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January 2021 Newsletter

DRILL OF THE MONTH

Throughout 2021 we will be running a Drill of the Month in each edition of the newsletter. The goal is help motivate folks to get to the range and actually shoot their defensive weapons, and to have some fun in the process. Each month we'll post a drill or a short course of fire. You are encouraged to go to the range, shoot the drill, and then post your thoughts and a photo of your target on the Rangemaster Facebook page, https://www.facebook.com/groups/rangemaster/ .

FBI Pistol Qualification, Modified

Your task this month is to shoot the current FBI Pistol Qualification Course, adopted in 2019. However, instead of using the FBI Q target, we will use the IDPA silhouette, scored as follows:
Hits in the 8" chest circle (-0 zone) = 2 points
Hits in the -1 zone around the chest circle count as 1 point.
Everything else is a miss, zero points. There are fifty shots, so a max possible score is 100.

FBI PISTOL QUALIFICATION COURSE, revised Jan 2019

IDPA Silhouette, scored 2/1/0

3 yards Draw and fire 3 rds strong hand only, switch hands and fire 3 rds support hand only, all in 6 seconds

Shoot with both hands from this point on.

5 yards Draw and fire 3 rds in 3 seconds

From the Ready, fire 3 rds in 2 seconds

From the Ready, fire 6 rds in 4 seconds

7 yards Draw and fire 5 rds in 5 seconds

From the Ready, start with 4 rds in the gun, fire 4 rounds, conduct an empty gun reload, and fire 4 more rds, all in 8 seconds

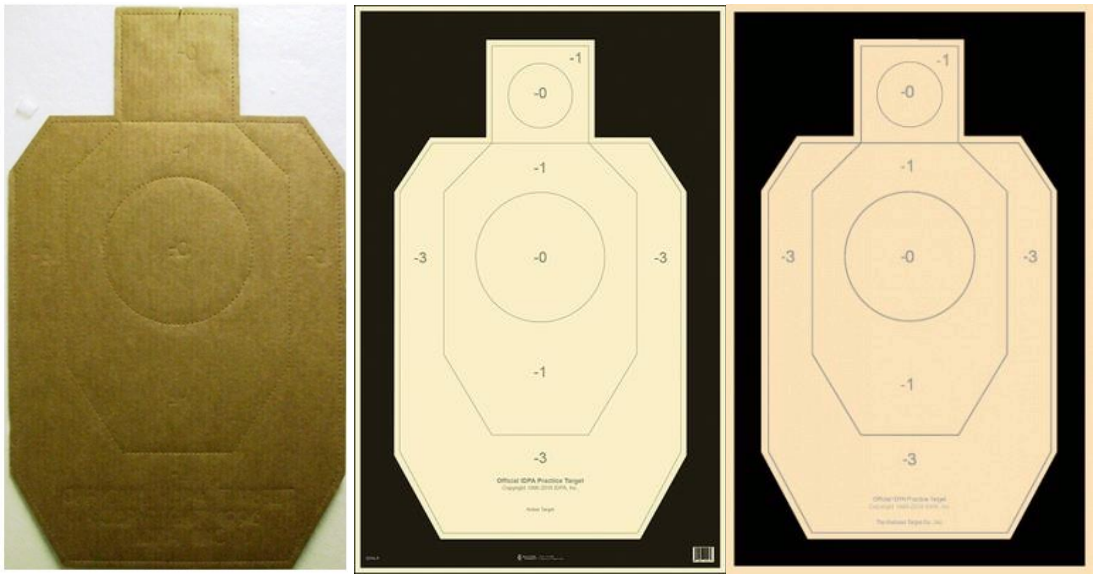
From the Ready, fire 5 rounds in 4 seconds

15 yards Draw and fire 3 rds in 6 seconds

From the Ready, fire 3 rds in 5 seconds

25 yards Draw and fire 4 rds from Standing, drop to a Kneeling Position and fire 4 more rds from Kneeling, all in 20 seconds.

