



The EatWild Shooting Skills Workshop

The EatWild Safety Program

1. You are responsible for the safety of everyone at the workshop.
2. Under no circumstances should a gun ever be pointed at anyone. **If you point a gun at anyone, you will be asked to leave the workshop.**
3. Only one bullet is loaded at a time; load one bullet and fire one shot.
4. All firearms must be left with the action open and pointed down range, or stored on a rack with zap strap though the action.
5. If you are not sure about what to do, please ask for help. We are all here to learn!
6. Lets have fun, learn, and be safe.

EatWild Shooting Skills Program

Introduction and program overview. Safety meeting and sign waivers

Range rules and safety orientation with Range Officer

Basic shooting concepts overview

1. Sight picture
2. Positioning and support
3. Breathing
4. Trigger Control
5. Flinching

Learn to shoot with the 22 at 25 meter targets

1. 5 shots in the sitting position
2. 5 shots in the standing position or with a rest

Sighting in a rifle demonstration

High powered rifles shooting exercises at 100 meter targets

1. 3 shots with 243
2. 3 shots with 308
3. 3 shots with 30-06 or 308

Practical and field shooting at deer targets

Cleaning firearms demonstration and clean up range



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EatWild Rifle Range Rules

- Always treat firearms like they are loaded. **Always.**
- Always keep the muzzle pointed downrange.
- Observe the Firing Line - Never cross the Firing Line
- Always keep your finger off the trigger and outside the trigger guard until you are ready to shoot.
- Commands issued by Range Officers and Mentor personnel must be obeyed immediately and without question.
- All firearms **not** on the firing line must be unloaded with their action open, the magazine removed, and with a zap strap through the action.
- Eye protection and ear protection are mandatory at all times on the range.
- Shooter must know and understand all of the operating and safety features of the firearms they are using prior to shooting in the range.
- Report any unsafe activity or conditions to the Range Officer or Mentor
- No firearm handling will be allowed unless you are on the firing line. No exceptions.
- When the command "Cease Fire" is given, **stop shooting immediately** and wait for further instructions from the Range Officer or Range manager.
- Only shoot at your target, cross firing of targets is prohibited.
- When the range is **red**, the range is live for firing and you must observe the above rules.
- You may only cross the firing line after a cease fire has been declared by the Range Officer and the Ranger Officer has declare the range safe or **green**.
- If you are not sure what to do, please ask someone. We are all here to learn.



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Basic Rifle Marksmanship for Hunters

To be an ethical hunter you must learn the fundamentals of shooting and then practice shooting to build your skills and confidence. Shot placement is very important when shooting an animal. Firstly, from an ethical and moral standpoint, you want to kill the animal as quickly, cleanly and humanely as possible. Secondly, a well-placed shot will not destroy as much edible meat. Your first shot must hit effectively in a vital area for you to be a successful kill shot. Poor shooting can cause unnecessary stress and pain to an animal, and cause you to miss or destroy edible meat. Relying on second or third shots to down an animal is irresponsible.

EatWild Hunter Rule #1 – Practice shooting, be confident, and make the first bullet count

Hunting marksmanship is very different from “target shooting”. As a shooter in the field we are faced with a multitude of variables that we have to deal with and adapt to. The ranges we shoot game at in the field are generally unknown to us at the time. But, that is not usually a problem here in BC where the majority of game animals are frequently shot under 100 metres. Also, the trajectory of modern hunting cartridges stays well within the vital zone aiming area of the animal out to 250 metres or more. Of course more care and skill is necessary to engage targets at 300 metres or farther. It requires ability in judging distance and a knowledge of ballistics and trajectory of your bullet.

EatWild Hunter Rule #2 - If you can get closer,... get closer

Firing positions in competitive target shooting are detailed and specified. (prone, sitting, kneeling, standing) A hunter should be familiar with the standard positions and their strengths and weaknesses. There are no shooting benches in the bush, so you will probably have to improvise. In the field, if you are faced with a shooting opportunity you are going to have to select a shooting position quickly and quietly. The prime consideration is to find the steadiest position available. A firing rest is a good idea. There are a surprising number of trees, branches, stumps, or fence posts that can serve this purpose if you look around. Sometimes you can use your backpack or rolled up jacket. Get used to doing quick position selection, taking into account the terrain and time available to take the shot.

