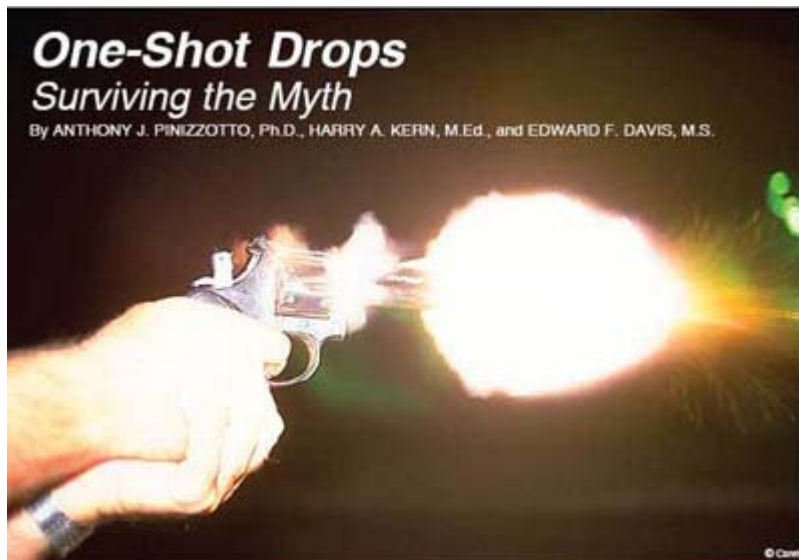


One-Shot Drops Surviving the Myth

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On a summer evening in the northeastern part of the United States, a patrol officer received a radio dispatch at approximately 7 p.m. to respond to an address for a disorderly subject. The officer arrived at the location and parked his patrol vehicle on the opposite side of the street, several houses away. Before exiting the vehicle, the officer paused to observe the scene. He saw a male move from behind a large tree in front of the address of the alleged disorderly subject. The officer started to exit his vehicle, but then stopped when he saw the male, with a gun in each hand, begin to run toward him. The man fired both weapons at the officer, who returned two rounds from his service weapon, striking the male in the center of his chest. However, the man continued to fire. One round struck the officer in the head, killing him instantly. The male survived the two gunshot wounds and later was convicted of killing the officer.

This scenario is a collage of several cases dealing with the use of deadly force, by and against law enforcement, that the authors have examined over the last decade. Studying these cases and interacting with officers attending the FBI National Academy,¹ who have experienced similar incidents in their own agencies, have led them to question if officers have died because of any of the following factors:

- The type of weapon issued to the officer.
- The type of ammunition the department issued for service rounds.
- The lack or quality of self-defensive training provided to the officer.
- Overconfidence because the officer was wearing a bullet-resistant vest and, thereby, took unnecessary chances.
- The officer's own preparation for a violent encounter, such as wearing a bullet-resistant vest or remaining in excellent physical condition.
- The officer's choice to notify dispatch of the location during a traffic stop or other encounter with suspects.
- ny other circumstances presently unknown to the officer's department.

In the opening scenario, did the officer “hesitate” after firing the two rounds that struck the offender? Was he instructed to “double tap” and pause, as many departments once trained?

The authors have learned from their research on law enforcement safety that there exists a significant hesitancy on the part of many officers to use deadly force. However, they have not determined the reason for either the hesitation or why officers stop shooting before they neutralize the threat. One question they can answer is that handguns used for protection by law enforcement *are* capable of immediately eliminating a deadly threat quickly. However, the fact largely remains that bullet placement, rather than caliber, causes immediate stop-page of body functions in most instances. 2

With all of this in mind, then, if officers are adequately armed, what causes them to fall victim to criminals wielding less powerful weapons? An examination of the myth of the “one-shot drop,” data relative to the type of weapons offenders have used to attack officers, and effective survival and firearms training may help law enforcement agencies begin to reverse this tragic trend.



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THE MYTH

In many of the classic, albeit simplistic, cowboy movies from the early days of the American film industry, the stereotypical “good guys” wore white hats, whereas the “bad guys” donned black ones. After meeting in the middle of a dirt street in some small town, two shots would ring out. The bad guy’s bullet always missed, but the one from the hero in the white hat inevitably found its mark and freed the town of the criminal threat. With one shot from the good guy’s gun, the bad guy immediately dropped to the ground and became completely incapacitated.

In today’s films and television programs, Hollywood has varied not only the clothing of the actors but also their standards and demeanor, both the good guys and the bad guys. It now has become difficult to distinguish the protagonist from the antagonist. Unfortunately, however, this increased realism has not always carried over to the portrayal of gun battles. Many current shooting scenes continue to display unrealistic reactions and underlying expectations regarding ballistic effects. For example, one shot from a handgun often lifts the wounded person 2 feet off the ground and causes immediate incapacitation.