50 rounds total 100 points possible 90 or above for instructors



Selecting Carry/Duty Ammunition

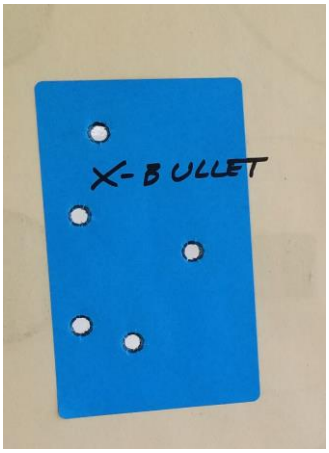
In terms of accuracy, reliability and terminal effect, we have the best ammunition ever made available to us today. In fact, in the past 15 years or so, great strides have been made in manufacturing pistol ammunition that reliably expands in real flesh while still penetrating enough to reach vital structures deep within the body. Not all ammunition, however, is created equal. There is a bewildering array of ammo available to us, so how do we pick what is best for our use?

First, we have to define our context. In this discussion, I am limiting the context to the personal self defense of a private citizen CCW carrier or off duty law enforcement officer, who share essentially the same threat profile and equipment. For our use, ammunition selected for carry, as opposed to practice, should meet these criteria:

As close to absolute mechanical reliability as possible. The ammo needs to feed and cycle reliably in **your** gun. I would not trust a load I had not fired at least 100 rounds of consecutively in my pistol with no malfunctions.

Acceptable terminal effect, consisting of adequate penetration and reliable expansion. Vetted authorities like Dr. Gary Roberts have done this step for you, and published the results. Beware of results obtained in shooting pot roasts, water bottles and similar test media. The US Army Wound Ballistics Laboratory went to great lengths to come up with 10% ordnance gelatin as a reliable, repeatable, consistent substitute for muscle tissue. Properly prepared and calibrated ordnance gelatin gives us a result that has correlated very closely with actual field results in many, many shootings. Bear in mind the 14” to 18” recommended range for penetration is in gelatin that has no skin and no bones, thus the need for deeper penetration than the depth of an average torso. If you hit the chest, for instance, with the sternum and rib bones right where you are aiming, there is an 80% chance of striking bone, which will reduce penetration in many cases. Dr. Roberts has assembled a comprehensive list of factory loads that meet our requirements and they are listed below.

So, we have quite a list of quality loads that meet our reliability and terminal effect requirements, what's left? **The load needs to shoot accurately in <u>your</u> gun, and if you have fixed sights, the point of aim and the point of impact need to coincide. In others words, the bullets need to hit right where you aim them!** This can be tricky. Many handguns shoot different loads, especially with different bullet weights, to widely varying points of impact. My approach is to select several loads from Dr. Roberts' list, then shoot them in the specific gun I want to use them in. I then choose the load that shoots closest to point of aim with no larger than a 2.5" to 3.0" five shot group size, fired off-hand at 25 yards. In the photos below, I was checking various loads in my EDC Glock 17. The targets are 3X5 labels. I just fired two of my carry HST 124+P loads at one. One hit dead center, and one a bit high, which was probably my fault. These were the first two rounds of the day, fired at 25 yards, standing. The 9mm 147 grain 9MS load from Federal is an earlier generation load. It shot very well, but repeated testing has shown very rare expansion. I only use that one for practice/training, and shot it just as a standard to compare the HST load against. The third load was a 115 grain Barnes all copper hollow point loaded by ASYM, a high-quality small ammo company. As you can see, the same gun/shooter combo can give very different results. The Hornady 135 grain Critical Duty +P load also shot pretty well, and pretty close to point of aim. This particular load was used in two recent student involved shootings, and in both cases performed splendidly. (see pic of recovered bullet)



The 124 +P HST is my personal choice, as it has a great street record and shoots right to the sights in my guns.

The following is Dr. Gary Roberts' list of loads that provide adequate penetration and expansion in laboratory gelatin testing. I would trust any load on this list. If it's not on this list, I would not select that ammo.

