

THE GRADUATE COLLEGE OF THE  
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER

ANNOUNCES THE FINAL EXAMINATION OF

# Susan Woods

FOR THE DEFENSE OF THE DOCTOR OF PHILOSOPHY DEGREE

GRADUATE COLLEGE

Allied Health Sciences

Thursday, December 7, 2017, 1 pm  
College of Allied Health Building, Room 3025

## *THE IMPACT OF DIET AND PHYSICAL ACTIVITY ON BODY COMPOSITION AND ABILITY TO WALK FOR A TIME IN ADULTS WITH PRADER-WILLI SYNDROME*

### COMMITTEE IN CHARGE:

Allen Knehans, PhD, Sandra Arnold, PhD, Carol Dionne, PhD,  
Leah Hoffman, PhD, Peggy Turner, MS

**ABSTRACT:** **BACKGROUND/PURPOSE:** Individuals with Prader-Willi syndrome (PWS) present with high fat mass, low lean mass, and low levels of physical activity (PA). They tend to have inadequate dietary intake of calcium, vitamin D and fiber. Previous research in PWS has focused on children and young adults; this study focuses on adults, including individuals over 50 years old. In Oklahoma, there are 100 known cases of PWS from all age groups; we estimate 60 or less to be adults, so this study represents approximately 30 percent of the population in Oklahoma. **METHODS:** This prospective, cross-sectional study of adults with PWS measures physical activity, body composition, and dietary habits of adults with PWS, and tests the associations among these variables. **OUTCOMES:** Participants had more desirable body composition than reported by previous studies. Physical activity was less than healthy living recommendations for many participants, whether or not they participated in structured exercise. Participants met the US Dietary Guidelines for macronutrient distribution in the diet, but were deficient in dietary calcium, vitamin D and fiber. Many took a vitamin/mineral supplement to increase adequacy of intake. **CONCLUSION:** Structured exercise alone is not adequate to meet healthy PA recommendations; activity throughout the day is needed to limit time spent sitting or sleeping during daytime hours. Diet needs to include more sources of calcium, vitamin D and fiber; supplementation should also be considered.