Even knowing that these are movies and television programs, some in the law enforcement community still expect one-shot drops in real-life shootings. In fact, few actual instances end this way.

Realistic and regular law enforcement training must counterbalance and mentally and emotionally override the fallacy of the one-shot drop still promoted by some media. Short of disrupting the brain or severing the upper spinal column, immediate incapacitation does not occur.³ Therefore, the threat remains to the officer. Yet, implicit in the media presentations of law enforcement encounters is the belief that with the “proper handgun” and the “proper ammunition,” officers will inflict immediate incapacitation if they shoot offenders anywhere in the torso. Varied and multiple real-life law enforcement experiences contradict this false and dangerous belief.

Actual Shootings

In the authors’ ongoing study of violence against law enforcement officers, they have examined

several cases where officers used large-caliber hand guns with limited effect displayed by the offenders. In one case, the subject attacked the officer with a knife. The officer shot the individual four times in the chest; then, his weapon malfunctioned. The offender continued to walk toward the officer. After the officer cleared his weapon, he fired again and struck the subject in the chest. Only then did the offender drop the knife. This individual was hit five times with 230-grain, .45-caliber hollow-point ammunition and never fell to the ground. The offender later stated, "The wounds felt like bee stings."

In another case, officers fired six .40-caliber, hollow-point rounds at a subject who pointed a gun at them. Each of the six rounds hit the individual with no visible effect. The seventh round severed his spinal cord, and the offender fell to the ground, dropping his weapon. This entire firefight was captured by several officers' in-car video cameras.

In a final case, the subject shot the victim officer in the chest with a handgun and fled. The officer, wearing a bullet-resistant vest, returned gunfire. The officer's partner observed the incident and also fired at the offender. Subsequent investigation determined that the individual was hit 13 times and, yet, ran several blocks to a gang member's house. He later said, "I was so scared by all those shots; it sounded like the Fourth of July." Again, according to the subject, his wounds "only started to hurt when I woke up in the hospital." The officers had used 9-millimeter, department-issued ammunition. The surviving officers reported that they felt vulnerable.

They wondered if they had done some thing wrong that caused their injury or placed them in the proximity of physical danger. They also wondered if they would react differently if faced with a similar situation.

Practical Expectations

Social science discloses that if people expect to see something, they well may see it. For example, in basic psychology courses, instructors generally include the perceptual set theory, which shows students a picture. Although exactly the same picture, it appears to some as an old woman, whereas others see a young woman. People often see what they expect to see. This explains why so many sightings of the Loch Ness "monster" turn out to be floating logs.

Officers' expectations of how they will respond when shot significantly affect their reactions to these situations. Development of advanced, practical expectations may be influenced best by clarifying misconceptions and imparting new knowledge during purpose-driven training concerning the topic. Absent a clear, purposeful understanding of the session's training objectives, little influential and practical learning can occur. Further, lack of purposeful training may prove detrimental to an officer's practical expectations, psychological preparation, and capabilities when employing complex tasks in response to the significant stressors of a life-threatening, critical incident.

Humans are largely differentiated from animals through their miraculous ability to develop skills and abilities to perform multiple, complex tasks simultaneously through repetitive practice. By necessity of minimizing risk to themselves and others, officers effectively learn many firearm-use procedures and tactics through a progressive building-block process. Herein, initial exposure is given to learning gross and fine motor skills. Some conscious behaviors develop into subconscious ones. Officers progressively hone skills to a reasonable level of mastery, then apply them under shorter time constraints during which they must incorporate and maintain mental processes of assessing their surroundings and changing conditions. Trainers need to remain cognizant of the role that repetition plays in the mental processes reinforced during training scenarios and courses of fire. From learners' perspectives, ideal firearms and tactics training objectives should embrace an achievable notion that they will learn "something new"

about their personal performances, skill levels, and capabilities with their equipment each time they receive training.

THE DATA

To better grasp the scope and gravity of the myth of the one-shot drop, the authors provide an overview of felonious, line-of-duty law enforcement officer deaths. From 1993 to 2002, 636 officers were feloniously killed in the line of duty.⁴ Offenders used handguns, ranging from .22 to .50 caliber, to kill 443 of the officers.⁵ Forty-five of these victims were slain with their own weapons.

Fifty-six of the 443 officers (12.6 percent) were killed by small-caliber weapons that fire lightweight bullets at low velocity and included .22, .25, and .32 calibers. Undoubtedly, no officer would consider any of these firearms as a primary weapon of choice, and no records indicated that agencies issued any of these to their uniformed patrol officers.