"The following loads all demonstrate outstanding terminal performance and can be considered acceptable for duty/self-defense use:

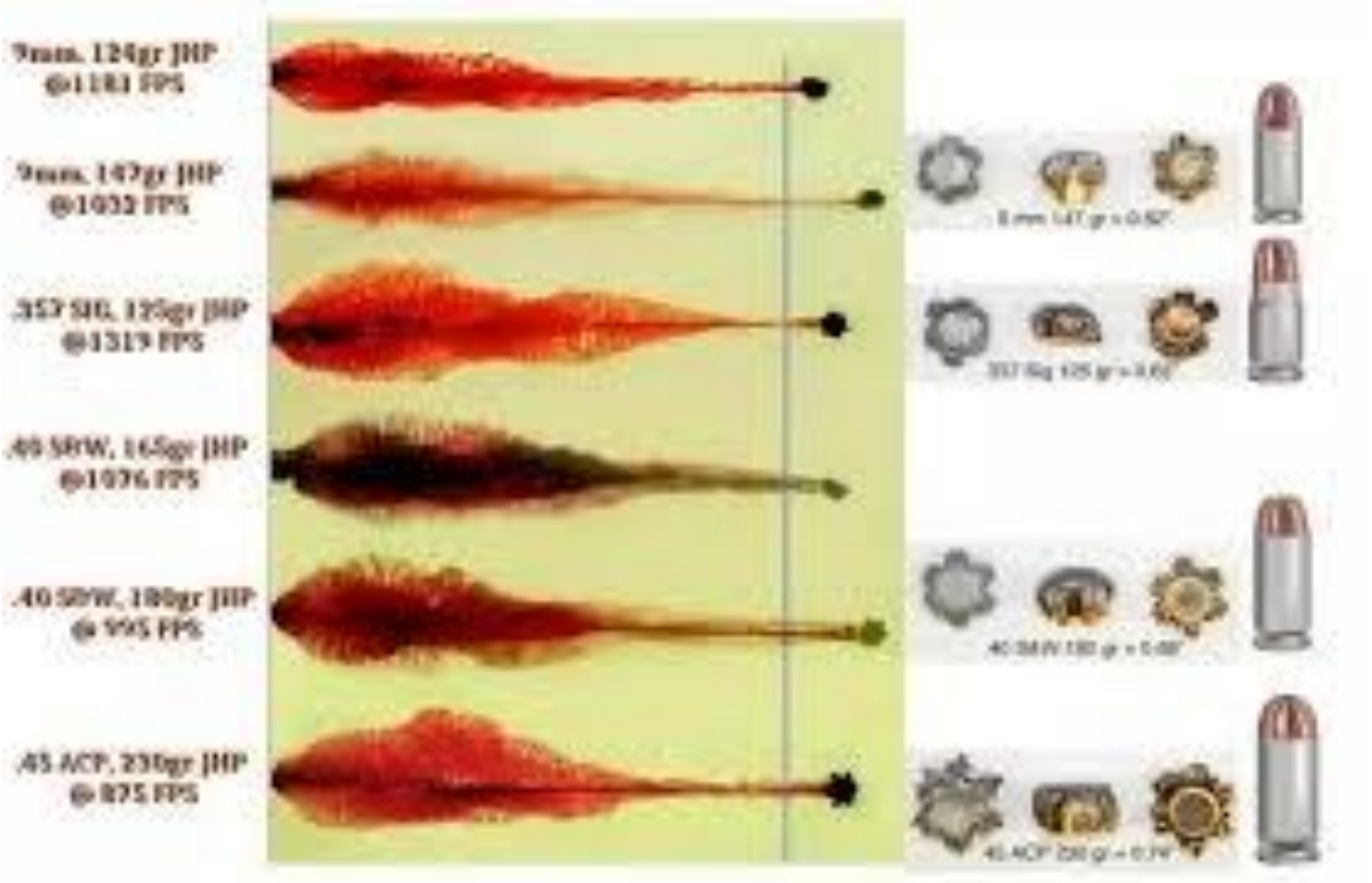
9 mm:
Barnes XPB 115 gr JHP (copper bullet)
Federal Tactical 124 gr JHP (LE9T1)
Federal HST 124 gr +P JHP (P9HST3)
Remington Golden Saber bonded 124 gr +P JHP (GSB9MMD)
Speer Gold Dot 124 gr +P JHP
Winchester Ranger-T 124 gr +P JHP (RA9124TP)
Winchester 124 gr +P bonded JHP (RA9BA)
Winchester Ranger-T 127 gr +P+ JHP (RA9TA)
Federal Tactical 135 gr +P JHP (LE9T5)
Hornady Critical Duty 135 gr +P PT
Federal HST 147 gr JHP (P9HST2)
Remington Golden Saber 147 gr JHP (GS9MMC)
Speer Gold Dot 147 gr JHP
Speer G2 147 gr PT
Winchester Ranger-T 147 gr JHP (RA9T)
Winchester 147 gr bonded JHP (RA9B/Q4364)

