



MONITORING TRAINING LOAD & RECOVERY IN COLLEGIATE ATHLETES

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Effective loading is one of the most important factors underpinning good training programs and prepares athletes to compete at their highest level.

Monitoring training load and the athlete's response may help optimize an athlete's health, adaptations and readiness while potentially reducing risk of injuries during training and competition.

MONITORING OVERVIEW

Monitoring programs aim to:

- Elevate a player's responses to training and practice
- Elicit performance benefits across the season
- Enhance the athlete's, coach's and support staff's knowledge of training and recovery

Personalized load monitoring approaches are warranted due to variations in training and competition demands across sports and positions

A complete athlete monitoring program includes:

- External load
- Internal load

External load: measures what a player does, including training frequency, distance/length and speed, type of training, power output and metabolic power

Internal load: how athletes respond to their external loads, including heart rate, biomarkers and perceived exertion

Common Performance Assessments

- **Sprints**
 - Pros: inexpensive, time efficient setup, tests large groups quickly
 - Cons: challenging to execute for professional athletes, potentially fatiguing
- **Isokinetic**
 - Cons: not widely available in-house, challenging to test a large number of players quickly, movement is not sport-specific
- **Force Plates**
 - Pros: time efficient, non-fatiguing, able to look at multiple variables
 - Cons: expensive, logistic issue with large plates, effort-dependent

The athlete's perceptual response is just as important as their physical response. How do the athletes perceive their readiness, fatigue and motivation?

- Perceptual wellness has been shown to be impaired for 4-5 days following collegiate football games

RECOVERY

- **Players are constantly fluctuating between periods of preparation and recovery**
- **Understanding the time course of fatigue and recovery states is key for making practical decisions on load monitoring**
 - Poor recovery can lead to maladaptation and poor performance
- **The time course of recovery following competition varies by sport and experience of the athlete. Understanding the time course of recovery of your sport is important for deciding when and how to monitor your athletes**

IMPLEMENTING IMPACTFUL MONITORING

- **Identify an appropriate baseline timepoint**
- **Be consistent in your data collection approach**
- **Teamwork: Identifying what works best for your organization and athletes is key to making the program impactful and sustainable**
- **Interpret and turn data around to the athlete and coaching staff in 24-48 hours**
- **Highlight opportunities for athlete engagement**

The author is employed by the Gatorade Sports Science Institute, a division of PepsiCo, Inc. The views expressed within this document are those of the author and do not necessarily reflect the position or policy of PepsiCo, Inc.





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