EatWild Hunter Rule #3 – Be patient, wait for a clear target, and aim with confidence

If you are still-hunting, hunting from a stand, or calling animals in, you will often have the opportunity to observe the animal coming into view and eventually the animal will present a clear view of the vitals. It is critical that you are patient and wait for clear shot. If an animal is not aware of your presence you will likely get several opportunities to take an ethical shot.

EatWild Hunter Rule #4 – Make your decision to shoot, find a rest, and shoot with confidence

If you are walking through the woods and spot an animal, likely the animal is aware of your presence and you only have a few moments to decide if you can take an ethical shot. Double check if the animal is legal to shoot (count twice and be sure). Once you see a clear view of the vitals you must take a shot in the shortest possible time. The animal is already aware of your presence and is not going to hang around for long. I estimate taking 15 seconds to 1 minute, depending on the particular circumstances and species. The most important thing to remember is to take the shot when you first have it. If you think about the shot too much, you could miss your chance. Get that shot off quickly by learning how to get into a shooting position quickly and being able to shoot with confidence.



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EatWild Hunter Shooting Principles - Fundamentals overview

1. The position and hold must be firm enough to support the firearm.
2. The firearm must point naturally at the target without physical effort.
3. Sight alignment must be correct.
4. The shot must be released and followed through without disturbance to the position.

1. POSITION and HOLD

An appropriate shooting position is crucial to accurate shooting. The more solid the position, the easier it is to hold the rifle and control the trigger without disturbing the sight picture. Bone support and improvised support are critical in forming a supported shooting position.

Bone support

Good shooting positions utilize bone support and not muscle support. The body's skeletal structure provides a stable foundation to support the rifle's weight. A weak shooting position will not withstand the recoil of the rifle. To attain a correct shooting position, the bones of the body must support as much of the rifle's weight as possible. The weight of the rifle should be supported by bone rather than muscle because muscles fatigue whereas bones do not. Establish a strong foundation for the rifle by utilizing bone support. This will enable the shooter-to relax as much as possible while minimizing the movement of the rifle due to muscle tension.

Improvised support

Improvised support is when you use available material, objects or terrain to your advantage by making your rifle more stable. The improvised support or rest prevents muscular tension and pulse beat which is transmitted to the rifle and can throw the shot off target. As a rule, the improvised support is used to replace the support hand under the forend of the rifle. The support hand and improvised support can be used in concert. One basic type of improvised support is a vertical surface such as a tree or post used to steady the support hand. This helps greatly when shooting offhand. The support hand is used as a buffer with the supporting surface and the forend of the rifle. Make sure that nothing hard touches the barrel or forend. The support should be placed in the same position on the forend as where you normally hold it.

Muscular relaxation

Once bone support is achieved (or improvised support), the muscles are relaxed. Muscular relaxation helps to hold the rifle steady and increase the accuracy of your aim. Muscular relaxation also allows the maximum use of bone support to create a minimum arc of movement and consistency in resistance to recoil.

The best way achieve muscular relaxation is by utilizing bone support or improvised support. During the shooting process, the muscles of the body must be relaxed as much as possible. Muscles that are tense will cause excessive movement of the rifle, disturbing the aim. When proper bone support and muscular relaxation are applied, the rifle will settle onto your aiming point, making it possible to apply trigger control and deliver a well-aimed shot.

Only through practice and achieving a natural point of aim will proper muscular relaxation be achieved.



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Shooting Positions

The five basic shooting positions used in formal marksmanship training are prone, sitting, kneeling, standing, and the Hawkins position. These positions are flexible to allow modifications according to individual body structure. In the field, a shooter must assume the steadiest position possible which will allow observation of the target and provide cover and concealment. Depending on the terrain, vegetation, and individual situation, there are innumerable possibilities; however, in most instances they will be variations of the five basic positions. Some shooters will have more difficulty in assuming a particular position than others. They must apply the fundamentals of relaxation and maximum support for the rifle. You might have to adjust the position to best fit your body.

