GEORGIA SOUTHERN RESEARCHERS TRACK PLAYER PERFORMANCE IN REAL TIME

What if a coach could get real-time data on his players’ physical status — everything from heart rate, calories burned, fatigue or stamina — during a game? Georgia Southern researchers are doing just that with the Eagles soccer team.

“In the past we’ve worked with the School of Health and Kinesiology to do VO2 Max testing with our student-athletes to measure their cardiovascular fitness,” said Head Soccer Coach Kevin Kennedy. VO2 Max refers to the maximum amount of oxygen a person can use during intense or maximal exercise. “By working with Dr. Adam Wells, we’re able to give our guys real-time feedback of how their bodies are responding and if they are about to hit the wall.”

The School of Health and Kinesiology has partnered with men’s soccer to conduct research on athletic performance and the body’s recovery. Researchers led by Assistant Professor of Exercise Science Adam Wells, Ph.D., attach a Zephyr BioHarness with a GPS tracker to each player’s back in order to track a variety of factors, including heart rate, g-forces on the body, physiological load, distance traveled, calories burned and training intensity. The data is recorded in real-time and streamed to an on-site computer, where researchers can watch each student-athlete’s load throughout the game. Recent changes by the NCAA now allow coaches to use this information during games.

“The research team sits right beside or behind our bench at every game,” said assistant soccer coach Geoff Del Forn. “During the game, we ask them questions and they let us know when some of our guys are reaching their limit. Coach Kennedy can use that information when deciding whether or not to substitute a player out of the game.”

After each game, the researchers, coaches and players receive a spreadsheet of the game’s data. Some soccer players run as much as six or seven miles and keep their heart rate over 150 bpm over the course of a game.

“On the team, we compare our individual data,” said Eagles midfielder Thor Sveinbjornsson. “We’re a competitive group; we look at the distance traveled and sprint speeds against our teammates to know where we can improve.”

At the end of the 2015 season, Wells and his team analyzed the results to see how the players’ performance changed throughout the season. Additionally, the team is learning how rest, recovery and the climate impact the student-athlete’s performance.

“We’re excited to be working with the School of Health and Kinesiology in the College of Health and Human Sciences again as this is one of our University’s most outstanding colleges,” said Kennedy. “Dr. Amy Jo Riggs has consulted with our team on sports nutrition, particularly in the areas of post-training meals, pre-game meals and recovery nutrition. We also worked with Associate Dean Steve Rossi on a study that analyzed the benefits of players wearing recovery tights after matches. I’m really looking forward to working with Dr. Wells in this venture. We have had a tremendous relationship with this school over the last several years and I’m thankful for the support of Interim School Chair Jim McMillan and Dean Barry Joyner.”

Currently, Dr. Wells and his team are also working with the Georgia Southern men’s tennis program to record data on the hardcourt. In the future, many other Georgia Southern sports can take advantage of science to get wins on the field.