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TOP STORY

Researchers study effects on newborns of pregnancy diet, exercise

By DEBORAH HIGHLAND dhigland@bgdailynews.com 6 hrs ago





Whitney Peake gently undressed her baby boy, Booker, before handing him to Rachel Tinius, who placed the infant inside a Pea Pod machine to demonstrate how she measured his body fat just after birth.

Peake and Booker are participating in a study to analyze the effects of exercise, metabolism and diet of pregnant women on their babies at birth.

“I’m a researcher too in social sciences,” Peake said. “I thought it was a great opportunity to get involved and help someone else’s research. The whole reason I did this was to move the research forward so they can help other moms and babies.”

The research project is being led by Tinius, an assistant professor in exercise science at Western Kentucky University’s School of Kinesiology, Recreation & Sport. Tinius wrote the grant to buy the \$90,000 Pea Pod machine that is housed at The Medical Center where the 700-pound machine can be rolled into the rooms of new moms and used bedside.

As the name suggests, the Pea Pod looks like a small pod in which a baby is placed, the top of the machine is clear so mom and baby can see each other. The machine is then closed and the baby’s body fat composition is measured. It takes about two minutes to complete the analysis.

“This is the gold standard for assessing body fat in a baby,” Tinius said.

“This machine is going to be used for a lot of ongoing and future projects,” she said.

Tinius began collecting data for the study in May 2016, but the system for measuring body fat, skin fold calipers, was a “poor quality measure,” she said. The machine arrived in July and Tinius began using it. She takes the measurements within 48 hours of a baby’s birth.

“The underlying theme of all my research is exercise during pregnancy and how it can improve the outcomes in mothers and their babies,” Tinius said.

When most babies are born, their height and weight are measured, but that doesn’t paint a complete picture of overall infant wellness.

“Body fat is another measure to essentially assess how healthy a baby is at birth or several months into life,” she said.

The data collection for the current study is expected to be complete in May. It will include information gleaned from mothers in their third trimesters and babies within 48 hours after birth.



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Other planned studies will monitor pregnant women and babies for longer periods of time.

Peake plans to participate in Tinius’ next study, which will include information gathered from a four-month physical assessment of Booker.

Caitlin Burklow, a registered nurse and director of women and newborn services at The Medical Center, said the research is “exciting.”

“If she is going to find something we can implement down the road to make our moms and babies more healthy, we just want to be a part of that,” Burklow said. “Her research supports our overall mission to improve the lives of the community we serve.”

Burklow is an expectant mother, and she is also participating in the research.

“My baby is going to be in the Pea Pod when I deliver,” she said. “My two interests as a nurse and a mom just makes me passionate about our project.

“I feel like since I was going to be promoting her research that I needed to be a part of the study. But more than that, as a mom, I want to make sure that what I do leads to healthy outcomes for my baby.”

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Deborah Highland

Night editor and senior writer Deborah Highland is a veteran journalist with 23 years of experience writing and editing both community and metropolitan newspapers. She has also developed websites and co-hosted a political talk show.