

Physical Performance Training Based on Gender:  
Training Officer Adam and Officer Eve  
(Part 1 of a 2-Part Article)

In my last article, I briefly addressed some of the performance advantages and disadvantages due to the physiological and structural differences between the genders. As politically incorrect as it may sound, these differences can and do affect physical performance. In particular, these differences have the greatest affect on movement mechanics. The ability to efficiently move in and out of different positions and ranges of motion specific to the law enforcement profession is influenced by gender.

For example, a recent article in a popular law enforcement magazine reported that a physical test for state police cadets is preventing females from becoming police officers. The obstacle course portion of the test is not a problem for most of the male cadets, however, 64% of the female cadets failed during the past six months (1). The obstacle course requires cadets to climb stairs, crawl through windows, and climb a wall in just over two minutes. The test is now under review as being discriminatory towards women because of the high failure rate.

The unfortunate thing about this situation is that the types of physical skills these female cadets are struggling with involve real world tasks and movements they will need to perform their jobs. Changing the physical testing standards by eliminating such movements and drills will not help females once they become officers. The standards and physical skills needed to perform on the street are not going to change. A paradigm change is needed in the way police officers physically prepare for their jobs. A well-designed physical fitness program that addresses the specific needs of women officers

will improve performance and the success rate of women cadets and officers on physical fitness tests.

One of the main structural differences between genders is the breadth of the pelvis. Generally speaking, females have a wider pelvis than males. This is one of the reasons females often need to have their duty belts positioned differently than male officers in order to draw their firearms efficiently. A wider pelvis changes the bone alignment from the hip to the knee (known as the Q-Angle). This difference in bone alignment is one of the reasons there are so many non-contact knee injuries in female athletics. Females have a greater Q-Angle than males, which places more stress on the knee joint and increases the risk of knee injuries. Women tend to compensate for this structural difference by altering the way they perform certain movements and get in and out of certain body positions (males do this too but for different reasons that will be addressed in the next article). These compensations in the way females perform movements become more exaggerated over time and ultimately alter the body's ability to effectively recruit and use certain muscle groups. This results in poor movement performances when attempting to move out of a low squat, crawling or climbing position. It also hinders the ability to land properly after a jump or coming over an obstacle like a wall. Because of this, women have higher rates of knee injuries as well as lower performance scores during these types of obstacle course drills.

Along with structural differences, physiological differences such as muscle mass are also seen between genders. In general, women are not as strong as men. This is due to the fact that women are born with fewer muscle fibers than men. Because of this difference in muscle mass, females tend to be weaker in certain parts of joint range of

motion where muscles are least favorable for producing force to initiate movements (a muscle is at its weakest point during the greatest part of a joint range of motion).

Examples include: a person is stronger in a high squat position compared to a very low squat position, and it is easier to climb a shorter step than a taller one. If an officer has to go to the ground to handcuff an offender, the joint angles of the hip and knee dictate that the officer's muscles are at their weakest for producing force and moving. This problem is exaggerated by the fact that females have less muscle to produce force anyway, which can result in an inability to quickly change body positions putting the officer at a greater risk if the offender is non-compliant.

Even though these physiological and structural differences cannot be changed, there are exercises that can be performed to help women compensate and overcome these disadvantages and improve performance while minimizing the risk of knee injuries. One of the best exercises is the Overhead Box Squat, which has many benefits that include:

- improved lower body movement mechanics
- greater lower body strength
- improved strength in the weakest joint ranges of motion for the hip and knee
- ability to effectively recruit and use the muscles of the hip and legs
- reduced likelihood of knee injuries

Refer to the *Courses* page on [www.pkcotraining.com](http://www.pkcotraining.com) to see a

*Dartfish* performance video of the Overhead Box Squat.

It is important to be aware of the structural and physiological differences between genders. These differences affect physical performance and can be a disadvantage when performing certain movements; however, being female does not mean being inferior or a

low performer. It just means being different from a structural and physiological standpoint. Acknowledging these differences and training to compensate for them will help female officers enhance their job performance and reduce the chance of injury. It will also help otherwise acceptable female candidates pass physical tests and become police officers. In next month's article, I will address structural and physiological differences in male officers that affect their performance and how they can train to compensate for the disadvantages that those differences present.

**Authors Note:**



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Frank Marik  
Director Law Enforcement Operations  
630-926-8015  
[frank.marik@dartfish.com](mailto:frank.marik@dartfish.com)

1. AMERICAN POLICE BEAT, May 2006 pg. 81.