

Let's Ban Something!



The ongoing debate over guns and gun control seems always to be driven by mass shootings; especially those happening in schools. With each new incident come calls for banning so-called “assault rifles”, especially the AR-15. But what are the facts and can such a ban be justified?

Any time you discuss banning something, you must consider both fairness and efficacy. We cannot simply ban an item that millions of Americans want and already own without justification. If the justification is needless death, the discussion should be expanded to include cigarettes and sugary soft drinks.

While we are a democracy based on majority rule, legislation still must have a rational basis. It cannot be arbitrary or capricious, especially where it potentially impacts rights protected by the Second Amendment to the Constitution. And yes, there is such a right. The U.S. Supreme Court in *District of Columbia v. Heller* rejected arguments based on the “well regulated Militia” language, and held that the Second Amendment does indeed guarantee an **individual** right to bear arms [[REF LINK](#)].

So any ban must start by defining the firearm or firearms to be banned and provide a legitimate basis for banning them. And that will turn in part on questions of efficacy and what actually can be achieved by a ban, which then must be measured against the rights being extinguished by the ban. If a ban is highly effective, a stronger argument can be made for extinguishing even important rights. If a ban accomplishes little, then the argument for extinguishing any rights is weak.

It is safe to say based on their public statements that many if not most of those seeking to ban the AR-15 and similar firearms are protesting based in large part on misconceptions fueled by the press, ill-informed or politically motivated elected officials and social media. It therefore is important to begin any discussion of a ban with an understanding of certain indisputable facts.

The AR-15 is now the most popular rifle in America accounting for 61% of all U.S. civilian rifle sales in 2016. Despite claims to the contrary, it has many qualities that make it appealing as both a hunting and sporting firearm and it is estimated that Americans legally own approximately 10 million of them. But the same qualities that make it frightening to those calling for a ban on its manufacture and sale also make it appealing to those few individuals with a predilection to inflict deadly harm on others. It is dark and menacing and has a military aura. Pretty much anybody looks badass holding one.

The press has dubbed it an “Assault Rifle” which the AR in the name is often incorrectly assumed to represent although it in fact stands for “ArmaLite Rifle” in recognition of ArmaLite Corporation where Eugene Stoner and others developed the original design. ArmaLite sold the rights to Colt in 1959 which later marketed the fully automatic version of the rifle to the U.S. military where it entered service in Viet Nam as the M-16. The AR-15 is no longer under patent, so the name now refers to a generic style of rifle rather than a particular manufacturer or model.

A fundamental misconception that must be addressed and understood as part of any rational firearm discussion is the distinction between automatic and semi-automatic firearms. Press and social media hysteria aside, ***no mass shooting has ever involved a fully automatic firearm or machine gun.*** With limited exceptions, it is illegal in the United States to own a fully automatic firearm and has been for decades. All of the firearms involved in mass shootings, including the AR-15, are ***semi-automatic*** but even that term has somehow been conflated by the press and public into something

menacing when all it means is that you do not need to throw a bolt or cock a lever to move a bullet into position and prepare the firearm for your next shot. But, and this is really important...you do have to pull the trigger...for each and every shot. **One trigger pull equals one bullet fired.** You can pull the trigger and hold it for as long as you want and only one bullet will fire until you let go of the trigger and pull it again. No firearm you can legally buy will spray a continuous hail of bullets, and if it did your magazine would be empty in about 2.5 seconds.

As a semi-automatic, the AR-15 is no different from millions of other firearms on the market and in the hands of hunters and sportsmen, be they rifles, handguns or even shotguns. One pull of the trigger equals one shot and the next round is then ready to be fired the next time you pull the trigger. Just like all of those other semi-automatic firearms, the AR-15 will fire as fast as the user can pull the trigger – and will do so until the magazine is empty. **All** semi-automatic firearms have been doing that since 1885 with one of the more famous being the Colt M1911 45 Caliber Pistol, designed by John Browning. That pistol remains popular among civilians and saw regular use by the U.S. Military through 1986, with some Special Forces Units still fielding the handgun. Browning introduced a semi-automatic shotgun to the civilian market in 1902 and Winchester introduced semi-automatic rifles in 1902 and 1905. The semi-automatic AR-15 fires and functions just like all of those other semi-automatic firearms.

