

# Alicia Papa, Physical Therapy

Year in School: Senior  
Faculty Mentor: Dr. Mary Beth Brown, Physical Therapy  
Funding Source: School of Health Profession Undergraduate Research Mentorship Program

## Effects of beta-blockers on exercise in the geriatric population

This study is a retrospective look on the effects that Beta-blockers have on exercise outcome in the very old (those over the age of 80). Subjects for this research project were chosen out of the pool participants in the exercise specificity study at the Health Connection. The exercise specificity study groups participants into 1 of 3 groups for comparison: strength, balance and flexibility, and aerobic. Out of the pool of participants in these 3 groups, 2 groups of participants were assembled to constitute the experimental and control groups in order to determine the effects of beta-blockers on exercise. Subjects were included in the experimental group (n=10) if they had already completed the exercise specificity study and were receiving beta-blockers as a means to control hypertension. Subjects were included in the control group (n=8) if they had already completed the study and were not receiving any type of anti-hypertensive medication. Measurements were taken of each subject's heart rate and blood pressure at baseline; before, during, and after each exercise session; and at the end of the study. Additionally, physical performance tests (PPT, Berg, 6-minute walk) were done for each subject at baseline, upon completion of study, and at 3 and 6 months post study. Information regarding participant's age and number of medications was also analyzed for comparison between the experimental and control groups. Overall, the control group showed greater gains in Berg, PPT, and 6-min walk as compared to experimental group. Further investigation needs to occur to determine if these gains are due to the use of beta-blockers or because of differences inherent between the two groups.