TASER Technology – Changing the World and Protecting Lives

TASER International, Inc. provides safer use-of-force options for use in the law enforcement, military, private security and personal defense markets. TASER® technology saves lives every day and numerous independent medical studies conclude that TASER Electronic Control Devices (ECDs) are the among the safest and most effective use-of-force options available. TASER technology dramatically reduces injury rates to suspects and officers, thereby lowering liability risk and improving officer safety and community security. TASER technology is revolutionizing law enforcement and changing the world with safer, effective and accountable tools for citizens, law enforcement, military, corrections, and private security.

TASER Electronic Control Devices

TASER devices use proprietary technology to quickly incapacitate dangerous, combative or high-risk subjects who pose a risk to law enforcement officers, innocent citizens or themselves. TASER ECDs utilize compressed nitrogen to project two small probes up to 15, 21, 25 and 35 feet (citizens can only buy the 15-foot TASER cartridge) at a speed of over 160 feet per second. These probes are connected to the TASER system by insulated wire. An electrical signal is transmitted through the wires to where the probes make contact with the body or clothing, resulting in an immediate loss of the person's neuromuscular control and the ability to perform coordinated action for the duration of the impulse while allowing an instant recovery once the cycle ceases. This effect is a state-of-the-art Neuro-Muscular Incapacitation (NMI) technology that temporarily overrides the nervous system, taking over muscular control. This NMI technology temporarily debilitates even the toughest individuals with minimal risk of injury.

TASER International markets the ADVANCED® TASER M26; ADVANCED® TASER M18 & M18L; TASER® X26; TASER® X26C Citizen Defense System and the newly introduced TASER® C2 Personal Protector.

Quick Stats

- More than 13,400 law enforcement, correctional and military agencies in 44 countries deploy TASER devices
  - Of this more than 5,000 agencies deploy TASER ECDs to all of their patrol officers
- More than 375,000 TASER brand devices have been sold to law enforcement since February 1998
- More than 181,000 TASER brand devices have been sold to citizens since 1994 (legal in 43 states)
- TASER ECDs for citizens are prohibited in DC, MA, RI, NY, NJ, WI, MI, HI and certain cities and counties. CT and IL are legal with restrictions
- TASER International's headquarters and manufacturing facility is located in Scottsdale, AZ and was founded in September 1993
- TASER International trades on the NASDAQ under the trading symbol TASR
TASER Safety and Medical Studies

Independent medical and scientific experts have determined TASER devices to be a safer use-of-force option compared to traditional use of force tools. Field studies have reaffirmed the life-saving value of TASER devices. Independent studies - including an extensive, multi-million dollar three-year study conducted by the British Associations of Chief Police Officers (ACPO) in consultation with the British Police Scientific Development Branch (PSDB), the British Defense Science and Technology Laboratory (DSTL) and the British Defence Scientific Advisory Council Sub-committee on the Medical Implications of Less-lethal Weapons (DOMILL), as well as a U.S. Department of Defense (DOD) study involving approximately 20 medical and research doctors from a dozen academic, government and private institutions - have reaffirmed the overall safety and effectiveness of TASER’s life-saving technology.

In January 2005, the Pacing and Clinical Electrophysiology (PACE) Journal published the results of a cardiac safety study of TASER technology and stated, “There has been no report directly related to its risk of inducing ventricular fibrillation (VF), although preliminary findings suggest that the likelihood of inducing VF by neuromuscular incapacitation (NMI) discharge is extremely low. We hypothesized that the induction of VF would require significantly greater discharge levels than delivered by electrical NMI devices fielded by law enforcement agencies.”

- Dr. Richard Luceri, a renowned cardiac rhythm specialist and member of the Scientific and Medical Advisory Board for TASER International concluded, “The PACE article, using pigs of comparable human weights (66 to 257 lbs), confirms the extraordinarily wide safety margins for fibrillation induction in TASER-like products. Average fibrillation induction required 28 times the energy of commercially available TASER products, far greater than the safety margin of most cardiac drugs approved by the U.S. Food and Drug Administration. These data add scientifically validated support to the large database of favorable TASER outcomes collected in the field,” concluded Dr. Luceri.

A recent US Department of Justice study conducted by Wake Forest University School of Medicine showed that 99.7% of suspects who have encountered a TASER device as a means of force received only bruises and scrapes or were uninjured. For more comprehensive research information, please visit: http://www.TASER.com/research/science.

