

Health Sciences News

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USC Receives National Football League Charities Grant To Study Heart Rate in NFL and USC Athletes

\$100,000 Grant to Keck School of Medicine of USC's Cardiovascular Physicians and Center for Body Computing is First Study to Focus on Player Heart Rates Under Stress

Los Angeles, Calif., Dec. 21, 2010—NFL Charities has awarded a \$100,000 medical research grant to the University of Southern California (USC) to study heart rate behavior in National Football League players and USC student-athletes.

The Keck School of Medicine of USC study “Dynamic Heart Rate Behavior of NFL Athletes” will be the first to investigate the heart rate response of NFL players under dynamic stress, including during games.

“We hope that this study will create a safer playing field for all athletes,” said Leslie Saxon, M.D., the principal investigator for the study, chief of Cardiovascular Medicine at the Keck School of Medicine of USC, and the executive director of the USC Center for Body Computing.

To better understand the spectrum of normal heart responses in elite football players, researchers will study heart data by body mass index, player position and age. They also will also do a comparative study with USC football players.

The USC grant is part of more than \$1.6 million in grants to support sports-related medical research awarded this year by NFL Charities, the charitable foundation of the National Football League owners.

“We are proud to support sports-related medical research proposals through NFL Charities Medical Research Grants,” said Commissioner Roger Goodell, president of the NFL Charities Board. “These grants will help to address risk factors for football players and all athletes, and make the game safer.”

The risk of sudden death in persons with undiagnosed cardiovascular disease increases twofold among competitive athletes, said Saxon.

“Unfortunately, currently recommended cardiovascular pre-participation screening procedures for athletes to determine risk of sudden death may both fail to detect the subjects at risk and falsely identify other healthy athletes as at-risk,” said Saxon.

A team of USC physicians will apply a small patch to pre-screened NFL and USC players to obtain heart rate and other data during practice and game situations. The data will be analyzed at USC.

“We’re excited to take part in this worthwhile heart study, and we look forward to evaluating the results,” said USC head athletic trainer Russ Romano. “I know it will provide valuable input in our quest to provide the best possible healthcare to our student-athletes.”

Children’s Hospital Los Angeles, which is affiliated with the Keck School of Medicine of USC, also received a grant in the amount of \$100,000 to conduct research on red blood cell metabolism in carriers of sickle cell trait and its consequences for athletes.

The grants will go to 16 organizations including USC and Children’s Hospital Los Angeles. Since 2000, NFL Charities has committed grants to medical facilities nationwide, including studies on brain injury, ACL injury prevention and heat stress risks.

The USC study will be administered through the Division of Cardiovascular Medicine at the USC Cardiovascular and Thoracic Institute and the Center for Body Computing. Headquartered at the Keck School of Medicine of USC, the Center for Body Computing works with other USC schools, including the USC School of Cinematic Arts, the USC Viterbi School of Engineering, the USC Marshall School of Business and USC Athletics, to think about, study, and create the future of healthcare.

The USC Center for Body Computing is considered the most comprehensive wireless health institute in the world. The Center for Body Computing hosts the annual Body Computing Conference, develops award-winning medical applications, and pioneers significant research. The Center for Body Computing fosters low-cost health solutions that can lead to better health outcomes across the globe, especially in the developing world. The Center also focuses on wellness and the discovery of faster cures for common diseases like heart disease.

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