Below is a link to a video showing the operation of a typical semi-automatic handgun - in this case a Glock 19.

https://www.youtube.com/watch?fbclid=IwAR0_5z2bt5ZyRFHJ5CcoZao-wcqxOGrw6MiO_FAHa3sNJYiSx7hNM8-H1Nw&v=V2RDitqCaD0&feature=youtu.be&app=desktop

Now let's discuss what legislation banning the AR-15 might look like. If you are only going to ban firearms based on that specific design, such

legislation is pretty easy to craft; except for that sticky part about ***confiscating the 10 million of them now legally owned by law abiding Americans***. Good luck with that. And simply banning AR-15 style rifles will hardly solve the problem as numerous alternative “Assault Rifles” are available to those planning to commit mass murder. Firearms based on the Russian Kalishnikov or AK-47 rifle are extremely popular. The recent Parkland school shooter reportedly owned one of those as well and could just as readily have used it in his rampage. Ironically, cost may have been the deciding factor as AK-47 ammunition is generally more expensive than AR-15 ammunition.

It is difficult to determine exactly how many AK-47 style rifles are owned by U.S. civilians, but there are over 75 million of them in circulation worldwide so the number is probably between 5 and 10 million. Any legislation to be effective would have to ban all firearms ***similar to*** the AR-15 and AK-47, both existing and in the future, which necessarily would require that any proposed legislation define what constitutes an “Assault Weapon” subject to the ban. How does one do that? Is it like Porn – you know it when you see it? If it’s scary and seeing one makes me wee myself a bit then it’s an assault weapon?

We actually have been there and done that. Remember in the beginning where I described an assault weapon as something that frightened people because it was dark and menacing and had a military aura? Something close to that useless cosmetic definition is essentially the one adopted by Congress when it enacted the original assault weapons ban in 1994. After listing several specific firearms like AR-15s and Uzis, the act banned those firearms and any copies or duplicates of them. Well, that part was easy and didn’t require a rocket scientist. But what about other similar firearms and new firearms designed and placed on the market by manufacturers? An actual definition still was needed, so Congress defined assault weapon as any *semi-automatic* firearm with a *detachable magazine*¹ that included *two or more* of the following characteristics:

¹ The phrase “*semi-automatic* firearm with a *detachable magazine*” standing alone would have outlawed virtually every handgun other than revolvers, including the venerable

- Folding or telescoping stock
- Pistol grip
- Bayonet mount
- Flash suppressor, or threaded barrel to accommodate one
- Grenade launcher

One can readily see that with the exception of the detachable magazine, grenade launcher (for which no grenades are legally available), and possibly a bayonet mount, all of the attributes that define an assault weapon are basically cosmetic in terms of practical civilian use. They have absolutely nothing to do with the lethality of the firearm. If it looks frightening or militaristic, then it is an assault weapon under the Act.

Those attributes also are completely irrelevant to the prevention of mass shootings. Folding stocks and pistol grips have nothing to do with lethality, and bayonets have not featured prominently in any mass shooting to date. Flash suppressors are relevant primarily at night when someone is shooting back at you and clearly of no relevance to mass shootings. Finally, a grenade launcher is basically just extra weight to carry around since a shooter cannot legally purchase grenades for it to fire.

Hopefully any new ban would include a more sensible definition, but remember that any such ban has to be rational and justified. So what makes the AR-15 and other “Assault Weapons” different from other firearms that would justify banning them? We can hardly justify banning a popular and functional firearm owned by 10 million Americans simply because it looks frightening to some segment of the population or because it has a particular appeal to psychopaths.

Colt M1911 45 Caliber Pistol mentioned above. The definition clearly could not stop there and additional attributes were needed to classify a particular firearm as an “assault weapon” subject to the ban.

Are assault weapons used in more homicides? Not even close. According to FBI data, where the firearm used could be identified, **rifles of all types were used in just 2.5% of firearm homicides in 2016**, a figure consistent with previous years. [[REF LINK](#)] In the four previous years, more homicides were committed using shotguns instead of rifles. Handguns accounted for 65 percent of homicides in 2016. Despite recent trends, handguns also have historically been the firearm of choice for mass shooters – more on that below.

We must not ignore this 2.5% statistic because it defines the upper limit of what might be accomplished with a ban on so-called assault rifles. Even if one makes the highly unrealistic assumption that every one of the rifles used in all of the homicides reported in the FBI statistics was an assault rifle subject to the proposed ban, total homicides theoretically could be reduced **by at most 2.5 percent**. The cold reality, however, is that many of those homicides probably still would be committed by either handgun or shotgun and be moved to another category in the FBI statistics.

