

# Centennial Honors College

*Western Illinois University*  
Undergraduate Research Day 2014

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**Poster Presentation**  
**Incidence of Hallucinations during an Ultra-Endurance Event**  
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**Exercise Science**

**Purpose:** The purpose of this study was to examine whether or not hallucinations occur when athletes undergo extreme physical exertion for extended periods of time without sleep.

**Methods:** Twenty-two participants (Male = 15, Female = 7; mean age =  $31.9 \pm 8.66$  years; age range= 19 to 58) enlisted in the event were surveyed with a questionnaire asking, “Do you feel like you may have experienced anything that might be a hallucination?” every time they checked in after finishing an event. If the participants answered “Yes”, then there was a follow up question asking the participants to explain what they experienced. The official title of the event was “The Ultimate Suck”, and the race consisted of a wide range of challenges and obstacles with no specific emphasis on one discipline of fitness. This event was 36 hours in duration. “The Suck” is a military term that defines any situation where conditions are undesirable and is a testament to the dedication of those who endure it.

**Results:** The overall result of the hallucination questionnaire was that 30 experiences occurred in total. Within those hallucinations, 11 could possibly be explained by a misperception of something in actual existence. However, 19 hallucinations could not be explained in this way. The highest number of hallucinations was recorded between the 28<sup>th</sup> and 30<sup>th</sup> hour of participation

**Conclusion:** This study revealed that participants going through intense exercise in concurrence with sleep deprivation may experience hallucinations after a prolonged time.

**Practical Applications:** When considering the types of training that military, police and other first responders are put through, and the situations in which they operate in, it is important to know when they could possibly become a danger to themselves, as well as the people around them. Having an idea as to when these tactical athletes maybe become unfit for duty can potentially reduce casualties from friendly fire and lower the occurrence of fatal mistakes made in the line of duty due to extreme exhaustion.