About TASER International, Inc.

Co-founders Rick Smith and Tom Smith formed AIR TASER, Inc. in 1993 with the initial TASER inventor Jack Cover. In 1998 AIR TASER, Inc. became TASER International, Inc. in response to the Company’s international expansion and increased market share. TASER International, Inc. became a public company in May 2001, and began public trading on the NASDAQ stock exchange under the symbol TASR. TASER International’s state-of-the-art 100,000 square-foot corporate headquarters and manufacturing facility are located in Scottsdale, AZ.

For further corporate and investor information, please visit www.TASER.com and select “Investor Relations” or contact Investor Relations at (800) 978-2737 or IR@TASER.com.
Synopsis: The TASER® X26 (TASER X26C and TASER® C2 for citizens) and the ADVANCED TASER® M-Series (M26 for law enforcement/military and M18L and M18 for citizens) are the electronic control devices (ECDs) that can immediately stop a truly aggressive, focused, combat trained attacker. Suspects can recover immediately as electricity cannot be stored by the human body.

Range: 15-35 feet for law enforcement and military, 15 feet only for citizens. Depending on the TASER Cartridge, the TASER ECDs can be deployed from 0 to 35 feet (0 to 10.67 meters). TASER Cartridges are available in cartridges with ranges of 15, 21, 25 and 35 feet.

Method of Incapacitation: TASER ECDs utilize a state-of-the-art Neuro-Muscular Incapacitation (NMI) technology that temporarily overrides the nervous system, taking over muscular control. This NMI technology temporarily debilitates even the toughest individuals with minimal risk of injury. Existing stun systems stimulate sensory neurons and can be over-ridden by a focused individual. The TASER devices directly stimulate motor nerve tissue, causing incapacitation regardless of mental focus, training, size, or drug induced dementia.

Accountability with Dataport Systems:
- The TASER X26 stores time, date, duration, temperature & energy cell status of over 1,500 firings. Data accessed through USB into encrypted secure “.x26” file format on Windows® PC (Windows® 2000, XP, or ME).
- The ADVANCED TASER M26’s on-board memory can download the time and date of its most recent 500+ uses to protect officers from unfounded charges of misuse of force.

M26 Power Supply: AA Nickel-Metal Hydride batteries 1.2 volts
AA Hi-Output Alkaline (i.e., Duracell® Ultra) batteries 1.5 volts

X26 Power Supply: Digital Power Magazine (DPM) with lithium energy cells and digital memory. 6-volt output, 10-yr shelf life.

C2 Power Supply: C2 Lithium Power Magazine lithium energy cells and digital memory. 6-volt output, 10-yr shelf life.

Power: M26: 26 watts; 0.50 joules per pulse into load; and 3.6mA avg. current
M18L/M18: 18 watts; 0.50 joules per pulse into load; and 3.6mA avg. current
X26: 5 watts; 0.07 joules per pulse; and 2.1 mA average current
C2: (approximately): 5 watts; 0.07 joules per pulse; 2.1 mA average current

Training: The TASER devices use similar hand motions and muscle memory as standard semi-automatic pistols, reducing the amount of time required to train and increasing accuracy under stress. Minimum recommended law enforcement user training is 6 hours; certified instructor training is 16 hours.
What is a TASER electronic control device (ECD)?

A TASER ECD is an electronic control device that is a safer use-of-force option for law enforcement, private security, military and personal defense. TASER ECDs transmit controlled pulses of electricity that are carefully designed to stimulate the skeletal muscles of the human body without affecting the heart or other vital organs preventing a suspect’s coordinated actions.

TASER technology has revolutionized policing by providing a standoff tool. The advantage is that TASER technology can truly immobilize a suspect who can overcome pain, might be on dangerous drugs like cocaine or methamphetamine or even emotionally disturbed, whereas other use of force tools rely upon pain compliance. The TASER system doesn't use pain compliance but immediately stops any coordinated action by the subject only while the TASER system's current is flowing. Recovery is instantaneous so the TASER system only provides a window of opportunity to temporarily stop someone's dangerous actions.

The success of TASER programs are dramatic reductions in injuries to both suspects and law enforcement officers. No other law enforcement tool has undergone as extensive international scientific testing and scrutiny as TASER technology. Although, no use of force device is risk free including TASER technology, medical experts and recent independent comprehensive reports from the governments of Canada, United Kingdom and the U.S. have concluded that TASER systems are among the safer use-of-force alternatives to subdue violent individuals who could harm law enforcement officers, innocent citizens or themselves.
How does a TASER device work?