Holding the rifle

The palm of the **forward hand** is under the forearm. The wrist is straight and locked so that the rifle rests across the heel of the hand. The hand itself is relaxed. The fingers can be curled against but should not grip the stock, since the rifle should rest on the forward hand. The **forward elbow** should be directly under the receiver of the rifle, or as close to this position as the body will permit, with the forward elbow directly under the rifle. The bones (rather than muscles) support the rifle's weight. The shooter, by trial and error, must find the forward hand and elbow position best suited to them to avoid tension and trembling.

The shooter places the **rifle butt** firmly into the pocket of the shoulder. The proper placement of the butt helps steady the rifle and prevents slipping out of the shoulder. With the rifle butt firmly in the shoulder, the recoil is lessened.

The shooting **hand grips** the small of the stock firmly but not rigidly. A firm rearward pressure is exerted by the gripping hand to keep the rifle butt in its proper position in the pocket of the shoulder to reduce effects of recoil. The thumb lies on the small of the stock in its natural position, and also forms a rest for the chin. In this way it creates a spot weld. The trigger finger is placed on the trigger in a natural position to enable the shooter to manipulate his trigger independently of the rest of his hand. This permits the trigger to be squeezed directly to the rear without disturbing the point of aim.

The placement of the **rear elbow** gives balance to the shooter's position. Correctly positioned, the elbow helps form the shoulder pocket. The exact location of the elbow varies with each position and will be described in the explanation of each position.

The placement of the cheek against the stock should remain firm and consistent from shot to shot. This is called "**stock weld**". Consistency of the stock weld is achieved through proper placement of the rifle butt in the pocket of the shoulder. A firm contact between the cheek and the stock enables the head and rifle to recoil as a single unit. This provides quick recovery between shots, keeps the aiming eye centered in the telescopic sight, and prevents the head from bouncing off the stock during recoil. Eye relief is the distance of the eye from the eyepiece rear sight aperture. A correct shooting position will determine the distance between the eye and the rear sight. Although the distance from the rear sight to the eye varies between positions, consistent eye relief within each position is essential to accurate shooting.

2. **Natural Point of Aim (NPA)**

The point at which the rifle sights settle when bone support and muscular relaxation are achieved is called the "natural point of aim".



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Since the rifle becomes an extension of your body, it may be necessary to adjust the position of your body, thereby adjusting your natural point of aim, until the rifle sights settle naturally on the desired aiming point on the target.

When in a shooting position with proper sight alignment, the position of the tip of the front sight post or scope crosshairs will indicate the natural point of aim. When completely relaxed, the tip of the front sight post or scope crosshairs should rest on the desired aiming point.

One method of checking for natural point of aim is to aim in on your target, close your eyes, take a couple of breaths, and relax as much as possible. When you open your eyes, the tip of the front sight post or scope crosshairs should be positioned on the desired aiming point while maintaining sight alignment.

3. Sight Alignment

Sight alignment (the relationship of the front and rear sight or clear, centered reticle in an optical sight) is most important to accuracy as it helps eliminate angular error. With optical sights, such as telescopes, proper alignment is obtained when there is no dark portion or "shadow" at any point in the circumference of the field of view. This will ensure that you are always sighting through the center of the scope. The aligned sights, when placed on the target is called the "sight picture". The front sight or reticle should always be positioned in the same spot. These two factors ensure that the shots fired, if the other fundamentals are correctly applied, will hit in the same general area.

4. Shot Release and Follow Through

Breathing

Breath control is another critical element in marksmanship. Breathing causes movement of the chest and will cause the rifle to move while aiming and firing. To minimize this movement and the effect it has on your aim, learn to control your breathing and extend your natural respiratory pause for a few seconds during the final aiming and firing process. When shooting, the shooter takes normal breaths then he exhales until he reaches a point called "natural respiratory pause". Natural respiratory pause is the period when the shooter is completely relaxed in his respiratory cycle. The respiratory pauses help to maintain natural point of aim. This pause lasts just seconds during normal breathing, but it can be extended up to 15 seconds for some shooters to fire a shot. This pause should last as long as the shooter feels comfortable with it. It really depends on the physical condition and the lung capacity of the shooter. Getting the aiming point, applying trigger pressure, and taking the shot all occur during the shooter's natural respiratory pause.

