Suppressors for Snipers – A Sound Decision

American Sniper Association Position Letter

We’re all familiar with the scene. A lone assassin slips undetected in the room occupied by his unsuspecting victim. He holds a semiautomatic pistol, adorned with a six-inch silencer. Taking a position behind his target, he quietly fires a string of shots, killing him without alerting anyone else.

Or we have the scene with the elite, special operations team, penetrating the perimeter of their objective like camouflaged specters. Night vision headgear illuminates the darkness for them as they flash hand signals to one another to coordinate their attack. As one, they shoulder their suppressed M4 rifles and enter the room. Taking the enemy completely by surprise, a rapid series of muffled shots solve the problem and save the day.

When one mentions suppressors to many police administrators today, they are quick to deny requests from SWAT Team personnel and snipers to acquire them. Their rationale often being suppressors, often referred to incorrectly as silencers, are only used by assassins and soldiers. Having them would look bad in the eyes of the public. Why would law enforcement officers need them?

The answer is simple and obvious – noise reduction. According to the National Institute on Deafness and Other Communications Disorders (NIDCD), hearing damage occurs with noises of 85 dB or louder. The impulse noise created by a sniper rifle firing is over 170 dBs peak sound pressure levels. This can cause permanent hearing loss. Think about the ramifications for a sniper and his partner. If his rifle has a muzzle brake, (which can add as much as 11 dB), that noise is channeled to the sides, where his partner may be situated. If the shot is fired inside a vehicle or a room, the noise is contained and reverberates off the hard surfaces, increasing the potential for hearing damage.

Unlike in the cinematic portrayal, suppressors don’t make firearms completely silent. There is still some noise. A good suppressor will lower the firearm’s signature to below 130 dBs. The use of subsonic ammunition can reduce the perceived sound even more. There is ample scientific proof suppressors lower the impact noise created by gunfire to a threshold where it is much less likely to result in irreversible hearing loss.

Exposure to gunfire, both in training and operationally, has a deleterious effect on short and long-term hearing. This is caused by accumulative damage caused by repeated exposure during training, and by acute damage caused by single exposures during operations. We have plenty of anecdotal information from snipers who have documented some degree of hearing loss. However, independent research also leads to recommendations for mitigating the damage.

Obviously, wearing adequate hearing protection devices, either passive or electronic, can dampen the sound of gunfire. However, while they can be worn without consequence during a live-fire training day, in operational circumstances, they can inhibit the sniper’s situational awareness. This drawback could be seen as a safety concern of a different stripe. Additionally, wearing traditional hearing protection on a callout may inhibit the sniper’s ability to utilize his communication gear. As such, he may forego wearing hearing protection in lieu of his operational headset, which might not provide adequate protection.

During gunfights, many officers report not hearing the shots being fired. This is a perceptual phenomenon known as auditory exclusion. During high-stress incidents, the brain can sometimes fail to process sensory information, thus certain sounds may not be “heard.” However, the physical pressure wave created by the weapon discharge still occurs and impacts the eardrums.

In 2011, the Center for Disease Control conducted a live-fire range study in California, and later produced a report, Noise and Lead Exposures at an Outdoor Firing Range. In it, the author concluded: *“One of the Health Hazard Evaluation Report 2011-0069-3140 Page 5 Results and Discussion (continued) primary sources of noise generated during gunfire is the muzzle blast during firing, which generates high noise across the mid to high frequency range. The only potentially effective noise control method to reduce students’ or instructors’ noise exposure from gunfire is through the use of noise suppressors that can be attached to the end of the gun barrel.”*

In a 2014 study on noise exposure at shooting ranges,the National Institute for Occupational Safety and Health (NIOSH) recommended:

*“If feasible and legally permissible, attach noise suppressors to firearms to reduce peak sound pressure levels.”*

In 2017, the National Hearing Conservation Association’s Task Force on Prevention of Noise-Induced Hearing Loss from Firearm Noise stated that *“using firearms equipped with suppressors”* is one of *“several strategies [that] can be employed to reduce the risk of acquiring noise induced hearing loss and associated tinnitus from firearm noise exposure.”*

Overpressure created by a large caliber weapon is a danger which is also mitigated by using suppression. The military and others have done research on this issue, establishing what they deem to be safe levels of overpressure. One such study, published by the National Library of Medicine, concludes: *“Our findings indicate OPs >4 psi are common and that muzzle devices are critical to blast exposure. Shooting positions closer to the ground experienced higher OP and impulse than did other positions. Suppressors mitigated blast effects well.”*

There are also tactical advantages to using suppressors during training and operations. Suppressors reduce felt recoil, which can assist shooters with accuracy. The reduced muzzle flash may protect the shooter’s position from being detected by an adversary on a callout, especially at night. This can be seen as a safety benefit.

There is a certain irony in using the military as a negative reason for law enforcement to utilize suppressed weapons. Operational military units have been using suppressed weapons for the very same reasons mentioned here. They have long recognized the tactical advantages, as well as the medical safeguards provided by them. Why should law enforcement be so resistant to following their logically sound reasoning?

Because suppressor technology is constantly evolving and improving, we won’t recommend specific configurations or brands here. However, we would like to make you aware of three important points.

First, there are two primary ways to attach suppressors to weapons. They come in direct thread, in which the suppressor is attached directly to a threaded barrel. Or they can come in a variety of quick detach arrangements, both locking and non-locking. Check with the manufacturers to see the details on each.

Buy your suppressor from a reputable vendor, with experience and expertise in producing equipment that is reliable, functional, and safe. Lives will be depending on how well your weapon works in the field. Don’t buy such an important piece of hardware from Joe’s Cut-Rate Suppressors and Car Parts, no matter what sort of hometown deal he may offer. Suppressors come in a wide range of styles, lengths, weights, effectiveness, and prices. Well-known companies like Thunder Beast, Gemtech, Surefire, SilencerCo, OSS, and others have put in the time and work to produce suppressors designed to meet your tactical needs. Do your research first.

Lastly, it is usually a good idea to have the suppressor vendor do the installation work. Most post-purchase problems with suppressors like accuracy and repeatability are attributed to poor installations. The best way to get consistency and accountability is to have the vendor who builds and sells the suppressor be responsible for its proper installation.

Use of suppressed weapons by snipers simply makes good sense. From a tactical perspective and from a health perspective. It is our position that all teams need to look seriously at investing in suppressors for all their tactical personnel. SWAT officers routinely wear Kevlar helmets to protect their heads, googles to protect their eyes, and armor to protect their bodies. What is so outrageous about utilizing specialized equipment to protect their hearing?

**Resources:**

Center for Disease Control

American Suppressor Association

National Institute on Deafness and Other Communications Disorders (NIDCD)

National Institute for Occupational Safety and Health (NIOSH)

National Hearing Conservation Association

National Library of Medicine