

# Some Thoughts On Perfecting Accuracy of Rifle Firing

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In the Spring of 2016 I attended a Project Appleseed Weekend Marksmanship Clinic. I'll be honest – my performance was far short of 'Marksmanship.' But I did learn a lot and since the Clinic I have focused on improving my performance. I hope to attend another weekend clinic in 2017 – provided I can actually 'improve.' The following are a few thoughts I have had since focusing on the learning material I received from Appleseed. Keep in mind I am a newcomer. What I say here is opinion only – I am fairly certain you have your own.

### **Several general tips**

- Do not use a bolt-action rifle at a weekend clinic. I did and was not able to work the action fast enough for the firing that was short-time-limited. I have since spoken with several experienced individuals who agree that a semi-automatic is the preferred choice. What brand you use is your choice. (I did note that everyone, but me, used a semi-automatic at the weekend clinic I attended.)

- Go online and download documents that describe the 'standing', 'sitting', and 'prone' positions, as advised by Appleseed. Click [HERE](#) for one link. Attaining what Appleseed terms a "Natural Point of Aim", NPOA, is paramount but there is far too much information thrown at you to absorb during a clinic if that is where you first hear it. You will know when you have attained a NPOA for any of the three shooting position when: (a) You are not straining your muscles to hold the sights on the target and (b) you can be on target, close your eyes, and still be on target when you open your eyes.

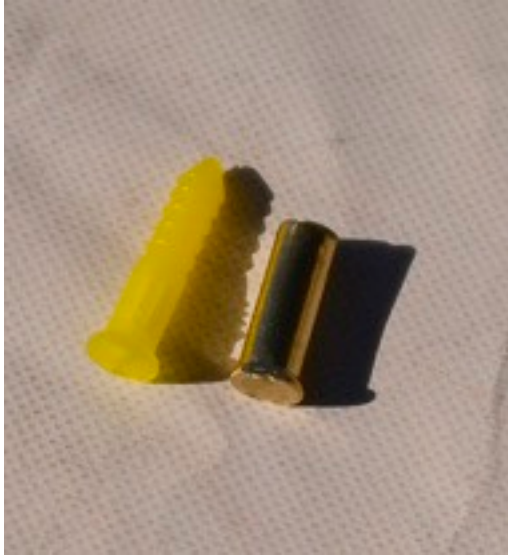
- Along with focus on NPOA give attention to where your trigger finger is placed on the trigger. I find placing just short of the crease of the first knuckle, square onto the trigger, results in the least pulling of the sight off target. As one website says you have to experiment with what works best, click [HERE](#). Also make certain you are firmly gripping the pistol grip portion. For more on this, click [HERE](#).

- Practice using Dry Firing. I do NOT agree with the advice that you should begin the use of very large numbers of dry fires, say 1000, for every live fire. That advice is based on a military fellow who was practicing for a military competition because he could not do live firing where he was assigned. I also understood that that individual was a firing line instructor – so firing a rifle was a job. If you are like me there are far too many other matters in life to deal with, such as a job, children, house-maintenance, etc., to have that sort of time. Moreover it is overwhelming and discouraging to start dry firing at that amount for every live firing. Work up in the number of dry fires so that it is not a chore but rather an enjoyment.

I had not used dry firing before, so I had to take time to learn what dry firing is about and then come to appreciate it. I began with 10 to 20 dry fired for every 10 rounds of live fire. Slowly I realized that dry firing was improving my performance. So slowly I increased the number of dry fires between live firing. At this time I dry fire 100 times each day I can, 25/ group with a rest in-between. I do this a total of 10 days and then fire 10 live fires. So I am dry firing 1000 times and then 10 live fires.

### **More on Dry Firing**

One problem with dry firing is the potential of damaging the firing pin and/or the breach where the pin strikes. The advised method for avoiding damage is use of a non-active cushion where the pin strikes. I use two forms: a dry-wall anchor, shown on the left in Figure 1 and an empty 22-LR shell, shown on the right.



