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## **Match Day -1 Reactive Strength Index and In-Game Peak Speed in Collegiate Division I Basketball**

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**Background:** Basketball is a game of repeated jumps and sprints. The objective of this study was to examine whether repeated jump assessments the day prior to competition (MD-1) could discriminate between fast and slow in-game performances the following day. Seven NCAA Division I Basketball athletes (4 guards and 3 forwards; 20 +/- 1.2 years, 1.95 +/- 0.09 m, and 94 +/- 15 kg) performed a repeated hop test on a force platform before and after each practice MD-1 to assess Reactive Strength Index (RSI) and Jump Height (JH). Peak speed was recorded during games via spatial tracking cameras. A median split analysis classified performance into FAST and SLOW relative to individual in-game peak speed. Paired T-tests were performed to assess post- to pre-practices differences. An independent sample T-test was used to assess the differences between FAST and SLOW performances. Cohen's defect sizes (ES) were calculated to determine the magnitude of the differences.

**Conclusion:** Athletes with greater gains (i.e.,  $\Delta$ ) in RSI from pre- to postpractice were found to achieve greater peak speeds in matchplay the following day. Conversely, no differences were found between FAST or SLOW performances when JH was the variable analyzed. It is for this reason that professionals should closely examine acute adaptations to MD-1 as it may influence player selection or training strategies that place their athletes in the best position to succeed on the court.

### **Biography**

Dr. Adam Petway, who has over 12 years of experience in strength training and sports performance at the NBA and collegiate levels was the Director of Athletic Performance for the NBA Washington Wizards. In DC he directed all aspects of player performance for the team. In his role with the Wizards, he led the kinetic assessments of each athlete, collaborated with medical staff on player rehab, and designed and implemented training programs for all athletes.