While the FBI data showed that you were far more likely to be killed by a handgun than any other firearm, it also showed that in most years, you were more likely to be killed by a shotgun than a rifle. What most people do not realize is that you also were four (4) times more likely in 2016 to be knifed to death than killed by a rifle of any kind [[REF LINK](#)]

A 2004 Report commissioned by the US Justice Department's research arm, the National Institute of Justice, examined the impact of the 1994 Federal Assault Weapons ban and largely confirms what the FBI data suggests. The study found that renewal of the ban would likely have only a small impact on gun violence, perhaps **too small to measure**, because rifles in general, including so-called assault rifles, were so rarely used in gun crimes even before the ban. Assault weapons were used in only a small fraction of gun crimes before the ban - less than 2% according to most studies. The authors found no statistically significant evidence that either the ban on assault weapons or the limit of magazine capacity to 10 rounds had resulted in a reduction in gun homicides. Their ultimate conclusion was that,

despite the ten (10) year ban, "there has been no discernible reduction in the lethality and injuriousness of gun violence, based on indicators like the percentage of gun crimes resulting in death or the share of gunfire incidents resulting in injury." Koper, Christopher S.; Woods, Daniel J.; Roth, Jeffrey A. (June 2004) [First published 1997]. *"An Updated Assessment of the Federal Assault Weapons Ban: Impacts on Gun Markets and Gun Violence, 1994-2003 – Report to the National Institute of Justice, United States Department of Justice"*. Philadelphia: Jerry Lee Center for Criminology, University of Pennsylvania [[REF LINK](#)].

In summary, the previous ban made little to no difference, in part because rifles are so rarely used to commit gun violence. So what else is there about the AR-15 and similar rifles that makes them different from other firearms in ways sufficient to justify banning them?

Does the bullet from an AR-15 have more destructive power than other firearms? The answer is definitely not. The .30-06 round commonly used for deer hunting is at least as lethal and at far greater range. That .30-06 round in fact is effectively the same one used by the U.S. Infantry during World War II in the M1 Garand rifle and it is still used not only for deer hunting but for hunting big game like bear and bison. The rounds fired by many handguns are of equal or greater lethality than an AR-15 round, especially when using rounds designed for the purpose. And at short range, which is where most mass shootings happen, the carnage inflicted by a farmer's shotgun (or his wife's) is simply devastating compared to that of an AR-15. Let's explore that for a moment because shotguns are readily available and banning them is out of the question.



A "double ought" buckshot round contains steel or lead pellets of roughly 32 caliber that spread out as they leave the barrel of the gun. ***Each individual pellet is larger than a typical AR-15 bullet and each one weighs about 60 grains which is slightly more than a typical 55 grain***

AR-15 bullet. More important, **there are 9 of them** for a total combined weight of 540 grains which is almost **ten times the weight of a single AR-15 bullet.** That matters because the damage caused by a fired projectile is different than the damage caused by other penetrating objects like a knife. Both penetrate tissue leaving a permanent cavity or wound tract but a fired projectile also imparts substantial kinetic energy because it is moving at high speed. The kinetic energy of a projectile and the damage it is capable of inflicting are not just a function of its speed or velocity, however. The larger, heavier projectile of a .50 caliber round obviously will do far more damage than a .22 caliber round and in fact can penetrate and disable the engine of light vehicles. The formula for kinetic energy, one half of the product of the Mass times the square of the Velocity, recognizes this combined role of mass and velocity.

The injury caused by a projectile then is largely a function of: 1) the extent of surface area directly damaged by the passage of the projectile; and 2) the kinetic energy that is transferred to the target by the impact and slowing of the projectile. While an AR-15 projectile has a much higher velocity of 3,100 fps compared to a shotgun's 1,325 fps, the ten times greater mass of the shotgun projectiles nearly doubles the kinetic energy while also creating a much larger wound tract nearly one inch (6 sq. cm.) in diameter.²

² You may see or hear media interviews of trauma surgeons who describe how the AR-15 and similar rifles cause more severe injuries because of "cavitation" effects from the "high velocity" rounds they fire. They often use the analogy of a speeding boat and the waves it creates as an example. The reality is that those surgeons are inferring incorrect causal associations and making the mistake this website is about; blindly accepting the common wisdom instead of making the effort to learn the true facts. Wound ballistics is a complex subject about which there is much debate but the basic physics are well understood. The extent of tissue damage beyond the direct wound track will always be the result of the forces acting on the tissue and those forces are determined primarily by the kinetic energy transferred as the projectile slows while penetrating the tissue. While cavitation related injury is a real phenomenon, it should be viewed in the overall context of kinetic energy transfer as the focus on velocity alone is misleading. A large, slow projectile can produce just as much cavitation as a fast, small one.

