Shotgun

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Definition

A lethal police shotgun is a shoulder-fired smoothbore firearm used with conventional lethal ammunition.

For police intervention purposes, the most important ammunition distinction is between:

- buckshot – multiple relatively large pellets fired in a single discharge; and
- slug – a single large projectile.

This entry excludes 12-gauge beanbag, sock, or other reduced-lethality ammunition, which belongs in Less-Lethal Shotgun.

This platform profile should be read with Lethal Firearm Force, which contains the common evidence on firearm wound mechanisms, incapacitation, deadly-force justification, and the limitations of firearm "stopping power" claims.

How It Is Designed to Work

The shotgun differs from pistol and rifle platforms because one firearm can deliver very different terminal effects depending on ammunition.

Buckshot

Buckshot launches multiple pellets in a single discharge. After leaving the muzzle, the pellet group gradually spreads, with a pattern that depends on ammunition design, barrel and choke, distance, pellet size, wad design, and other platform variables. At typical police engagement distances, buckshot should not be conceptualized as a broad cinematic "wall" of projectiles, since spread can remain sufficiently compact that accurate aiming is still necessary.

Slug

A shotgun slug is a single large projectile whose injury mechanism is therefore more analogous to other single-projectile firearms, although projectile mass, diameter, velocity, deformation, and penetration behaviour differ.

Injury and Safety Evidence

Ordog, Wasserberger, and Balasubramaniam (Ordog et al., 1988) reviewed shotgun wound ballistics and emphasized the unusually broad spectrum of shotgun injury, finding that wound severity depends

substantially on range, pellet size, number of pellets striking, shot pattern, and ammunition type. Close-range shotgun wounds can be highly destructive, while greater distance can substantially alter the injury pattern, a pattern that demonstrates why “shotgun wound” is not a single injury category.

Ammunition determines deployment risk

Buckshot and slug use create different risks. Buckshot introduces multiple projectile paths, pellet spread, the potential for individual pellets to miss the intended target, and multiple wounds from one trigger press. A slug introduces one projectile path and substantial projectile mass, with penetration behaviour that depends on slug design and barriers. Accordingly, shotgun bystander risk cannot be discussed responsibly without specifying ammunition.

Evidence of Effectiveness

Overall assessment

Evidence strength: Strong for capacity to cause severe and lethal injury; moderate for shotgun wound mechanisms; very low for police field evidence comparing shotgun stopping effectiveness with pistol or rifle.

The medical literature clearly establishes that lethal shotgun ammunition can produce catastrophic injury but does not establish a reliable police encounter-level probability that one buckshot discharge, one slug, or the shotgun platform generally will immediately stop threatening behaviour.

Firearm-type comparisons

Sarani and colleagues (Sarani et al., 2019) included shotgun victims in their firearm-type comparison of civilian public mass shootings, but only 22 of the 232 victims in the sample were categorized as shotgun victims, making the study unsuitable for estimating police shotgun effectiveness while remaining useful as evidence that firearm-type comparisons are strongly influenced by event context and wound location.

Primary Operational Characteristics

The shotgun is a shoulder-fired platform that generally provides multiple physical contact points, good mechanical stability, and substantial lethal-force capability.

Its deployment may be influenced by:

- agency equipment;
- whether the shotgun is already assigned to patrol;
- ammunition carried;
- barrel length;
- capacity;
- recoil;

- need to identify the loaded munition; and
- the environment in which the firearm will be used.

Capacity and follow-up fire

Many police shotguns have lower ammunition capacity than common duty pistols or patrol rifles, which means reloading and ammunition management may become more operationally significant in prolonged incidents, though this is a platform characteristic rather than evidence that the shotgun is ineffective.

Recoil

Shotgun recoil can be substantial, particularly with conventional lethal ammunition, and can influence recovery between shots, shooter comfort, training demands, and practical performance, though the literature does not provide a clean police field estimate translating recoil into encounter outcome.

Confined Spaces

The common assumption that a shotgun is automatically preferable in confined spaces should be treated cautiously, since a long gun may be more cumbersome than a pistol, more exposed to weapon-retention problems at contact distance, and harder to manoeuvre in some vehicles or narrow structures, though a shoulder-fired platform may offer greater stability and control once brought to bear. Whether the shotgun is appropriate therefore depends on the actual environment, officer position, ammunition, threat location, and ability to maintain separation.

Penetration and Bystander Risk

There is no single “shotgun penetration” rule, since buckshot, birdshot, and slugs differ dramatically. For police lethal-force analysis, relevant questions include what ammunition is loaded, expected penetration through the intended subject, interaction with walls, doors, glass, or vehicles, pellet spread, projectile continuation, and location of uninvolved people. Buckshot creates the additional possibility that some pellets strike the intended person while others continue past or around them, while a slug creates a single but potentially substantial projectile path.

When Its Use May Be Appropriate

A lethal police shotgun may be used as lethal force where an officer reasonably perceives an immediate threat of death or serious bodily injury. See Lethal Firearm Force for the common justification framework. The shotgun’s specific deployment considerations – ammunition type, available space, and capacity – affect when it is the practical platform available.

Relevance to Edged-Weapon Encounters

Potential role

A lethal shotgun can be an appropriate firearm response where an edged-weapon subject presents an immediate threat of death or serious bodily injury, and like a rifle, it can allow firearm force to be delivered from outside contact range through a shoulder-supported platform.

Conditions favouring deployment

Its practical use is most plausible where:

- the shotgun is already available or can be retrieved without sacrificing necessary reaction time;
- the officer knows what ammunition is loaded;
- the intended target can be isolated;
- the backdrop is acceptable;
- pellet spread or slug penetration can be reasonably accounted for; and
- the platform can be handled safely in the available space.

