PERFORMANCE CHANGES IN NBA BASKETBALL PLAYERS VARY IN STARTERS VS. NON-STARTERS OVER A COMPETITIVE SEASON

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ABSTRACT
The NBA professional basketball season imposes a great amount of physiological stress and demand which may subject athletes to overtraining syndrome. Tracking sport specific performance characteristics in starters vs. non-starters may allow coaches and players to identify performance changes indicative of overtraining.

PURPOSE: To compare starters (S) to non-starters (NS), on their ability to maintain strength, power and quickness during a competitive NBA season.

METHODS: S: NBA players were assessed at the beginning of the competitive season. The season (S = 4, NS = 3) players (28.2 ± 3.4 yrs, 200.9 ± 9.4 cm height, 104.7 ± 13.9 kg weight; 7.2 ± 1.9 % body fat) were determined using the unequal variances t-statistic on a sample size.

RESULTS: S played an average of 1813 ± 639 total game-time minutes (27.8 ± 6.9 min·game-1) and NS (n = 3) played an average of 543 ± 375 total minutes (11.3 ± 7.0 min·game-1) over the competitive season. Changes in vertical jump power indicated that S was likely to increase VJP (Δ = 77.3 ± 78.1 W) compared to NS (-160.0 ± 151.0 W). Changes in vertical jump power was 77.3 ± 78.1 W. Pre-season VJP power were seen between S (∆ = 110.8 ± 191.0 W) and NS (∆ = 0.074 ± 0.037 s). In addition, no clear difference in Δ SQT power were seen between S (0.047 ± 0.067 s) and NS (0.025 ± 0.073 s). Changes in subjective feelings of energy indicated that S were very likely to maintain their feelings of energy, focus, alertness, and fatigue during each testing session. Results of this study suggest that NBA players may enhance lower body power, repetitive jump power and reaction during a competitive season, which appears to be enhanced with the stimulus of playing time.

RESULTS (CONT.)

SUMMARY & CONCLUSIONS
To our knowledge, this is the first study attempting to quantify the magnitude of performance changes during an NBA basketball season. The results of this study indicated that S were not only able to maintain their physical performance levels throughout the season, but also appear to have provided a greater stimulus for enhancing vertical jump power.

In addition, S appeared to maintain their body composition and reaction time levels over the season.

Greater playing time also appeared to have positive effects on feelings of fatigue and alertness.

The only determinant associated with S was possible decrease in energy as the season progressed.

PRACTICAL IMPLICATIONS
The importance of monitoring elite basketball players’ performance for overtraining is crucial not only to the athletes, but also the success of teams. However, it is important to acknowledge that each athlete responds individually to the stresses of practice and games. Although the results of the team may be consistent, it is important for the strength and conditioning coach to examine individual player performance as well. When needed specific adjustments to the athlete’s daily routine (e.g. greater recovery, less time on the court) may prevent potential performance detriments that may not manifest as part of the team results. Results of this study suggest that NBA players may enhance lower body power, repetitive jump ability, and reaction during a competitive season. This appears to be enhanced with the stimulus of competition.