


# IMPORTANCE OF RECOVERY

Exercise, alongside the demands of daily life, causes physiological and psychological fatigue for an athlete. Allowing athletes to experience a level of stress, causing fatigue, overload, and/or overreaching, is essential to drive adaptation and therefore enhance performance over time (Thorpe, 2021).

Adequate recovery following exercise has been shown to allow the restoration of physiological and psychological processes, allowing athletes to compete or train repeatedly at an appropriate level. On the other hand, inadequate recovery may lead to non-functional overreaching, and in turn, impaired performance. Continued insufficient recovery may result in prolonged decrements in performance, and symptoms of maladaptation (Meeusen, et al., 2013; Kellmann, et al., 2018).

A balance between exercise (training, competition), stress (life demands, etc), the resultant fatigue, and recovery is difficult to achieve in both professional and amateur athletes. Recovery is therefore recommended to be a regular component of an athlete’s training schedule. Figure 1 highlights how training may impact recovery and performance.

PROCESS	TRAINING [OVERLOAD]	INTENSIFIED TRAINING 		
		Functional Overreaching	Non-Functional Overreaching	Maladaptation and Prolonged Decrements in Performance
Potential Outcome	Acute Fatigue	Functional Overreaching	Non-Functional Overreaching	Maladaptation and Prolonged Decrements in Performance
Recovery	Hours / Day(s)	Days – Weeks	Weeks – Months	Months +
Performance	Increase	Temporary performance decrement	Stagnation Decrease	Decrease

**Figure 1**  
Possible presentation of different stages of training and recovery. Adapted from Meeusen, et al. (2013).

Each athlete will have unique recovery requirements. This is in part due to different physiological and psychological demands between and within sports, as well as the individual response to those demands. Sport specific demands will also dictate the timetable for recovery, with recovery requirements changing depending on the duration between consecutive bouts of exercise. Understanding these demands is key when planning the appropriate methods to monitor and support recovery. Examples of factors that may impact the competitive schedule, and thus subsequent time available for recovery are listed below:

<p><b>MESOCYCLE</b> Off-season vs pre-season vs competition</p>	<p><b>COMPETITION TYPE</b> Domestic vs international</p>	<p><b>LEVEL OF PERFORMANCE</b> Remaining or being eliminated from cup competitions</p>
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Table 2 provides examples of training and competition schedules for different sports, highlighting the differences in time available for recovery (or recovery window). Additional factors should also be considered when developing a recovery strategy. These include, but are not limited to, travel commitments and the type, intensity and duration of exercise within each day. As such, there is no one-size-fits-all approach towards recovery. Accordingly, the choice of recovery modalities and strategies should be individualised and follow an athlete centered approach.

SPORT	COMPETITION SCHEDULE	DAY OF MICROCYCLE						
		1	2	3	4	5	6	7
<b>American Football</b> (National Football League)	Typical in-season weekly schedule	●	●	○	●	●	●	●
<b>American Football</b> (Collegiate)		○	●	●	●	●	●	●
<b>Basketball</b> (National Basketball Association)		●	●	●	●	●	○	●
<b>Basketball</b> (Collegiate)		○	●	●	●	●	●	●
<b>Baseball</b> (Major League Baseball)		●	●	●	●	○	●	●
<b>Ice Hockey</b> (National Hockey League)		●	●	●	○	●	●	●
<b>Soccer</b> (English Premier League and Women's Super League)	In-Season; 1 game week	○	○	●	●	●	●	●
	In-Season; 2 game week	●	○	●	●	●	●	●
	In-Season; 3 game week	●	○	●	●	○	●	●
<b>Cycling</b> (Tour De France)	1 week, no rest day	●	●	●	●	●	●	●
<b>Swimming</b> (Olympic 100 & 200m Butterfly)	Competition week	○	●	●	○	●	●	○

● Competition

● Training

○ Rest