**Figure 1**

The dry-wall anchor works well in my bolt-action rifle because raising and lowering the bolt cocks the trigger. So multiple dry firing can be accomplished without expelling the anchor. As noted above, I dry fire 100 times each day I can. The anchor survives the 100 impacts. After the 100 dry-fires, a session, I rotate the anchor 180 degrees for the next session. Then I insert a new dry-wall anchor.

For my semi-automatic I use an empty 22-LR shell that has been modified so that the extractor does not expel the shell when cocking the trigger. Figure 2 is an end view of the modified shell. I file the rim of the shell so that it has parallel edges that the extractor cannot reach. The firing pin of the semi appears to strike fairly hard, so I dry fire 25 times and then rotate the shell for another 25 dry fires. Then I insert a new modified shell for the next 50 dry fires. (Left-handed use a right-handed semi-auto makes cocking the trigger difficult – I know because that is what I do.)



**Figure 2**

**Suggestions for Use of an USGI Web Sling**

I find the method of creating a loop at one end of the sling, for wrapping around the arm above the bicep, to be tedious and too-much trouble to get into and out of. So I have devised a different approach that accomplishes the purpose.

Figure 3 shows the disposition of the sling set up for my modified use. The clip is left free at the end of a length that is only sufficient for reaching a strap that is placed around the upper arm, as shown in Figure 4. The length is adjusted at the front swivel for each shooting position. (I sew a thread line into the web for each location it bends around the front swivel, a black one for the prone position, a red one for the sitting position, and a white one for the standing position.



**Figure 3**



**Figure 4**

The arm strap is shown in more detail in Figure 5 and Figure 6. The black Velcro strap has a tongue, whose surface is covered with hooks, that loops around the arm and then through a buckle back onto the Velcro. A brass D-Ring is added, which is free to move the length of the strap, to receive the sling's clip. The strap is tightened around the arm above the bicep. The felt backing is stapled onto the strap. The felt dampens the effect of the heartbeat which comes into play if the strap is tight.



**Figure 5**



**Figure 6**

The arm strap can stay in place throughout a shooting session, loosened if not needed and immediately tightened and the sling clip snapped onto the D-Ring when shooting. It is convenient and is far less hassle than encountered by the traditional use of the sling looped around the arm. The combination of the use of this strap and changing the sling length to the color-coded thread marking makes adjustments for shooting positions quick and easy.

### **Suggestions for Easily and Repeatedly Achieving NPOA for the Shooting Positions**

Figure 7 is my shooting mat – somewhat ugly to say the least. It is a simple ground tarp with a cushioned pad fixed to it. (Keep in mind I shoot left-handed.)

The tarp came with the yellow line along its length. I call that yellow line the “Prone Body Alignment” because the first thing I did was rotate the tarp to the left so that when lying along the yellow line I could aim at the center of the target, close my eyes, and when opening I was still aimed, wind-age-wise, at the center. Next I located a piece of black duct tape at the front right of the tarp, ‘Mark 1.’ Finally I placed a second piece, ‘Mark 2’, so that the line-of-sight from one to the other pointed at the center of the target.



**Figure 7**

So when I get set to shoot in the prone position I first rotate the tarp so that the line-of-sight through the two marks is directly at the center of the target. Now I can lay aligned with the yellow line, with my elbows at spots on the cushion knowing I am at the NPOA. In other words, I do not have to spend time guessing at my alignment and squirming to reach NPOA.

The alignment for the sitting position is different from that for prone. Basically I rotated my orientation to the left of the yellow line until my elbows came naturally down in front of the knee cap/joint. That alignment is the short yellow line you see at ‘Sitting Body Alignment.’ Whereas the body is at what is probably a 30-degree angle for the prone position it is approximately 45-degrees for the sitting position. (You may differ and all of this is reversed if you shoot right-handed.)