Concerning the 45 officers killed with their own weapons, 3 were slain with small-caliber rounds from backup/off-duty weapons they carried, either .22 or .25 caliber. Twenty-five officers (56 percent) were killed with their 9-millimeter or .40 caliber service weapons, common to law enforcement during the time period examined. The remaining 17 officers were slain with other weapons, including .38 caliber, .357 magnum, 10 millimeter, .44 magnum, and .45 caliber.

In two previous studies on violence against law enforcement officers conducted by the authors, offenders stated their reason for selecting a particular firearm as availability, 41 per cent in the first study and 68 percent in the second.⁶ These offenders did not care about bullet weight or velocity. The majority of the offenders in both studies had been involved in prior shootings before assaulting or killing the officers. Their major concern was being “fast on the trigger” and delivering the bullet to its intended target. One stated, “There’s no time to sight up the gun. If you hesitate, you’re dead.”

Because of the time needed for adjudicating these offenses, the most recent disposition data available for offenders involved in line-of-duty law enforcement officer felonious deaths are for the 10 years 1991 to 2000.⁷ Of the 665 persons charged with killing a law enforcement officer for this time period, only 9 remained fugitives. The majority (464) of these individuals were arrested and convicted of murder. The victim officers justifiably killed only 23 of their attackers. Other officers responding to the scene killed an additional 78 offenders. Sixty-two of the perpetrators committed suicide after killing the officer. In their ongoing research, the authors are examining if any of these incidents could have started as an officer-assisted suicide or, more commonly, suicide by cop.

Law Enforcement Officers Feloniously Killed in the Line of Duty with Firearms 1993-2002

Size of Ammunition	Total Slain	While Wearing Body Armor	With Own Weapon
.22 caliber	28	9	2
.25 caliber	18	11	1
.32 caliber	9	6	0
.32-20 caliber	1	0	0
.357 magnum	30	19	5
.38 caliber	65	28	5

.380 caliber	43	24	0
.40 caliber	34	24	11
.41 magnum	1	1	0
.44 magnum	11	7	1
.45 caliber	36	24	5
.455 caliber	1	1	0
.50 caliber	1	1	0
7.62x25 millimeter	1	1	0
9 millimeter	136	65	14
9x18 millimeter	1	1	0
10 millimeter	2	0	1
Size not reported	25	10	0
Total	443	232	45

Source: U.S. Department of Justice, Federal Bureau of Investigation, Law Enforcement Officers Killed and Assaulted, 2002 (Washington, DC, 2003).

Offenders Justifiably Killed or Committed Suicide 1991-2000

Year	Justifiably Killed by Victim Officer	Justifiably Killed by Other Than Victim	Committed Suicide
1991	2	6	5
1992	3	6	5
1993	2	7	6
1994	4	12	9
1995	4	5	8
1996	1	14	3
1997	2	6	12
1998	2	11	4
1999	0	5	5
2000	3	6	5
Total	23	78	62

Source: Compiled by members of the FBI's Criminal Justice Information Services Division with data from U.S. Department of Justice, Federal Bureau of Investigation, Law Enforcement Officers Killed and Assaulted, 2002 (Washington, DC, 2003).

THE TRAINING

A firm understanding of what an officer possibly may expect if shot or severely injured during a violent confrontation with an adversary remains crucial. This includes heightening an officer's awareness about establishing a survival mind-set and practical measures to combat reactions to extreme stress concerning natural physiological, psychological, and emotional responses that occur in normal people during abnormal situations. Such training is imperative in *conquering* survival versus *succumbing* to an

otherwise treatable, recoverable injury.

Survival Training

Effective survival training should provide a clear understanding of how authorized weapons and ammunition likely will perform under varying conditions to 1) strengthen officer confidence in personal skills with equipment and 2) prepare officers to efficiently and quickly incapacitate/control a threat against life. First and foremost, officers should possess a working knowledge about terminal ballistic performance of bullets when fired through intervening obstacles that they, by necessity, may have to shoot through and penetrate to incapacitate a violent adversary. Some common intervening obstacles encountered in law enforcement shootings can include heavy clothing; building materials, such as wood and drywall; automobile windshield glass; and sheet metal used in vehicle doors. Such obstacles may alter terminal projectile performance (i.e., the medium may plug or close the hollow point of a bullet, making it perform as a ball round or become deformed and, thus, limit penetration).

Officers also should know about ammunition performance at different, reasonable distances. Such training promotes greater understanding of agency policy when applied to different situations encountered in daily work experiences (i.e., when it is reasonable to shoot, not shoot, or seek alternate methods of self-preservation). Agencies using firearm ranges of 25 yards or fewer may consider options of periodically shooting at reduced-size targets, simulating a longer-distance handgun shot.

