

Abstract Submitted
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A Study of Women's Self Defense Strikes ZACHARY BARNES, CHRISTOPHER BARNETT, ALEXANDRA WATERS, ROBERT MARLOWE, University of Tennessee Chattanooga — The need for, and appeal of, women's self-defense programs has rapidly become one of the more popular trends in America. Many of these courses are taught by different schools of thought and are based upon various methods, with so many different techniques being taught as absolutes a scientific viewpoint is paramount to our understanding of self-defense. This study will focus on testing the feasibility of 3 different strikes by using approximately 200 female volunteers with no prior experience in self-defense or martial arts. Our overall goal is to find the strike that is most effective after a single class (as most of these courses last a mere few weeks to only six months) and discover trends from various body-types and age-groups. The vertical punch, twist punch, and open-hand palm-strike will be taught to the participants during a course lasting 30-45 minutes, then each participant will have her strikes measured via a pad fitted with a pressure sensor. After all data has been collected, the instructors teaching each strike will be fitted with motion tracking suits and the techniques will be captured via a tracking program. A skeletal structure will be applied and the body mechanics will be examined from a classical (Newtonian) mechanics perspective.

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