

## Fight Stopper

Anytime you're in a fight, particularly a gunfight, halting your adversary is the goal. When you're in a fight, you just want out of the fight. You can disengage, run, or neutralize your attacker. Or you can be killed.

Once your attacker has commenced his assault, stopping him becomes your life's work. The firearm most likely available to you will be your handgun. If you are aware of the impending attack, you'll most certainly arm yourself with a long gun. Since most attackers won't afford you that opportunity, proficiency with your pistol remains paramount to your survival. Because of the array of pistol manufacturers, models, and calibers available, there is inevitably a debate about which combination is "best." I am frequently asked to give my opinion on caliber selection. Even more than training, or tactics, or weapons selection. Everyone loves talking about ballistics. The problem is that most of us are knuckle-draggers and we only know two things about ballistics...jack and shit.

We get on the internet and google and read and talk to our buddies who seem to know a lot about guns. I'm no different. I've been amassing articles and studies about ballistics for as long as I can remember. This is my attempt to solve the "caliber riddle."

First off, lets talk about knock-down power. Simply put, it doesn't exist. The force a bullet will impact your adversary is equal to (or less than) the recoil you felt when you fired the round. It's physics. It isn't debatable. If you fired a bullet capable of knocking someone to the ground, you would likewise be knocked to the ground when you triggered it. *Every action has an equal and opposite reaction.* Sound familiar? It's Newton's Law of Motion. I may be dumb but that guy was smart so you should pay attention.

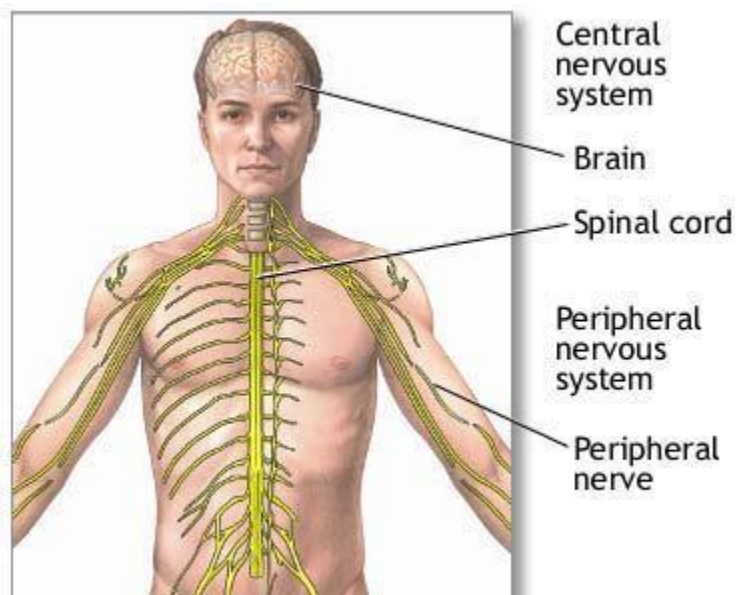
Whats confuses the issue is that many people tend to fall down when they've been shot. It isn't caused by the projectile, they do it for all sorts of other reasons. The belief that they are more seriously injured than they are, the "training" received by years of movies and television, or simply a desire to quit fighting all contribute. Some people fall down when shot, some people don't. Since you can't control it, you can't count on it to happen during a fight.

Ok, so knock-down power can't be achieved. How do I stop my adversary?

The impact of bullets on the human body has four factors which contribute to how quickly an attacker is stopped. The first factor is **Penetration** and is measured by the distance the projectile travels into the target. The damage caused by penetration is directly related to the tissue disrupted or destroyed by the bullet passage. The second factor is the **Permanent Cavity** and is measured by the volume of space once occupied by tissue that is now destroyed by the passage of the projectile. This is the hole left in the guy after you shoot him. The next factor is the **Temporary Cavity** and is measured by the amount of expansion or stretching of tissue due to the transfer of kinetic energy from the projectile. The final wound factor is **Fragmentation** which are pieces of the projectile which separate and are propelled through the body. Fragmentation may not occur in every bullet wound, and should be considered a secondary effect. In fact, fragmentation in pistol rounds is extremely limited (typically less than one centimeter) and should not be heavily considered during bullet selection.

