Kinetic Energy Projectile (KEP) Weapons
Familiarization Training

Pacific Grove Police Department

Objectives

- Policy Review/ Legal Considerations
- Definitions
- Physiological Aspects/ LL & KEP Considerations
- KEP Weapons Familiarization
  - Less Lethal Shotgun
  - 40MM Launcher
- KEP Munitions Familiarization
- Practical Application

PGPD Policy

- Policy 300- Use of Force
  - Only that force necessary
  - Reasonableness
- Policy 301- Control Devices and Techniques
  - 301.9- Kinetic Energy Projectiles
    - Deployment and Use
    - Deployment Considerations
    - Safety

Other Legal Considerations

- Graham v. Conner
  - Objectively Reasonable Test
  - Intrusion vs. Need for Intrusion
- 9th Circuit- Glenn v. Washington County
  - Lethal Backup
- Whitley v. Warren
  - Documentation of Injuries
- Deorle v. Rutherford
  - Duty to Warn, prior to application

Definitions

- Force
  - "Application of physical techniques..."
- KEP Weapons
  - Intended to induce compliance by causing sudden, debilitating, localized pain
- KEP Munitions
- Designed to be less likely to kill a living target
- Not necessarily non-lethal

**Definitions**

- **Kinetic Energy**
  - Energy = Speed + Mass
  - Created by the movement of a mass as it strikes an object
- **Expressed in foot pounds**
  - Amount of energy it takes to move 1 pound (mass) a distance of 1 foot.
  - **Foot Pound Comparisons**
    - CPR chest compressions - .5
    - Little league fastball - 120
    - .38 special - 377
    - Bean bag Round - 120

**Physiological Aspects**

- **Blunt Force Trauma**
  - Compression of tissue beyond recoverable limit
  - Projectile impact stimulates pain receptors and creates movement of body tissue
  - Human Body has 86 nerves/ 206 bones/650 muscles / 5 liters of blood/ numerous vital organs

**Physiological Aspects**

- Injuries May Include
  - Abrasions/ contusions/ fractures/ penetrations
- **Wound Ballistics**
  - Compression too deep or too great can cause serious injury or death
  - Soft body tissue - damage to internal organs
  - Skeletal - damage to bones and related injuries from fractures/ fragments

**Physiological Aspects**

12ga Bean Bag
- [https://youtu.be/boi9pOTxUEI](https://youtu.be/boi9pOTxUEI)
- [https://youtu.be/4-BU3OPRsz0](https://youtu.be/4-BU3OPRsz0)
- [https://youtu.be/m2KCI_1Zr2g](https://youtu.be/m2KCI_1Zr2g)

40mm Sponge
- [https://youtu.be/b4rBfIcBRE](https://youtu.be/b4rBfIcBRE)
Friendly Fire

MEDICAL CONSIDERATION
PGPD Policy 300.6

"Prior to booking or release, medical assistance shall be obtained for any person who exhibits physical distress, who has sustained visible injury, expresses a complaint of injury or continuing pain, or was rendered unconscious..."

Considerations for KEP (LL) Deployment

- Priority for Human Life
- Level of Resistance
- Exigency
- Alternatives
- Surroundings
- Environment

KEP Shot Placement

- Large Muscle Groups Only (see diagram)
  - Lower arms/ thighs/ shins/ buttocks
  - Most fatal injuries are due to penetration of the CHEST area.

- HEAD / CHEST/ NECK AREAS SHOULD NOT BE INTENTIONALLY TARGETED

Other Shot Placement Considerations

- Clothing
  - Avoid bare skin impact
- Wind Conditions
  - May effect accuracy
- Distance/ Angle
  - Too close may cause significantly more injury
  - Too far may effect accuracy
- Background/ Foreground/ Proximity
COMMUNICATE YOUR INTENT

- 7’ Distance - Thin Shirt
- 10’ Distance - Bare skinned
- 10’ Distance - Bare Arms, T Shirt
- 12’ Distance - Letterman’s Jacket
- 30’ Distance - Football Jersey
- 30’ Distance - Bare Skinned

Documentation

- Use of Force Form
- Photographs (Important)
- Witness Statements
- Recordings

PGPD KEP Weapons

- Remington 870 12ga Shotgun
  - Orange Stock Only
- Penn Arms GL1-40mm

PGPD KEP Munitions

- Remington 870 12ga Shotgun
  - DT Drag Stabilized Bean Bag Round
  - 270 fps/ Range 7-75'/ 10 Round capacity
- Penn Arms GL1-40mm
  - DT eXact Impact Sponge Round
  - 325 fps/ Range 5-230'/ Single Shot

Deployment Statistics

- Subjects Involved
  - 47% involved suicidal subjects
  - 19% barricaded suspects
  - Distances
61% took place inside 21’
19% took place between 21’-42’
Number of Rounds Fired
43% - 1 shot fired
22% - 2 shots fired
18% - 3 shots fired

Training Take Aways

Policy and Legal Considerations
Deployment Considerations for KEP Weapons
Physiological Effects of KEP Munitions
Shot Placement Considerations for KEP Munitions
Familiarization with Operation and Handling of Department Issued KEP Weapons and Munitions

Live Fire Training - Army Style

Live Fire Range at City Yard

All Range Safety Rules Apply
All Protective Gear Will be Worn
No Live (Lethal) Ammo on person
Leave duty pistols and magazines in Patrol Vehicle
ONLY Blue guns in holsters