

Teaser Headline: Measuring Rising Temperatures

Teaser: A member of West Chester's health sciences faculty has spent the last four years closely monitoring pro-football players' core temperatures and blood sodium levels during their summer training.

Headline: Keeping an Eye on Rising Temperatures

She doesn't sweat the small stuff – she collects it.

Sandra Fowkes-Godek spent three weeks in August at the Eagles training camp at Lehigh University collecting droplets of the big guys' sweat – all in the name of science.

A professor of sports medicine at West Chester University, Fowkes Godek studies hydration and thermoregulation in athletes to help prevent heatstroke, a dangerous condition that contributed to the death of Minnesota Vikings Korey Stringer five years ago.

“Players swallow a silicone encased capsule that vibrates and transmits a signal” Fowkes Godek said. Using her little black recorder she then simply plugs in their jersey numbers and records their core temperatures during practice.

Every summer for the past four years, she has set up her on-site lab at the Eagles' camp where she analyzes droplets of sweat. “From the data I can determine how much sodium they lose in a day.” The players blood and urine samples are also analyzed so she can monitor body fluid and electrolyte balance. (She is doing a similar study with the Philadelphia Flyers.)

Gatorade, the popular sports drink athletes chug to help replace electrolytes doesn't have enough sodium for football and ice hockey players, she said, so she brews up her own concoction using Welch's pineapple-orange and grape drinks.

“I sit in my room at Lehigh with a little scale, adding Morton's salt until I get the right amount of sodium,” she said. “the players prefer the pineapple orange.”

Although her methods may seem a bit unconventional, her work has received recognition worldwide.

Recently, she presented papers to an international audience at the American College of Sports Medicine Conference. “Football is almost exclusively an American sport,” Fowkes Godek said. “I work with big athletes, linemen for example may weigh 360 pounds. In other countries, soccer and rugby players are usually about 160 lbs. and elite Kenyan runners weigh only 85 lbs. so their exercise physiologists were eager to discuss my research.”

Her findings have been published in the *American Journal of Sports Medicine*, the *British Journal of Sports Medicine*, the *Journal of Athletic Training*, and *Medicine and Science in Sports and Exercise*.

Fowkes-Godek holds a bachelor's in kinesiology from Penn State, a master's degree in exercise physiology from the University of Colorado and a Ph.D. in exercise physiology from Temple

University.

This year the University established the HEAT (Heat Illness Evaluation Avoidance and Treatment) Institute to help her continue her research.

Fowkes-Godek said her goal is to not only help professional athletes but college and high school athletes as well as others who may be in danger of heatstroke, particularly firefighters and hazmat workers.