Trigger Control

There are two types of triggers that one might commonly encounter: the single-stage or shotgun trigger and the two-stage or military trigger. The single-stage is most common on commercial sporting rifles, the two-stage on military and target rifles. When the single-stage is properly set up there is no apparent movement or "creep" during its activation. With the two-stage, the initial or first stage slack must be taken up before the actual firing pressure is taken up. A "good" trigger is one that "breaks" crisply with a minimum of movement and under controllable pressure.

To fire accurately, it is necessary to achieve a precise aiming point and squeeze the trigger without disturbing the aiming process. Trigger control is the ability to move the trigger to the rear to allow the rifle to fire without disturbing sight alignment or sight picture. Sight alignment and trigger control must be performed simultaneously in order to



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fire an accurate shot. If the shooter can move the trigger without thinking about it (subconsciously), they can concentrate on sight alignment and aiming point.

Correct finger placement on the trigger is when it allows the trigger to be moved straight to the rear, without disturbing sight alignment.

Every shooter is different. The trigger finger should contact the trigger naturally, it should be integrated naturally with the shooter's grip on the rifle. The placement of the trigger finger on the trigger is an individual preference and depends greatly on the size of the shooter's hand and his grip.

The conscious mind can only concentrate on one thing at a time. Therefore, the shooter must practice moving their trigger finger without consciously thinking about it. Trigger control must be developed through dry firing and continuous training until it becomes a subconscious process.

Errors in Trigger Control

Trigger control is the most difficult marksmanship skill for most shooters to master. The majority of shooting errors stems from errors in trigger control and can be attributed to the following:

Flinching: Flinching is the shooter's reaction to the anticipated recoil of the round going off. It is indicated by the shooter moving his head, closing his eyes, tensing his left arm, moving his shoulders to the rear, or a combination of these movements.

Bucking: Bucking is an attempt by the shooter to take up the recoil, just before the rifle fires, by tensing his shoulder muscles and moving his shoulder forward.

Jerking: Jerking is an attempt by the shooter to make the rifle fire at a certain time by rapidly applying pressure on the trigger and disturbing the alignment of the rifle with respect to the target and/or sight alignment.

Follow Through

Follow-through is the continued application of the fundamentals after the shot has been fired. The shooter does not shift his position, move his head, or let the muzzle of the rifle drop until a few seconds after the rifle has been fired. It is estimated that approximately 1/10th of a second elapses from the time the trigger is released until the bullet exits the barrel. Follow-through ensures that there is no undue movement of the rifle until after the bullet leaves the barrel.

From a training viewpoint, follow-through can assist the shooter in correcting his own errors. By knowing his aiming point the instant that round is fired, the shooter can analyze their shot group in relation to the aiming point and correct themselves accordingly.



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Sighting in a Hunting Rifle with Telescopic Sight

This information sheet will help you sight in your rifle first at a distance of 25 yards, then at a distance of 100 yards. You need to sight in your rifle to make sure the bullets hit where you are aiming. (See separate sheet for bore sighting the rifle)

The actual bullet strikes that are shown in the trajectory example shown below will vary somewhat depending on the variables of the individual rifle and selection and performance of the ammunition. Change of ammunition in the rifle will alter the points of impact. Consult the ammunition manufacturer’s ballistic information and trajectory charts.

Standard Conditions that were used for the trajectory example in this procedure:

- 4 power Telescopic sight --1/4 " turret click adjustment at 100 yards (fairly common)
- Scope mounted 2" above center of bore (fairly common)
- Bullet --180 grain .308 Hornady round nose-- Ballistic Coefficient (B.C.) = .271 --Velocity 2600 fps
- Selected ZERO POINT – 100 yards
- Targets set up at 25 & 100 yards.

Steps to set up

1. Make sure all the telescopic mount and ring screws are tightened up. Be sure to use a proper sized screwdriver so you don't muck up the screw heads.
2. Set up a bench or rest to accurately shoot from
3. Take two bull's eye sighting in targets and on one of them mark a horizontal line with a felt tip pen 1" **below** the centre line.(that is your 25 yd. target) the unmarked one is for 100 yds.
4. Mark off a distance of 25 yds. and set up your first marked "sighting in" target.
5. Then set the other up at 100 yds.
6. Load your rifle and using a good firm rest, line up the scope with the crosshairs directly on the center of your target at 25 yds.
7. You can now fire one or more shots with the same point of aim.