.40 S&W:
Barnes XPB 140 & 155 gr JHP (copper bullet)
Speer Gold Dot 155 gr JHP
Federal Tactical 165 gr JHP (LE40T3)
Speer Gold Dot 165 gr JHP
Winchester Ranger-T 165 gr JHP (RA40TA)
Federal HST 180 gr JHP (P40HST1)
Federal Tactical 180 gr JHP (LE40T1)
Remington Golden Saber 180 gr JHP (GS40SWB)
Speer Gold Dot 180 gr JHP
Winchester Ranger-T 180 gr JHP (RA40T)
Winchester 180 gr bonded JHP (RA40B/Q4355/S40SWPDB1)

.45 ACP:
Barnes XPB 185 gr JHP (copper bullet)
Hornady Critical Duty 220 gr +P JHP
Federal HST 230 gr JHP (P45HST2)
Federal HST 230 gr +P JHP (P45HST1)
Federal Tactical 230 gr JHP (LE45T1)
Speer Gold Dot 230 gr JHP
Winchester Ranger-T 230 gr JHP (RA45T)
Winchester Ranger-T 230 gr +P JHP (RA45TP)

Notes:
-- Obviously, clone loads using the same bullet at the same velocity work equally well (ie. Black Hills ammo using Gold Dot bullets, Corbon loads using Barnes XPB bullets, etc…)

-- Bullet designs like the Silver Tip, Hydra-Shok, and Black Talon were state of the art 15 or 20 years ago. These older bullets tend to plug up and act like FMJ projectiles when shot through heavy clothing; they also often have significant degradation in terminal performance after first passing through intermediate barriers. Modern ammunition which has been designed for robust expansion against clothing and intermediate barriers is significantly superior to the older designs. The bullets in the Federal Classic and Hydrashok line are outperformed by other ATK products such as the Federal Tactical and HST, as well as the Speer Gold Dot; likewise Winchester Ranger Talons are far superior to the old Black Talons or civilian SXT's."--- **Dr. Gary Roberts, well known ballistics expert.**



Federal 9mm HST 124 grain +P

Everyday Carry Gear, What Does Tom Carry?

I am fairly frequently asked, “Just what do you carry, and why?” Well, here is the answer.

My EDC handgun is a Glock 17 worked over by Ben Simonson at Boresight Solutions in Miami. Ben does a great grip reduction, which helps my small hands grasp the pistol correctly. Ben’s grip texture is a real stroke of genius. It provides an absolutely solid, non-slip grip, but does not abrade hands or clothing. The gun has Apex trigger parts, with the trigger pull weight set at 4.5 pounds. The sights are plain steel Heinies, with a black rear sight and a front sight painted a gaudy orange/red color. I use automotive touch-up paint, as it adheres to steel sights well. That’s it for modifications. Ben also built me an identical twin as a training/practice gun. I do 99% of my shooting with the training gun, and only shoot the EDC gun a couple of times a year, to burn up carry ammo and replace it with fresh. This allows me to transfer training/practice skills directly to the identical carry gun, without putting wear and tear on the gun I depend on for defense.

