

A Focus on the Fundamentals

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STANCE

The main goal of a proper stance is to provide stable and consistent support for the entire body so that it can hold the gun as steady as possible as well as recover from recoil quickly with little movement. The foot positions and body twist should be duplicated naturally, with little effort. It should be comfortable and give a repeatable natural point of aim.

Finding the stance that works for you involves experimentation on your part. Everyone is biomechanically different, so one stance does not fit all. But there are some basics to adhere to as mentioned previously: comfortable, sense of equilibrium, no muscle tension in the legs or torso, arm raises naturally toward the target and 45 recoil is easily handled with no loss of balance.

To find the position that works for you, start by turning somewhere between 45°-90° from the target. Keep feet about shoulder width apart. Knees should not be stiffly locked. Back and neck should be straight, shoulders relaxed. Head upright. Your non-shooting arm must be anchored to prevent body sway in recoil...most place their hand in their pocket, but hooking your thumb on you belt loop in front works even better for balance. There are three twisting points to align you with the target. Use all three instead of just one or two. The three twist zones are hips-torso, shoulder and neck.

The shooting arm must be extended fully with elbow and wrist locked in position (but not with too much tension). To counterbalance the weight of the gun in your extended hand, some backward sway may be necessary so as to keep your center of gravity in line with the center of your body mass. Keep your head level with the sights; your face should be turned as far as possible toward the target without undue strain on the neck muscles.

To find your natural point of aim, close your eyes and assume the positions described above....open them and see where your sights are aimed. Shift your feet to align the sights on the target bull. Now lower your arm, close your eyes and repeat the process until you are properly aligned. Simulate recoil with your arm and see where it falls back naturally. Adjust again if necessary. Remember, as tension free as possible. You should be able to stand in this position for a long time without any noticeable fatigue or movement.

After a period of time shooting, you may notice that your foot positions may have altered somewhat; this may be your tired body adjusting to find a more comfortable position. It's okay to accept this comfort adjustment. Check your alignment again and if it is off a bit, just use your rear foot to fine tune your point of impact by leaving the heel of the foot stationary and only making very slight (like an inch or two) toe movements left or right.

The stance forms the foundation for the shooter to hold steady and to build on the other fundamentals. All else remaining equal, an inconsistent stance will change your point of impact on the target. Like some other fundamentals, finding the stance that works for you is

not given enough attention. But once found and habitualized, a proper stance becomes natural and automatic and leaves you free to concentrate on other things.

GRIP

Gripping the pistol correctly and consistently is essential for shooting groups. Orthopaedic grips fitted to your hand will aid in the consistency necessary every time you grasp the pistol. That is your main objective: to grasp the same way every time. The gun should feel comfortable in your hand. The trigger finger should be able to position itself on the trigger so that it can be able to press it firmly straight back without rubbing against the side of the grip.

Here is a step by step method to grasp the pistol:

1. Pick up the pistol with your non-shooting hand and place it firmly in your shooting hand.
2. The pistol is seated high and deep into the web of the hand (that fleshy area between the base of the thumb and index finger). You are trying to make the pistol barrel a natural straight line extension of your arm. If a string traveled from the muzzle to your eye, it would follow a line along the inner portion of your arm. The mainspring housing (or that area of the grips) should catch the meaty portion of your palm below the base of the thumb.
3. The thumb itself is loose and relaxed along the thumb rest (if you have one).
4. The primary gripping pressure is produced by the middle finger.
5. Secondary pressure is provided by the third finger. Also, this finger can produce tiny changes in front sight elevation by increasing/decreasing pressure.
6. The little finger is loose and not exerting any noticeable pressure. Essentially, it is just along for the ride. Be careful...this finger has a lot of leverage, pressure while shooting will bring the muzzle down.
7. The fingertips do not exert pressure on the pistol grip. They are part of the total "package", along with the thumb and little finger, that form the entire grip and help to control the gun in recoil, but are not consciously applying pressure as do the middle and third fingers. If you "let go" with the thumb, little finger, trigger finger and finger tips..the gun should still be held firmly by the middle sections of your middle and third fingers pressing straight back into the lower palm of your hand.
8. The trigger finger must not be in contact with the grip at all.

The trigger finger must be able to flex at the middle knuckle without moving the pistol or varying the pressure of any of the other fingers. This is important and demands a lot of practice. You must be able to pull the trigger without moving the other fingers. The hand is not meant to work this way, so you must train to overcome this tendency.