If your rifle is properly sighted in, your bullet will hit exactly on the marked line 1"below the center of the bull's eye. If so, that means you have the following **trajectory** with a ZERO point of 100 yards (with a bullet that has the characteristics noted above.) This means your rifle theoretically should be zeroed to hit right on the mark at 100 yards. The trajectory is the path your bullet takes through the air after leaving your gun. ***It is a curved line, not straight.***

Sample Trajectory

Range in yards	Muzzle	25	100	150	200
Trajectory in inches	2.0 " Low	0.9" Low	"0"	1.5" Low	5.0" Low

If your bullets hit the paper target but are not where they should be, you will now have to adjust your scope so that the bullets hit exactly where you want at 25 yds. and will then be on the paper target at 100 yds..



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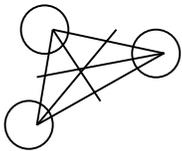
In the middle of your scope you will see two knobs called "turrets". On most scopes these knobs have screw caps on them to keep them clean and dry. Unscrew these caps and put them aside where you won't lose them. You will see an adjustment dial that can be turned. With some dials you can turn them with your fingers and with some you need a screwdriver or small coin. The top knob is for moving the "point of impact of the bullet" up or down. The side knob is used for moving the "point of impact of the bullet" to the left or right. The direction to turn the dial is indicated by a small arrow pointing to Up – Down or to Left – Right.

The usual setup for these dials is that by moving them one "click" (you can hear or feel them click) you move the "point of impact of the bullet" $\frac{1}{4}$ inch at a range of 100 yards. That would mean 4 clicks to move the bullet one inch at 100 yards.

But we are sighting in for zero at 25 yards. ($100 \text{ yards} \div 25 \text{ yards} = 4$) That means that to move the point of impact at 25 yards we have to multiply the number of required "clicks" by 4 - So we need to move the dials 16 "clicks" to move the point of impact 1 inch at 25 yards. It works like this:

100 yards----- to move "Point of Impact" **1 inch** needs 4 "clicks"
50 yards----- to move "Point of Impact" **1 inch** needs 8 "clicks"
25 yards----- to move "Point of Impact" **1 inch** needs 16 "Clicks"

Let's say for example that you shoot 3 shots at the "sighting in" target. That is called a "Group". You then find the rough "Centre" of that group and mark it with a felt pen.



Now measure how far the centre of the group is off from the exact point you are aiming at. Let's say for this example it is 2 inches low and 3 inches to the right of your mark. To adjust the crosshairs on your scope to hit the mark you have to move the crosshairs "UP" 2 inches and "LEFT" 3 inches.

- You need to move the top adjustment "UP" 32 clicks
- You need to move the side adjustment "LEFT" 48 clicks

REMEMBER: 4 clicks to the inch at 100yards/ 8 clicks to the inch at 50 yards/16 clicks to the inch at 25 yards

Fire another 3 shot group at the target and make further adjustments if necessary. When you are hitting the 25 yard target on the mark, you can then move to the target out at 100 yards and try at that range.

Fire a group of shots at the 100 yd. target, aiming exactly at the bull's eye. You should be pretty well sighted in by now. You may have to make some necessary adjustments (4 clicks/inch) to bring your group to centre on the bull's eye.

Your rifle is now "ZEROED" for 100 yards.

You can now expect your bullet to hit on the centre line of a target situated at various distances as shown on the ballistics chart on the other side of the sheet. It is based on a bullet with a Ballistic Coefficient (B.C.) of .271 at a



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velocity of 2600 feet per second. If you use a bullet with a higher B.C. or higher velocity you will get a flatter trajectory (Less curved) and get less horizontal variation over a possibly extended range.

1" low at 25 yards

"Dead On" (ZERO) at 100 yards

1.5" low at 150 yards

5.0" low at 200 yards.

Now put the screw caps back tightly on the turrets and you are ready to go.

Your rifle will now be properly sighted in and it should shoot dead centre at 100 yards and only 1 or 1 ½ inches high or low from 25 yards out to 150 yards. That is good enough for a clean kill on a properly aimed and fired shot.

You should sight in your rifle every year before you go out hunting. Things could happen during the year that might change the point of impact.