In order to quickly halt an adversary, the central nervous system must be severely damaged or destroyed. For the anatomically challenged, check out the picture.

Notice the heart isn't shown. Shooting someone in the heart causes blood loss, perhaps major blood loss. This will leave your attacker with approximately 15 seconds of full voluntary function before being incapacitated. Fifteen seconds is a long time to have someone shooting at you.



In order to achieve fight stopping results, the brain or upper spinal cord must be severely damaged or destroyed. This type of accuracy is clearly a function of training more than bullet selection. The shot placement discussion occurs frequently, but it can't be overstated how important marksmanship is to surviving a gunfight.

Bullet selection is critically important also. Even assuming the accuracy is there, the bullet must penetrate enough into the target to *pass through* the central nervous system in order to achieve fight stopping results. Because of this specific requirement, penetration is the most important factor in bullet selection.

Over-penetration gets talked about frequently in the law enforcement and self defense communities. It's true that a round can pass through the intended target and hurt a bystander. It's also true, and more likely, that a round will completely miss the intended target and hurt a bystander. Misses are extremely common during violent assaults. The risk of over-penetration should be carefully weighed against survival. Over penetration *might* occur and a bystander *could* be injured, but a weak round will *never* quickly incapacitate an attacker. When selecting a round for defensive purposes, a minimum of 12 inches of penetration is desired. Anything less would be considered a poor choice. More than 18 inches of penetration is probably unnecessary, but your situation should be carefully considered. The round I select for my situation may be different than what is needed to meet your specific requirements.

Permanent cavity is the next most critical consideration when selecting a pistol caliber, or specific bullet. The permanent cavity is the volume of destruction as the bullet passes through the target. In this case, bigger is better. Assuming an equal amount of penetration, a larger round will create a larger permanent cavity and will cause more damage. Exactly how much "better" a larger projectile performs is extremely difficult to determine, and I won't attempt to quantify it.

Temporary cavity is a much-hyped and misunderstood factor of projectile wounds. Pistol rounds are underpowered by nature and relatively slow moving. The latest research on temporary cavity is that the tissue damage could be as small as one tenth of the speed of the projectile. For the purposes of pistol gunfighting, it simply isn't a factor. If someone is trying to tell you how superior a particular round performs because of its "kinetic energy transfer" or temporary wound channel, you're being sold a line of crap.

Fragmentation simply isn't a factor for handgun rounds. Pistol rounds are simply too slow moving to achieve consistent fragmentation. Again, since you can't control it, don't count on it. Fragmentation in a pistol fight is a non-issue.

The final characteristic I want to discuss is the idea of expansion. Most of us have some experience with hollow-point ammunition. The round is specifically designed to expand on impact to inflict greater damage to the target. Assuming that 12 inches of penetration is achieved, an expanding bullet has lots of merit. The problem is that hollow point ammunition has inconsistent performance. When hollow point rounds impact bone, glass, or even thick clothing (it's winter time), the round will expand very little, if at all. Many times, forensics experts are unable to determine if a pistol gunshot wound was inflicted by a hollow-point round or a ball round. Hollow point ammunition is certainly a good choice for a defensive round, but the performance in terms of penetration and permanent cavity should be used to assess performance. Any expansion achieved will be gravy.

During the assault, you are in charge of very little. Your attacker likely chose the place and time. He'll control his actions, how many rounds he fires, and the tactics he employs. You can control where your rounds impact his body and the type of weapon and ammunition you employ. In order to take control during an assault you must be trained. If your training program doesn't stress shooting on the move, shooting at moving targets, no-light engagements, and low percentage shots (partial targets), then you're not preparing yourself to survive a violent assault. It's important to remember that you have to perform better than your assailant is lucky.

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