Total grip pressure is firm but not to the point where your hand starts to shake. Keep the wrist locked. A firm grip and locked wrist have much less play from left to right. If your finger nails are totally white, you are using too much pressure. If you can see a deep impression of the grips in the flesh of your hand, you are overgripping, back off a little (except maybe in hardball rapid fire). Try to keep a consistency in the amount of pressure you use to grip the gun throughout the entire shot process. Inconsistency will definitely change your point of impact.

Spend time working on your application of a good grip. Learn how to easily and consistently acquire it...like putting on a well worn glove. If the grip doesn't quite feel right, start over. Some shooters put memory markers on the grips to let them know that they are holding correctly.

If you feel you lack grip strength, do some exercises with a hard rubber ball. Dumbbell wrist curl exercises working both the inner and top of the forearm will strengthen the finger flexor tendons. Take a single sheet of a newspaper and using just your fingers, wad it up into a tight ball. Make sure you stretch your "tennis elbow" ligament.

Between shots in slow fire, relax your grip (without letting go) to let blood rejuvenate the hand and fingers.

Let me end by repeating:

1. A firm grip gives you a sense of controlling recoil.
2. The repeatability of the way you grasp the gun will give you tighter groups.
3. The trigger finger and nothing else tightens to squeeze the trigger.

BREATH CONTROL

To shoot well one must become motionless. Breathing causes motion, so it must stop....but in doing so you are robbing your body of the oxygen it needs to perform well. Lack of oxygen causes muscle fatigue and loss of vision (in fact, the eyes are the first thing in your body to go). Fortunately, these effects are not felt immediately because we have a reserve of oxygen in our system to sustain us for brief periods, and the more aerobically fit you are, the longer you can last.

To insure that you have enough oxygen in your system to last for the 10 to 20 seconds needed for a slow fire shot or timed fire string you need breath control.

Taking two deep breaths (inhale slowly nose, exhale quickly mouth) before a shot or string does two things....lowers your carbon dioxide blood level (which tells the brain when to breathe), thus reducing our urge to breathe and also gives you sufficient oxygen to avoid eye and muscle fatigue.

Then take a third normal breath as you bring your gun on target and exhale half the air to leave your lungs in a "neutral", comfortable state (too much or too little air in the lungs will

cause an uneasiness to inhale or exhale to relieve the pressure). Some listers have proposed having a little more air than you need and slowly letting it out as you shoot. Try it and see if you like that method. But remember, your chest must not move.

Since your body is accustomed to pauses between breaths you can stay motionless in this state until you begin to run out of oxygen. Hopefully, you will have finished shooting before that happens. If you run out of air in slowfire, put the gun down and start all over again since you are definitely holding too long and your eyesight is losing focus and your wobble area is increasing. In sustained fire, you can take a quick inhalation of air during recoil to revive yourself (the effect is almost instantaneous for your eyes and muscles).

If you cannot hold your breath for timed fire, even after taking two deep breaths prior, you are not aerobically fit and need to improve your aerobic capacity by walking or jogging exercises. If you are a smoker...well, duh!

This is the easiest fundamental to master since your body "knows" involuntarily how to do it. Just help the process along by remembering to oxygenate first and then leave the lungs and diaphragm in a relaxed state while shooting.

I know it seems as if I went into a too long explanation for what amounts to just "take a couple of quick breaths and hold it", but understanding the mechanics of "why" is, in my opinion, a reinforcement in understanding how important subtle things are when you are trying to something as difficult as precision shooting. Plus, I like to "hear myself talk".

AIMING AND SIGHT ALIGNMENT

There are different techniques to aiming and sight alignment depending on whether you are using iron sights or red dot scopes.

AIMING involves correct positioning of the sights in relation to the aiming mark on the target. Since the eye very easily centers concentric circles...with dots the aiming mark is the center of the bullseye. It is as simple as that. With iron sights, however, aiming presents three common options. Center and six o'clock holds plus sub-six area aiming. All three are valid aiming marks and the type of shooting and targets used determines which is best. For the less skilled shooters, center hold may be the best option for sustained fire since it allows the brain to accept more readily what it sees. Six o'clock and sub-six aiming are more suitable for slow fire. Sub-six is sometimes referred to as "area aiming" As in center hold it allows the brain to have a more acceptable area in which to pull the trigger. Six o'clock hold is a very precise point and trying to hold it before squeezing the trigger causes hesitation and can lead to poor trigger manipulation by novice shooters.

Make sure you are using your dominate eye for aiming. To find out which eye is dominate, extend your arms, palms forward, then bring your hands together making an opening with your thumbs at the bottom. Center an object in the opening, then close one eye, then the other. The eye that kept the object centered in the opening is your dominate eye. There has been a lot of discussion on the list about cross dominate shooters...refer to the archives for that discussion.