My chosen carry load, as noted earlier, is the Federal 124 grain +P HST jacketed hollow point. This load excels in gelatin testing, has a great street performance record, and shoots accurately and to point of aim in both my training and carry guns. It is carried in Glock OEM 17 round magazines. When I carried a 1911 I got in the habit of carrying two spare magazines, so I just kept doing that when I converted to the Glock. This gives me 52 rounds of capable ammo on my person, which ought to be plenty!

Just a few days a year, I wear a suit, and when that happens I carry a Glock 48 or a Glock 19, also worked over by Boresight, and set up just like my G17’s.

Whether it’s the G17, the G19, or the G48, they ride in an IWB #3 inside waistband holster from JM Custom Kydex in Nevada. The IWB #3 is a strikingly well designed IWB holster. Worn at about 3:30 to 4:00 on the belt, it is the best combination of speed, comfort, and concealability I have ever found. The Head Honcho at JMCK is Tony Mayer, who actually carries a gun daily and trains with it, which gives him insights that many holster makers don’t have. Tony won a Casino Coin in a hotly contested upper level class I taught in Arizona last year, using his IWB rig under a shirt. He knows his stuff. I have found that IWB carry just behind the hip gives me

the best combination of speed/comfort/concealability in a system I can use every day. Whether I'm wearing a pullover sweatshirt in the Winter, an untucked fishing shirt in the Summer, or a sports coat or suit coat, the same holster and positioning work just fine. That is important. The entire purpose of repetitive training and practice is to ingrain a response so we can do mechanical actions like drawing the gun without conscious thought or effort, allowing us to concentrate on the evolving tactical situation. Thus, for me, I want a holster that will always be in the same place, no matter how I am dressed.

I always have a blade on me, since I might need to cut something. Since I live/work in an urban environment, though, I don't carry a flashlight. In a career spanning 50 years, I have found exactly one private citizen self defense shooting involving a flashlight, and that took place on a rural farm far from street lights or other illumination. If I lived in the countryside, I would carry one of the newer Surefire high output lights, but that's not where I live.

My EDC gear was selected to meet my needs, and my gear does its job well. Your lifestyle and circumstances may require other answers, but this meets my needs.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https://www.jmcustomkydex.com/ https://www.boresightsolutions.com/

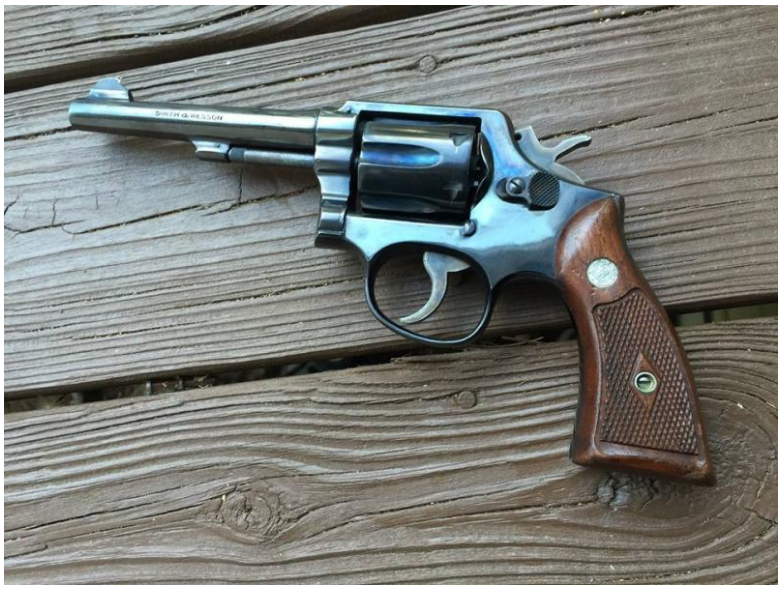
"Why does my Glock shoot left?", by Tim Chandler

If you have invested any time in formal firearms training with a handgun, you have doubtlessly encountered the phenomenon of bullet holes mysteriously appearing in targets low and to the left of a right-handed shooter's point of aim. Due to their ubiquity in the marketplace, Glock pistols are often in the hands of the puzzled shooter who thought their aim was straight.