### **About That Sitting Position**

I think crossing-the-legs and tucking them up under the butt as much as possible is best. But I am not a youngster, so this sitting position is not easy to hold. In particular resting the elbows on the legs, just below the knees, is nearly impossible for me because I can not hold my knees elevated in order to hold an elevated line of sight pointed at the target’s center. So I came up with the following as a means to get-equal-with-the-youngsters.

I think every one is familiar with the sock-full-of-sand idea for shooting from a rest. I adapted the sock-mode for cross-legged sitting. I placed a 1-gallon plastic bag inside each of 2 socks and filled up each bag as much as the sock would allow. I crammed sand into the bag/sock until it solid – I mean hard solid. Then I twisted the remainder of the sock and folded it back over the filled portion. I tied off with old boot show laces. Figure 8 is what I ended with.



**Figure 8**

The sand sock on the left in Figure 8 is used on my left side and is a little smaller than the one on the right which is placed on my right side, as shown in Figure 9. The two filled socks allow me to crisscross my legs and have the knees high enough to comfortably rest my elbows on them. Note in Figure 9 my left elbow is above the knee. Frankly, the elbow is resting on the meaty inside of the leg and that is not comfortable. I have since increased the angle of the body position with respect to the line to the target. This caused the left elbow to move to just below the knee cap.



**Figure 9**

Now before you complain that it isn't reasonable to carry around two heavy, hard-sand socks I should note: (1) You are shooting from the same place on the shooting range – so you are not carrying anything around. (2) There is nothing in any rulebook I have seen that says I cannot use sand socks. (3) The sand socks compensate for an 'old man's body.' What is wrong with that? (4) And, finally, if I combine these sand sock with what I described above for getting into a NPOA sitting position I can get into the correct NPOA sitting position, accurately, quickly, and easily. So while the rest of the firing line is squirming, jiggling, and searching for the right sitting position I am waiting, ready to fire.

One final thought, and this is about the shoes you wear. I have found that if I wear my running shoes, the type that has flared soles at the heels, my legs not stable while sitting. This is because the shoes are on their sides and the flare becomes a knife-edge that wobbles to and fro. So I wear straight-edged, soft-soled low-top shoes.

Final confession: With all of this I have a long-ways to go before I can perform at marksmanship level.

### **My Target and Notes**

I have read that I should keep notes on what I encounter in firing practice. I found at the Appleseed course that an emphasis is placed on hitting a small black square, which is about 1-inch by 1-inch. So I combined the two things to make the target I use for both dry and live firing, as shown in Figure 10.



**Figure 10**

The target is a sheet of 8.5-in by 11-in white paper at the center of which I attach a 1-in x 1-square made from black heavy-art paper. I tape this onto a piece of cardboard and clamp to a metal post located 25 meters from my position. (I can dry fire indoors at 20 feet. For this distance I use a 0.25" x 0.25" square.)

Since I am dry-firing a 1000 times, 100-per-day, I make my notes, for each day, on the target paper, including the number of dry fires and what I observe are my problems and potential solutions, scope adjustments, etc. At the very top I note the gun and the shooting position for that set of 1000 dry fires. For the last day I use that target I shoot 10 live rounds after a warm-up of about 10 dry fires. I then file the target away in a folder, along with the earlier such targets, in the order they came to be. This way I keep track of what the dry firing is doing for me, and what if any improvements, or not.

### **One Final Thing**

My eye sight is fairly decent. I use 1-diopter reading glasses for fine print. My far-sight is good-to-excellent. So I use a pair of 0.5-diopter glasses for shooting. I started this when using peep sights so as to slightly improve the image of the peep while not damaging the image of the target. I have continued to use them now that I have switched to a scope sight. For whatever reason(s) I am more comfortable with the scope sight when wearing the small correction than I am not using any glasses.

### **In Closing**

As I said at the beginning I am a newcomer. Some if not all of what I have said here may or may not work for you. Indeed you probably have better ideas and thoughts, or at least work for you. Write a paper such as this one and put it out there for the rest of us to read. If you reach marksmanship and I do not then I will say to myself, "Gee I wish I were as good as that guy/gal. Maybe I should pay attention to what they have to say."