Failure and continuation considerations

A shotgun discharge does not guarantee immediate incapacitation. With buckshot, not all pellets necessarily strike, pellets may hit non-critical anatomy, and the pattern may interact unpredictably with movement or intermediate objects. With a slug, the projectile may cause serious or fatal injury without immediate behavioural cessation, meaning the threat must be reassessed after each discharge in the same way as with other firearm platforms.

Risk trade-off

The shotgun's shoulder-fired stability and substantial terminal capability may be advantageous, though its unique risks depend heavily on ammunition and include multiple projectile paths with buckshot, potentially substantial penetration with slugs, recoil, lower capacity on many systems, and long-gun handling in constrained environments. The evidence provides no empirical basis for a general rule that the shotgun is the preferred firearm for edged-weapon attacks.

U.S. Legal Considerations

The shotgun is conventional deadly force, and the legal threshold is therefore the same as for pistol or rifle use. Ammunition and environment may become relevant to whether the manner of using the firearm was reasonable, particularly where uninvolved people are close to the line of fire, pellet spread creates foreseeable third-party risk, officers fire through uncertain barriers, or target identification is poor.

Evidence Limitations

Modern police shotgun-specific outcome literature is sparse, and the category combines materially different ammunition types whose characteristics should not be pooled. Older medical literature may involve civilian ammunition and shooting circumstances different from contemporary police use, and wound severity cannot be converted into a police stopping probability. Shotgun use is selected for particular incidents and agencies, making platform comparisons difficult, and there is little direct empirical evidence on lethal shotgun use in edged-weapon encounters.

Bottom Line

Primary advantage

Shoulder-fired stability combined with substantial lethal capability; the platform provides a more stable supported firing position than a handgun, which may be relevant at greater distances or where precise shot placement is important.

Primary limitation

Ammunition-dependent risk profile, including multiple projectile paths with buckshot and substantial penetration potential with slugs, combined with lower capacity on many systems and the handling constraints of a long gun in constrained environments.

Edged-weapon relevance

The shotgun can be a lawful and tactically reasonable lethal response to an edged-weapon threat, but the literature does not demonstrate that it is generally superior to pistol or rifle platforms.

Core Peer-Reviewed Evidence

1. Ordog, G. J., Wasserberger, J., & Balasubramaniam, S. (1988)

Shotgun wound ballistics.

Journal of Trauma, 28(5), 624–631.

DOI: 10.1097/00005373-198805000-00011

Citation key: `<span class="cite">(Ordog et al., 1988)</span>`

Priority: Essential shotgun-specific wound-ballistics review.

Contribution: Describes the relationship between shotgun range, shot size, pellet spread, and wound severity.

Key finding: Shotgun injury spans a very wide severity spectrum; close-range wounds can be devastating while increasing distance changes pellet dispersion and injury pattern.

Limitation: Medical review, not police encounter-effectiveness research.

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2. Hanna, T. N., Shuaib, W., Han, T., Mehta, A., & Khosa, F. (2015)

Firearms, bullets, and wound ballistics: An imaging primer.

Injury, 46(7), 1186–1196.

DOI: 10.1016/j.injury.2015.01.034

Citation key: `<span class="cite">(Hanna et al., 2015)</span>`

Priority: High cross-platform review.

Contribution: Reviews handgun, rifle, and shotgun ballistic injuries and emphasizes projectile–tissue interaction.

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3. Sarani, B., Hendrix, C., Matecki, M., et al. (2019)

Wounding Patterns Based on Firearm Type in Civilian Public Mass Shootings in the United States.

Journal of the American College of Surgeons, 228(3), 228–234.

DOI: 10.1016/j.jamcollsurg.2018.11.014

Citation key: `<span class="cite">(Sarani et al., 2019)</span>`

Priority: Supporting comparative firearm-type evidence.

Contribution: Compared autopsy findings by handgun, rifle, shotgun, and multiple-firearm categories.

Limitation: Civilian mass-shooting context, small shotgun subgroup, and no relevance to police platform selection or stopping probability.

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4. Fackler, M. L. (1988)

Wound Ballistics: A Review of Common Misconceptions.

JAMA, 259(18), 2730–2736.

DOI: 10.1001/jama.1988.03720180056033

Citation key: `<span class="cite">(Fackler, 1988)</span>`

Priority: Foundational ballistic interpretation.

Key value: Prevents simplistic assumptions that projectile energy or weapon category alone predicts injury.

The lethal police shotgun is not a single ballistic intervention unless ammunition is specified. Buckshot delivers multiple projectile paths whose spread and injury pattern vary with distance and ammunition design; a slug delivers one large projectile with a different penetration profile. The medical literature suggests that

either can produce catastrophic injury, but there is little high-quality police evidence showing that a shotgun provides superior immediate stopping outcomes compared with pistol or rifle platforms. In edged-weapon encounters, its relevance therefore depends on availability, ammunition, target isolation, backdrop, handling environment, and the same underlying lethal-threat threshold that governs all conventional firearms.

Evidence Rating

Lethality and serious-injury capacity: ★★★★★

Immediate incapacitation prediction: ★★☆☆☆

Platform-comparative field evidence: ★★☆☆☆

Edged-weapon-specific evidence: ★★☆☆☆

Overall confidence: High for injury mechanism; low-to-moderate for immediate stopping predictions and platform comparison.

References

Fackler, M. L. (1988). Wound Ballistics: a Review of Common Misconceptions. *JAMA*, *259*(18), 2730–2736. https://doi.org/10.1001/jama.1988.03720180056033

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