The classic answer to this problem is that the shooter is "jerking" the trigger. In fact, it is a sad commentary on the state of firearms training that "stop jerking the trigger!" is about all the "coaching" many shooters will ever receive either in institutional or private training settings.

Shooter error is certainly part of the reason why their bullets aren't hitting the intended point of aim, but there is more going on here than just bad shooter habits.

To understand what is really going on we need to go back in time a bit. In the late 19th and early 20th century, the double action revolver rose to prominence as the defensive handgun of choice by private citizens and police agencies alike. The doctrine of the day held that the appropriate use for the double action function was only in the closest range engagements. Essentially anything beyond arm's length was intended to be addressed with single action shooting. This post-war S&W Model 10 is a good example of a typical defensive revolver of the day:



Note that there is a significant void between the rear of the trigger guard and the front of the stocks. This "sinus" exists to facilitate single action shooting. It brings the hand higher on the gun to make the hammer spur easier to reach. It is essentially a carryover from the single action revolvers which were still heavily used as defensive sidearms deep into the 20th century.

The sinus in the grip may make it easier to reach the hammer spur for single action shooting, but it also makes accurate double action shooting much more difficult. The trigger finger is essentially coming on to the trigger in a downward and diagonal angle. In the single action mode of operation where the trigger's travel is short and relatively light, this isn't a problem. When one is moving through the full double action trigger press that requires more than 6 times the actual weight of the revolver, however, the barrel ends up being driven off target. The size of the error magnified by lack of refinement in how the trigger is being pressed.

As the merits of double action shooting gained traction in handgun training among serious practitioners of the early 20th century, it became clear that the approach to grip had to change. Serious shooters started to use devices like the Tyler T-Grip to fill that sinus, which had the effect of lowering one's grip on the revolver and changing the angle of the shooter's finger on the trigger. This snub-nosed S&W Model 12 wears a similar device manufactured by Pachmayr:

Businesses like Herett's Gun Stocks sprang up offering stocks for revolvers that were custom made to the dimensions of the shooter's hand. All in the effort of allowing the shooter to have a grip on the revolver that would allow them to work the double action trigger in as straight of a line as possible. Original stocks from the era are so valuable to collectors today because of how incredibly common it was to ditch the stocks put on the revolver by the factory for something that allowed the shooter to shoot more accurately at speed. (Herett's stocks, seen here on a 3" M&P)

The shooters of that day understood something critical: *One's grip on a handgun is absolutely critical for accuracy in action or defensive style shooting*. Not just the methodology of how one goes about gripping the gun, but also in how the gun responds in the hand to both the grip and the operation of the trigger.

The semi-automatic pistol's prominence seems to have buried that crucial insight. The grip dimensions of a semi-automatic are based on the need to accommodate a box magazine inserted into the grip. Shooters face a much more stringent limit on how far they can go in fitting the handgun to their hand. Polymer-framed semi-auto pistols further restrict what can be done as they don't use stocks at all. It took Glock until Generation 4 to reluctantly provide interchangeable grip panels on their guns. Even with interchangeable grip panels the most crucial areas of the gun's dimensions are set in stone.

When these dimensions run into the vast differences in human physiology, there are consequences. In this photo of the 2019 Rangemaster Polite Society match man-on-man shoot off, you can see how my hand interacts with the grip of a Gen 5 Glock 17:

I have what my late friend Todd Green referred to as a "freakishly high grip". Note that the major knuckle of my index finger sits far above the trigger, resulting in my trigger finger coming down on a diagonal angle very similar to what you might have seen from a double action revolver with an open sinus. (Note: The knuckle that is actually in line with the trigger is actually the major knuckle of my middle finger!)

Compare how my hands end up on the gun to another shooter's hands from the same match using a Glock 34:

Note how much lower the major knuckle of his trigger finger sits on the gun, allowing him to have a much less severe angle on the trigger. Also note that his trigger finger is making hardly any contact with the corner of the frame above the trigger finger because he's able to get a more optimal angle on the trigger.