SIGHT ALIGNMENT is one of the most critical of the fundamentals. Minor alignment mistakes make for major variations in your point of bullet impact. For dots, alignment consists of keeping the dot in the center of the scope lens and the bullseye. Again, it is as simple as that. Unfortunately, no one can keep the dot perfectly still and centered, especially while squeezing a trigger.

Iron sights are in perfect alignment when the front sight blade is centered in the rear sight notch and the tops of both are on level plane with each other. Since the eye can only focus clearly on one object at a time, your focus must be on the front sight blade...for it is only here that you can see misalignment....the brain determines if there is equal light on either side of the front blade and the top of the blade is level with the rear notch opening. You CANNOT do this if your eye focus is on the target or the rear notch. Both of them will be seen in relation to the front sight blade, but slightly fuzzy, that's okay.

The combination of sight alignment and aiming point on the target forms what is known as the "sight picture". Maintaining the sight picture while squeezing the trigger is the secret of successful shooting. Let me write that again...for it is the holy grail of successful pistol shooting. Squeezing the trigger straight back so as to not cause any misalignment or excessive movement will result in a good shot. Everytime. Guaranteed. Unless, of course, your gun and ammo suck.

A couple of clarifications. Don't confuse movement within your aiming area with movement which causes misalignment. If you maintain perfect alignment (no wobble of the dot from center, the front blade centered and level) you can still have side to side and up and down movement of your aiming area as much as the size of the ten ring and still shoot a ten. Jim Lenardson describes it thusly: imagine a pipe with a 3½" inside diameter (the size of the ten ring at 50 yds) running perfectly straight from your muzzle to the target. AS LONG AS YOU MAINTAIN PERFECT ALIGNMENT, you can have a 3½" movement by the combination of your arm and body sway and still hit the ten ring. But with a very slight misalignment, the path of the bullet is altered and will it hit the side of the pipe before it travels 50 yds.

So you can have three kinds of movement: wobble (misalignment), arm sway and body sway. All three contribute to the point of impact of the bullet, but the wobble is the one that does the most damage toward a good shot.

TRIGGER CONTROL

The controlled release of the trigger lies at the heart of performing a good shot on target. All of the other fundamentals can be perfectly performed but they mean nothing if the trigger release is faulty, because it will spoil the aim and sight alignment at the crucial moment when the shot is fired. Thus, trigger control is an equally critical fundamental with sight alignment.

Your trigger finger must apply pressure to the trigger in a direct line back toward the aiming eye. For this, the finger must be correctly positioned, with the center of the pad of the first joint (or whatever works for you) touching the trigger. The trigger finger must be clear of the frame and grips so as not to move the pistol as the pad is pulled straight back. ONLY THE

TRIGGER FINGER MOVES. Grip pressure of the other fingers must remain static (see the post on "Grip").

Trigger finger pressure must be constant, smooth, and progressive. Once you start applying pressure, continue until the gun fires... do not "stop-start" the trigger for usually only a very skilled shooter can do that successfully (because each stop-start requires the breaking of the trigger's inertia and that causes movement). The "keep the trigger moving" mantra for rapid fire applies to all trigger pulls.

In slow fire, the timing of the hammer fall should be practiced so that the release of the shot coincides with the steadiest part of your hold, which is approximately 6-10 seconds after you start the aiming process. In sustained fire, the hammer fall coincides with returning to an acceptable sight picture.

Keep your finger pad centered on the trigger. Too high decreases leverage and the pull feels harder, too low and the shot may fire before you are ready. You must be consistent in your trigger finger placement. Don't be afraid to experiment in training with different placements till you find the one that gives you the steadiest straight back pull.

Trust in your ability to hold and minimize wobble and the eye's ability to center the sights to form a sight picture and pull the trigger smoothly and continuously without trying to "snatch" a shot or jerk the trigger. You can start out with a slow release and with experience and lots of dry fire trigger time, you can increase your trigger speed without additional movement.

With two stage triggers, take up the first stage completely and add slight prepressure to the second stage (the amount of which depends on your "trigger sense" acquired with experience) just before settling in on your aim and alignment. This works well with slow fire. For sustained fire, take up the first stage in recoil recovery and keep the trigger moving. Again, do not "stop-start" as it will destroy your rhythm and cadence (the only exception is if you recover badly and do not have a sight picture which will give you a shot in the bull).