Two real-world examples will demonstrate the point. United States submarines long enjoyed a stealth advantage over their Soviet counterparts because their propellers while spinning at the exact same speed or velocity produced far less cavitation and

The AR-15 round expands on impact, but causes a single entry wound while the shotgun round can create up to nine larger entry wounds; the equivalent of being hit by a nine round burst from a sub-machine gun. Shotgun shells with pellets that fragment on impact like an AR-15 bullet or have additional pellets also are available. For example, a double ought shell with **12 fragmenting pellets** is sold under the brand name HEVI-Shot.

But a shotgun only holds 2-3 shells, you might say. That is true of some shotguns, but 3 to 5 rounds plus 1 in the chamber for a total of 6 is typical for many, although hunting regulations often require that the capacity temporarily be reduced while actually hunting. Extended magazines increasing that capacity to 8 rounds are readily available and models with interchangeable magazines of **15 or more rounds** also are legal and available. That compares to the 30 round magazine of a typical “Assault Rifle”.

Still, this discussion suggests one thing that might actually make some difference in total fatalities and that is limiting magazine capacity. The Federal Assault Weapons ban limited magazine capacity to ten (10) rounds, but only for a small group of firearms. Such a limit on capacity is unlikely to work for several reasons. First, the horse is already out of the barn. There are just too many “high capacity” magazines already

therefore detectable noise than the Soviet boats. Clearly, factors other than velocity such as propeller design, size, materials, overall mass, etc. played a role in the amount of cavitation produced. The speeding boat analogy used by surgeons also demonstrates the error in focusing solely on velocity. Common sense and observation tell us that the nature and extent of the waves created by such boats will vary greatly depending on the shape and design of the hull, the keel depth and other factors completely unrelated to speed or velocity. Similarly, how a fired projectile’s energy is transferred into tissues and the cavitation and other secondary damage it causes is influenced by a number of factors other than velocity including the rate of deceleration, the depth of penetration and the mass, shape, composition, deformation or fragmentation characteristics, and tumbling of the projectile. For a more thorough discussion of these issues, see Courtney A, et al., Physical Mechanisms of Soft Tissue Injury from Penetrating Ballistic Impact, Research Report, U.S. Air Force Academy (November 30, 2012) [REF LINK] and the authorities cited therein.

out there. Second, magazines are not complex items requiring expensive machinery or skilled personnel to manufacture. You may be able to shut down legitimate manufacturing, but the secondary and black markets would quickly fill the void.

Then you also have to debate and answer the question of just what is too much capacity. If you are purchasing a firearm for personal defense, many would submit there is no such thing as too much capacity. In 2008, the Rand Corporation produced a comprehensive Report for the New York Police Department (“NYPD”) analyzing that Department’s training and use of firearms over a multi-year period. Rostker B. D., et al., *Evaluation of the New York City Police Department Firearm Training and Firearm-Discharge Review Process*, Rand Corp. (2008) [[REF LINK](#)]. The analysis looked specifically at firearm discharge reports including cases in which NYPD officers discharged their service firearms at suspects.

Between 1998 and 2006, the average hit rate was 18 percent for all gunfights where the subject returned fire. For that same time period, the average hit rate in situations in which fire was not returned was 30 percent. (Rand Report, p. 14). Officers involved in gunfights fired an average of 7.6 rounds compared with 3.5 rounds for officers firing at subjects who did not return fire. *Id.*

In defending your home and family, you may be confronted with multiple attackers and your aim may be off in the stress of the moment. If there are only two armed attackers and the lives of your family are at stake, does a 10 round magazine limit sound adequate in light of the Rand data which suggests a trained officer would fire at least 15 shots in that situation? If it does, you should consider both the math and the real world realities of neutralizing a threat.