The physiology matters. As the gunmen of the early 20th century learned, how our hand gets on the gun is absolutely crucial to our ability to shoot it well at fighting speed. My natural grip on a Glock pistol results in a last-

minute lateral push in the opposite direction of the trigger finger, mostly occurring during the overtravel of the trigger.

The bullet does not leave the barrel the instant the trigger "breaks". The trigger continues to move to the rear as the striker is going forward to impact the primer and begin the process of firing. This means that as the gun is in the process of firing, my hand's interaction with the gun is literally driving the barrel off of my original point of aim.

For a skilled shooter exercising excellent trigger control, the effects are relatively minimal. For me, at 25 yards it results in a group centered on the left edge of the black on a B8 bullseye. For an unskilled shooter exercising poor trigger control, however, the results can be missing the target entirely

at much closer range.

What I actually need on a Glock is a modification that performs a similar function to the T-grip on a double action revolver, only on the backstrap of the gun. Something that lowers my hand on the grip to bring my trigger finger more in line with the trigger. When I consciously adopt such a grip by deliberately violating decades of practice and gripping lower on the gun, I'm able to press the trigger without inducing any lateral push. The trouble is that I cannot successfully land that altered grip at speed under stress any more than the gunmen of the early 20th century could guarantee they could land a lower grip on their double action revolvers from the holster when life was on the line.

I have found that replacing the factory trigger with one that has less overtravel from Apex Industries helps mitigate the effect somewhat. I have also found that tinkering with the different backstraps on the Gen 4/Gen 5 Glock can help reduce it as well. Even with a different trigger and the best grip option available in the box, I can't completely eliminate the effect.

In the last couple of years, I've fired more than 20,000 rounds of 9mm trying to completely eliminate the lateral push I experience on a Glock by altering my grip and my trigger finger placement…but to no avail. The bottom line is that the gun simply doesn't work with my physiology as well as other guns on the market. For the bit of lateral push I couldn't eliminate by changing the trigger and the grip panels I've just bumped my sights and my optic to compensate.

While bumping my sights to compensate might not be ideal, the simple truth is that if I'm going to shoot a Glock I either have to offset my aim

(which is difficult to do under stress) or change my sights. By bumping my sights I can achieve excellent accuracy on demand with the pistol, as witnessed by this winning target from the bullseye course shot during the Rangemaster Master Instructor's Course in January of 2020:

The inability to do much to alter the grip of most semi-auto pistols on the market today seems to have under-emphasized the importance of how one's hand interacts with the gun. It is certainly important that a shooter can reach the controls and successfully operate a pistol, but proper fit goes beyond that and also considers performance.

It is not a coincidence that a new generation of skilled polymer-smiths has arisen as the polymer framed handgun has become more common. The outstanding work done by Boresight Solutions isn't being undertaken for aesthetics. Skilled shooters figured out that reworking the grip of the pistol to better fit them allowed them to hit what they wanted to hit more quickly, and more reliably. I can only imagine that somewhere in The Great

Beyond Ed McGivern is chuckling to himself at our discovery of something they figured out almost a century earlier.

Hopefully the next time you run into a student who is consistently shooting left, you'll have a more nuanced understanding of what might be happening than "Stop jerking the trigger!"

UPCOMING EVENTS

Jan 21-23 Pistol Instructor Development, Homestead, FL

https://www.eventbrite.com/e/three-day-firearms-instructor-development-course-fl-tickets-99755840404

Jan 24-25 Advanced Pistol Instructor, Homestead, FL

https://www.eventbrite.com/e/advanced-firearms-instructor-development-course-fl-tickets-99757148316

Feb 20-21 Combative Pistol, Ruskin, FL

https://www.eventbrite.com/e/rangemaster-combative-pistol-course-fl-tickets-100974683998

April 9-11 Pistol Instructor Development, Bandera, TX

https://www.eventbrite.com/e/three-day-firearms-instructor-development-course-tx-tickets-102857140476