Work toward unconsciously activating the trigger, such that the shot becomes a surprise break to you. This will help in avoiding flinching or anticipated recoil. This is difficult to master, but with practice and patience, it will be achieved. When trigger pull becomes automatic, your brain is free to focus on the other critical fundamental...sight alignment. Just as your eye cannot focus on two objects simultaneously, your brain cannot focus on two separate fundamentals at the same time. All the fundamentals should be done on auto-pilot, but if you have to focus on one, then let it be sight alignment when shooting with iron sights and when you are using a scope, you can let your focus be on trigger pull (since a sight picture is so easily done with a scope).

One of the best ways to develop trigger control, speed and a feel for your particular gun's trigger is to dry fire. I know it is boring compared to live fire, but if you have long periods between matches, it can substitute as practice.

FOLLOW THROUGH

Follow through is an often neglected fundamental; yet, without it, all your good efforts in applying the other fundamentals may be wasted.

Releasing the shot should not be your final effort. You need to do one more thing. It is argued (especially on this list) that at the moment of ignition, the bullet has left the barrel before you could possibly do anything to affect its flight. I believe that also for the simple reason that the nervous system of your body reacts in tenths of a second and the gun fires in thousands of a second. It's no contest. But the problem lies in doing something BEFORE the moment of ignition. Without follow through, a bad habit may develop which is initiated just at or before ignition in which case, the flight of the bullet will be affected by your action or movement.

In all sports the achievement of a quality performance mandates follow through. The pitched baseball, the sprinter keeping form when crossing the finish line, the martial artist breaking a board, the golf shot.....the list of examples is long. What we do is no exception. There can be no let up of form and technique until it is absolutely certain that the act is completed. The danger is in relaxing your grip too early, losing your concentration on the sights, or beginning recoil before it has actually started; all of which will produce a bad shot. To practice follow through, imagine that the bullet is like a rocket leaving the barrel a few seconds after ignition. Try to maintain your form as long as possible to allow the rocket to leave the barrel, keep your focus on the sights or dot and try to call the shot. If you have trouble calling your shot(s)....you are not following through.

This technique of using follow through as a SEAMLESS, CONTINUING FLOW OF ALL THE FUNDAMENTALS will reduce the chance of giving up on the shot before it is fired.

Well, that's it. I hope you will or have been able to improve your score by the application and practice of these fundamentals. I've tried to explain them as best I could. I've already gotten some feedback from one individual who has improved his shooting. That's great.

RED DOT SCOPES

Most participants in matches use the red dot scope. Not that there is anything wrong with using iron sights, it is just that the dot scopes are easier. As our eyes weaken with age, the dot scope allows us to continue to compete at a level comparable with those of sharp vision.

With iron sights, three elements must be aligned to form a sight picture...the target, front sight blade and the rear sight notch. Since our eyes can only focus sharply on one thing at a time, our focus is thus on the front sight blade to ensure perfect alignment.

Red dots, however, are on the same focal plane as the target (infinity) and thus the "eye" has only to look at two things...the target and the dot and they are both in focus when you aim. That is quite an advantage! It allows for faster target acquisition and alignment and because the brain easily aligns concentric circles (the scope lens, the dot and the bullseye), you can concentrate more on trigger squeeze and let the aiming process become more automatic.

Low light levels (relative to the outdoors) at indoor ranges can be a problem with iron sights, but not with dots. Most dots have several brightness intensities to take care of the dimmest indoor ranges to the brightest outdoor sun.

Some things to remember when using scopes: Parallax is a factor even with the best dots (my choice is the Ultradot) so it matters that the dot is centered in the scope when aiming especially when shooting at 50 yds. You can check the amount of parallax your scope has by keeping it rested on the bench and held stationary with the dot centered on the bull. Now moving only your head slightly side to side and up and down, you can see how much the dot moves on the target when it is in different positions in the lens. The smaller the movement= the lesser the parallax= the better the scope. Keeping the dot centered in the lens avoids misaiming.

Always carry a spare battery. Dots will weaken gradually with silver oxide batteries and will fail very quickly with lithium batteries. The batteries last a long time if you can remember to turn off the scope when finished.

Ultradots (and some other brands) offers different dot and lens sizes. The choice is just a matter of personal preference and the style of shooting that you are doing.

The scope and mount will add 6oz. or more to the gun and if you are slide mounting, you may need to increase your powder charge slightly or change your recoil spring to give you reliable functioning.

I'll go out on a limb and say that dot scopes will probably add 10% to your iron sight scores especially if you have older eyes. They take some getting use it, as all changes do, and your scores may initially drop somewhat, but eventually you will be glad you switched. There are those who believe that all shooters should start out with iron sights when learning the fundamentals before transitioning to dots, I never really understood this, except of course if becoming Distinguished is important to you.