The preceding paragraph deals only with shots fired. It does not address actual hits and neutralization of the threat. You need two solid center mass hits to put an attacker down. Assuming two intruders, that means four hits. If they are armed and shooting back and you are as skilled as a trained police officer (unlikely), you will hit with 18% of

your shots. That means you will need at least 22 shots to achieve those four hits and put down the two intruders! Even if you miraculously achieve a 30% hit ratio while being shot at, you still will need 14 rounds (technically 13.3333) – four more than the magazine limit proponents would allow. Any way you cut it you will end up martyred on the altar of gun control.

Of course, you could always call the police during a home invasion. When seconds count, they are just minutes away. That statement is not meant to be disparaging. The simple reality is that the police generally investigate crimes after the fact; they rarely can prevent or stop them.

Returning to the types of firearms used in mass shootings specifically, the Mother Jones news organization maintains, compiles and publishes a database on mass shootings. The current version of that database contains data on 98 mass shooting events over the last 35 years. The organization recently published a comprehensive analysis that looked at 62 mass shootings between 1982 and 2012 analyzing a number of variables including how the shooters obtained the firearms used in the attack and the types of firearms used. Of the 143 firearms possessed by the killers, more than three quarters (75%) were obtained legally. When analyzed by shooting, the firearms were obtained legally in 49 of the shootings (nearly 80%) and illegally in 12. No determination could be made in the remaining case [[REF LINK](#)].

The choice of firearms by the shooters is of particular interest in evaluating calls for banning particular types of firearms. Of the 143 firearms carried or used:



71 were semi-automatic handguns
23 were revolvers
28 were rifles, and
21 were shotguns

Mother Jones also presents that data in a chart, but for purposes of this comparison that chart understates the

relative role of handguns as it displays revolvers separately from other handguns. A similar chart combining the handgun data is on the left.

20 of the 143 firearms used would qualify as an “assault weapon” under most definitions that have been used or proposed, but that number (14%) includes not only rifles but handguns like the Intratec DC-9 and MAC-11. Less than 20% of the total firearms used were rifles of any type. Two-thirds (94 out of 143 or 66%) of the firearms carried or used were handguns and the remaining 14% were shotguns. The complete Mother Jones article and data may be accessed at the following link: [[REF LINK](#)].

The data suggests that the repeated focus on long guns or “assault rifles” may be misplaced. Indeed, while mass shootings grab the headlines, they represent a very small percentage of total homicides; less than 1%. And as noted above, FBI data shows that the vast majority of gun homicides are committed with handguns. Among the most popular firearms in the world today are variants of the Glock semi-automatic handgun with magazine capacities of up to 17 rounds; over half the capacity of a typical assault rifle without the bulk. In the mass shooting with the third-highest number of fatalities to date, the shooter used two legally purchased Glock 19 handguns with magazine capacities of 15 rounds each to kill 32 people and wound another 17 at Virginia Tech in 2007.

Let’s assume that you persist in a ban, somehow come up with a workable definition of “Assault Rifle” that doesn’t require authorities to confiscate every hunting rifle in Appalachia and then successfully pass legislation banning them. What is a psychopath with mass murder on his mind left with to pursue his goal of inflicting maximum carnage? That depends.

He could simply follow the pattern of the vast majority of those who preceded him and use a semi-automatic handgun as his firearm of choice, many with capacities of 15 rounds or more and with ammunition providing lethality equal to or greater than an AR-15. But

what if he is drawn to that menacing aura of the AR-15, AK-47 or similar rifles? Did you **really** confiscate the 10 million AR-15 rifles already owned by Americans and the other 30 million or so “Assault Rifles” out there? If not, did you somehow effectively prevent their resale – and if so, how? Absent such measures, one of those 40 million rifles available on the used market will likely still remain his choice, although the legislation will probably cause the cost of one to increase substantially. If not, the shotgun option discussed above obviously still will be available unless you plan to ban them also, and the shooter can get one with half the magazine capacity of an AR-15. Or he can use a combination, starting with a shotgun and moving to handguns once it is empty. In short, the problem will always be the shooter, not the firearm he chooses. You simply will not stop the problem unless you preemptively address the mental health of those who commit such shootings. The only alternative to that is to ***ban and confiscate all firearms***.

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Author Note: Like many young men growing up in the rural South, the author owned a .22 caliber rifle and a shotgun, both of which were used for hunting and sport shooting. He no longer hunts and has passed the .22 rifle on to his son, but he still owns firearms for recreation and personal defense. He is not a member of the NRA and has no vested interest in the gun debate, but is tired of hearing heated arguments presented on both sides of the issue without bothering to learn the facts.