Finally, officers should possess a basic understanding of the human anatomy and related system functions from a three-dimensional perspective. Training should visually convey the placement and vulnerabilities of the cardiovascular system (heart, lungs, and blood-bearing organs) and the central nervous system (brain and upper spinal column). Knowledge of how these human systems likely will respond to low-velocity projectiles, such as from most hand guns, and high-velocity ones, such as from high-powered rifles, will augment officer awareness that reactions to being shot may not occur immediately. Perhaps more important, this information can help prevent officers from forming a false assumption or preconceived expectation that the adversary *will be* rendered immediately harmless following a well-placed shot from their firearm.



Firearms Training

Well-rounded firearms training programs should include instruction and courses of fire emphasizing fundamentals of marksmanship and position shooting. However, from a survival aspect, additional training points require consideration. Examples include alternate courses of fire that possess phases

unfamiliar to the officer, as well as a preset number of fired rounds, such as routinely employed in qualification courses and largely gathered for the purpose of establishing a “standard” of proficiency if needed in litigation. Alternate courses of fire (e.g., specialized combat courses), by design, should reinforce desirable behaviors and thought processes. Combat courses should necessitate officers shooting until they incapacitate the threat (target) or the threat ceases. This can help *prevent, rather than encourage*, psychological reinforcement and presumption that the threat will desist after firing a given number of rounds. If lethal force is warranted and appropriate under the circumstances, the officer *must shoot until the threat ceases*. Use of cardboard or paper targets, although economical, inherently forces personnel to perceive bullet impacts on a single plane of reference with out dimension—much different from a human simulation with dimension and placement of organs/skeletal structure of a body. An occasional mix of training on a three-dimensional target, such as clothed mannequins, preformed targets, and other devices limited only by imagination, may better demonstrate and encourage personnel to exercise critical-thinking skills for delivering optimal shot placement and effective ness. An example is a shooting scenario requiring accurate shot placement on a three-dimensional target at an adverse angle substantially different from the usual 90-degree target placement in many training scenarios due to range design, safety, and economy of training resource time.

Economical, three-dimensional reaction targets made of cardboard to resemble a torso are available. These targets, suspended by heavy string or cord to one or two inflated balloons inside the body of the device, can become lifelike by placing old clothing, such as a shirt or jacket, on the exterior. When one or both of the balloons are struck by a bullet, the balloon pops and the target drops from its suspended position. Such an exercise emphasizes that the officer must aim at a distinct spot on the torso to achieve incapacitation, rather than merely shooting at the entire target.

New technology incorporated into training simulators portraying lifelike, real-time scenarios permits course designers to define the zones of immediate or quick incapacitation similar to the relative area on a human body. Additionally, designers can denote zones of incapacitation based on the angle and distance of the adversary from the officer, as well as scenarios representing body armor worn by the adversary.

CONCLUSION

Just as in the days of the American Old West when only the peace officers’ superb gun-handling abilities stood between them and the violent outlaws of their time, today’s law enforcement professionals still must rely on their firearm skills to protect their communities from similar lawlessness. Employing deadly force against another human being is not an easy choice, nor should it be.

However, when an individual is intent on causing grave bodily injury, even death, to officers sworn to uphold this nation’s laws, those officers must react responsibly and quickly to protect their communities and to avoid the loss of innocent lives, as well as their own.

The perpetuation of the one-shot drop by movies and television programs has no place in the real world of violent criminals bent on their destructive missions. Officers must realize that they have to continually hone their survival skills, always expect the unexpected, and never give up; they must protect themselves to protect their communities.

Endnotes

¹ The FBI hosts four 10-week sessions each year during which law enforcement executives from around the world come together to attend classes in various criminal justice subjects.

² “Physiologically, a determined adversary can be stopped reliably and immediately only by a shot that disrupts the brain or upper spinal cord. Failing to hit the center nervous system, massive bleeding from holes in the heart, or major blood vessels of the torso causing circulatory collapse is the only way to force incapacitation upon an adversary, and this takes time. For example, there is sufficient oxygen within the brain to support full, voluntary action for 10 to 15 seconds after the heart has been destroyed.” See U.S. Department of Justice, Federal Bureau of Investigation, Firearms Training Unit, FBI Academy, *Handgun Wounding Factors and Effectiveness* (Quantico, VA, July 14, 1989), 8.

³ Ibid.

⁴ U.S. Department of Justice, Federal Bureau of Investigation, *Law Enforcement Officers Killed and Assaulted, 2002* (Washington, DC, 2003).

⁵ Members of the FBI’s Criminal Justice Information Services Division collected and supplied this information to the authors for this article.

⁶ U.S. Department of Justice, Federal Bureau of Investigation, *Killed in the Line of Duty* (Washington, DC, 1992); and, U.S. Department of Justice, Federal Bureau of Investigation, National Institute of Justice, *In The Line of Fire: Violence Against Law Enforcement* (Washington, DC, 1997).

⁷ Supra note 4, 44.