

QUICK RECOVERY TEST

HOW TO APPLY

Recovery monitoring is important in professional sports for avoiding overtraining and injuries. The key challenge especially in team sports is to control the level of recovery of the whole team as time spent for each athlete is limited. Firstbeat Quick recovery test provides easy way to screen the players readiness to train since the “measurement – analysis – feedback” cycle is performed in 5 minutes!

- Screen the recovery status of the whole team
- Adjust training program on individual basis if the recovery is not at expected level
- Use the test to screen the players whose recovery should be further monitored by overnight recovery test.

BACKGROUND

Recovery score is assessed based on heart rate level, heart rate variability and heart beat derived respiration rate. The used heart rate variability measures, low frequency power and high frequency power, are calculated second-by-second using the short-time Fourier Transform method. Also data filtering is used to select the best period during this 5-minutes test to best describe the recovery status.

The value showed in the report is individually scaled based on user’s measurement history showing the level of recovery compared to the highest measurement in record. Therefore during the first test the score is always 100% and during the 2nd test the score can be 0% or 100% (depending if the latest recovery score is higher or lower than the first one). Once there are more data in the background, the results becomes more meaningful.

PERFORMING THE TEST

The test can be performed using real time monitoring or from the already existing data.

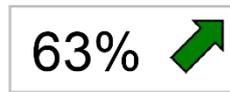
- **Real time test:** Perform the test e.g. in the locker room just before the team practice. After the receiver has detected all the belts, wait a moment until athletes are relaxed before starting the test.
- **Post analysis test:** Instruct the athletes to collect data with their heart rate monitors at home e.g. right after awakening and create test report after downloading the files to SPORTS software.

In order to produce reliable results it is recommended to perform the test always similarly. Comparing values between different conditions (morning, day time evening) is not meaningful unless the goal is to find the most relaxing moment during the day. For standardizing the conditions, please consider at least the following issues:

- Avoid physical activity before the test
- Avoid stimulants affecting to heart rate before the test (tobacco, coffee)
- Avoid heavy meals before the test
- Perform the test always in same time (morning, daytime, evening)

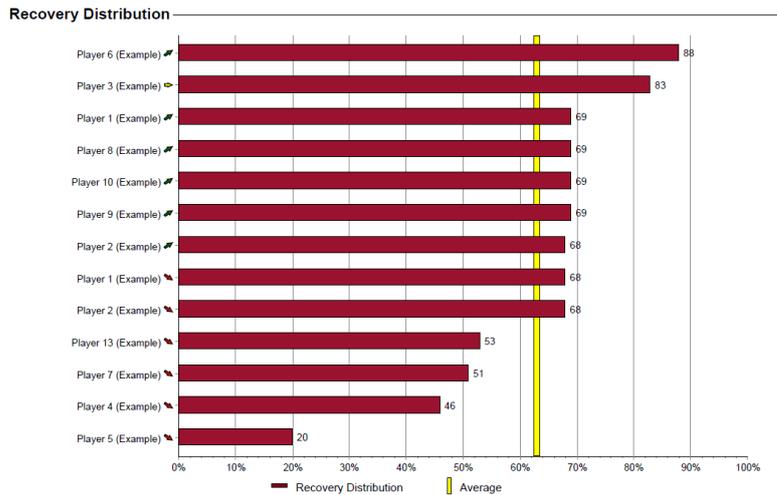
REPORT INTERPRETATION

TEAM AVERAGE



Team average recovery provides overall information of the recovery in team level. Arrow after the recovery score indicates the direction where the recovery level is going compared to previous measurement. The value should be high during easier training periods whereas hard training periods should provide normally lower values. The information can be used to make changes to the next training if the recovery is far from what is expected.

RECOVERY DISTRIBUTION



Recovery distribution provides information on each athlete's recovery. The main attention should be paid to the players with lowest recovery score.

- Values 70-100%: Good recovery. Training can be continued normally
- Values 35-70%: Moderate recovery. Check also the recovery progress from the statistics. The players with decreasing trend of recovery should be observed.
- Values 0-35%: Poor recovery. Suggested to further monitored by overnight recovery test to confirm the recovery status and make the adjustments to training program.

STATISTICS

Statistics shows the recovery scores during the last 6 days. The trend of the recovery should be monitored especially with the players with low recovery score.

Name	Recovery follow-up					Recovery level	
	Five days ago	Four days ago	Three days ago	Two days ago	One day ago	Current	Weekly average
Player 5 (Example)						20	20
Player 4 (Example)						46	46
Player 7 (Example)						51	51
Player 13 (Example)						53	53
Player 2 (Example)					68	68	68
Player 1 (Example)				68	69	68	68
Player 2 (Example)				68	68	68	68
Player 9 (Example)						69	69
Player 10 (Example)						69	69
Player 8 (Example)						69	69
Player 1 (Example)					68	69	68
Player 3 (Example)					83	83	83
Player 6 (Example)						88	88
						63	63

Group recovery follow-up from the previous 6 days.