete to train hard, perform better and more consistently, to reduce training injuries and illnesses, and to develop sound self management strategies.

What are the different types of RECOVERY tools?

- Active rest: stretching
- Passive rest: 7-9 hours sleep (too much rest can slow down Central Nervous System)
- Light aerobic work (60%effort, more concentric than eccentric muscle actions)
- Pool sessions (all concentric)
- Psychological strategies (Relaxation)
- Nutrition
- Massage (Increasing blood flow without muscle activity)
- Hyperbaric oxygenation Increase oxygen to fatigued muscle cells



- Contrast shower (Blood vessel pumping) • Increase motivation (mental recovery)

When are recovery strategies needed the most?

- When there is excessive , usually physical, overload on an athlete without adequate physical rest (USOC, 1998)
- High frequency of Competition
- Monotonous training
- > 3 hours of training per day
- > 30% increase in training load each week
- > 2 hard training days in succession
- > More than 1 game in less than 72 hours

What is the result of excessive Physical Overload?

- Damage to muscle
 - Contact injury or Delayed Onset Muscle Soreness caused by eccentric Muscle Activity
 - Eccentric Muscle activity
- Muscle contraction (shortening) and muscles stretching (Lengthening) simultaneously
- Occurs with changes of direction while trying to slow the body down
- Occurs with moderate to high intensity running
- Does not occur with light pool or bike riding
- Does not occur during stretching, rest, or relaxation techniques

What can Administrators do?

- Match administrators and tournament planners should consider the stressful consequences for players in periods of congested fixtures and alleviate the physiological strain as far as possible by allowing 72 hours between competitive games (Reilly 2005)

How much REST do we need between games?

- The present data suggests that a soccer match increases the levels of oxidative stress and muscle damage throughout a 72 hour period (Ascensao 2008, Ispirlidis 2008)
- These results clearly indicate the need of greater than 72 hours for sufficient recovery for elite soccer players between games (Ispirlidis 2008) • Conclusion – The recovery time between 2 matches, 72-96 hours, appears sufficient to maintain the level of physical performance tested but is not long enough to maintain a low injury rate. The present data highlight the need for player rotation and for improved recovery strategies to maintain an low injury rate among athletes during periods with congested match fixtures (Dupont 2010)

Does intermittent endurance fitness improve performance?

- Effects of intermittent endurance fitness on match performance in young male soccer players • Intermittent endurance fitness positively affects physical match performance in male young soccer players (Castagna 2009)

Does the level of fatigue effect performance?

- Yes
- Our results demonstrated that junior soccer players may benefit from aerobic training to attenuate the decline in short passing ability caused by a short bout of intermittent activities . . . (Impellizzerie 2008)

Does performance level effect fatigue (Mohr 2003)?

- Top class soccer players performed more high intensity running during a game and are in better shape than lower class players.
- Fatigue occurred towards the end of matches as well as temporarily during the game regardless of performance level.



- Central Defenders covered a shorter distance in high intensity running regardless of performance level
- Central Defenders and attackers are in poorer shape than midfielders and outside full backs regardless of performance level
- Discussion – Pre-conditioning is very important to decreasing fatigue. Rotating player positions might help decrease the level of fatigue per player.

What is the physical effect of playing a man down?

- Following dismissal/Red Card, remaining players covered a greater total distance than normal, particularly in moderate intensity activities and had shorter recovery times between high-intensity efforts.
- Conclusion – tactical alterations may be necessary and/or players may need to adopt a pacing strategy to endure the remainder of a match
- Effects of video based perceptual training on pattern recognition and pattern prediction ability in elite field sport athletes and whether enhanced perceptual skills influenced the physiological demands of game based activities.
- Conclusion – Video based perceptual training can be used effectively to enhance the decision making ability of field sport athletes; however, it has no effect on the physiological demands of game based activities (Gabbett 2008).

What is the effect of Hot Weather?

- Conclusion – The study provides direct reduction in high intensity running toward the end of an elite game played in a hot environment. This fatigue could be associated with training status and hyperthermia/dehydration (Mohr 2010)

FLUIDS

How does fluid loss effect performance?

- If an athlete becomes excessively dehydrated with a 2% reduction in bodyweight from fluid loss, not only can this be dangerous and lead to overheating their aerobic capacity can be reduced by up to six percent

What is the typical amount of fluid that is lost in training and games?

- 14-16 year old males lost as much as 1.5L (48 ounces) of fluids/hour during soccer training
- National team women lost .5-9 pounds of fluid in a match setting • 2005 University of Florida Women's Soccer team . . . Average player lost 5.5 pounds in the first preseason training session

How much is too much to lose?

- >1% of body weight = impaired performance
- >2% of body weight = safety risks
- >4% of body weight = hard to replace orally
- On days with multiple games or training sessions, athletes must be within 1% of their morning weight to be able to practice in the second session
- 160 pounds morning weight
- 154 pounds afternoon weight is 4%
- Would need to get weight up to 158.5 pounds

What should we drink?

- Sports drinks
- 1.5L per 1kg weight loss
- 1L = 33 ounces, 1Kg= 2.2 pounds
- 22.5 ounces of fluid per pound lost – Increased sodium and potassium stimulates thirst

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– Sodium speeds fluid replacement and helps salt lost in sweat – When consuming plain water the body thinks it is over hydrated. This switches on kidneys to increase urine output (25-50% loss) and decreases thirst mechanisms.

How much fluid does an athlete need?

- 2-3 cups of fluid for every pound lost during exercise
- Weight management
- Keep the same during competition
- Failure to replaced fluids lost through exercise can compromise performance and safety

What is the effect of Glycerol added to sports drinks?

- Carbohydrate beverage versus a Carbohydrate-Glycerol Beverage
- Conclusion – Ingestion of a Carbohydrate Glycerol Beverage provided players with better hydration than Carbohydrates alone. However, if training sessions are short (<75 minutes), with adequate time for recovery, both drinks are sufficient for maintaining performance intensities during soccer- specific training (Siegler 2008)