TASER devices utilize compressed nitrogen to project two small probes up to various ranges of 15, 21, 25 or 35 feet only 15 foot cartridges are sold to citizens) at a speed of over 160 feet per second. These probes are connected to the TASER device by insulated wire. An electrical signal is transmitted through the wires to where the probes make contact with the body or clothing, resulting in an immediate loss of the person’s neuromuscular control and the ability to perform coordinated action for the duration of the impulse.

What about the electrical current and high voltage?

TASER devices transmit controlled pulses of electricity that are carefully designed to stimulate the skeletal muscles of the human body without affecting the heart or other vital organs preventing a suspect’s coordinated actions.

While the TASER device produces 50,000 volts to create a spark that will transmit electricity through 2 inches of clothing, only short pulses of 400 volts actually enter the body. The average voltage during a five-second application is less than one volt. When compared to a static shock from a doorknob (35,000 to 100,000 volts) or a Van de Graff Generator (1,000,000 to 20,000,000 volts), a common display in science museums which makes your hair stand on end, 400 volts with extremely low current is equally as harmless.

Van de Graaff generator with over 1,000,000 volts

When discussing how electricity will affect the human body, voltage becomes irrelevant without a discussion of the corresponding amount of electric current (measured in amperes). To just say 400 volts is dangerous is inaccurate without also talking about the current associated with that charge. Voltage, even high voltage, alone does not harm or kill.

The average current delivered by a TASER X26 ECD is 0.0021 amperes or 2.1 milliamperes. Compare this with the average Christmas tree light bulb which has approximately 1 ampere of current, or the 16 amps from a typical 110-volt wall socket; it should become readily apparent that the extremely low current of a TASER device is safe.
To further put this into perspective, the “power plant” of a TASER device is two lithium camera batteries which can produce approximately 100,000 TASER electrical pulses, but only approximately 100 camera flashes.

Why use a TASER device?

TASER devices save lives and are generically known as electronic control devices. TASER brand devices are among the safer use-of-force options available today. TASER systems use proprietary technology to immediately incapacitate dangerous, combative or high-risk individuals who pose a risk to law enforcement officers, innocent citizens or themselves. TASER devices have been proven statistically to dramatically reduce injury rates to suspects and officers and increase officer safety and community security compared to any other use of force option.

Are TASER devices safe?

TASER technology has been around since the 1970s and has been the subject of over 150 studies by scores of universities, hospitals, physicians, law enforcement agencies, military panels as well as independently through years of testing by many government entities in Canada, the United States and throughout the world. This includes the Home Office in the United Kingdom which recently published its three-year-long peer-reviewed analysis of TASER devices. To date, all the studies have found the patented TASER technology, which transforms a low-energy power supply into an energy pulse that mimics the very electrical waveform generated by our brains to control skeletal muscles and which renders a person incapacitated, to be generally safe and effective.

TASER technology is not risk free, but independent medical and scientific experts have determined that when used properly, TASER technology is among the most effective use-of-force interventions available to law enforcement. No other law enforcement tool has undergone as extensive international scientific testing and scrutiny as TASER technology.

The success of TASER programs has been in reducing injuries to officers and suspects compared to traditional pain compliance tools such as fists, tackles, baton strikes, and impact weapons. Statistically speaking, TASER has not had a report of a law enforcement agency move forward with a TASER program in which injuries increased to officers or suspects. This fact was recently backed up by a recent US Department of Justice study that showed that 99.7% of suspects who have encountered a TASER device as a means of force received only bruises and scrapes or were uninjured.
Numerous recent independent studies - including an extensive, multi-million dollar three-year study conducted by the United Kingdom’s Association of Chief Police Officers (ACPO) in consultation with the British Home Office Scientific Development Branch (HOSDB), the British Defence Science and Technology Laboratory (DSTL) and the British Defence Scientific Advisory Council Sub-committee on the Medical Implications of Less-lethal Weapons (DOMILL), as well as a U.S. Department of Defense (DOD) study involving approximately 20 medical and research doctors from academic, government and private institutions - have reaffirmed the life-saving value of TASER technology.

A peer reviewed study by Journal of Pacing and Clinical Electrophysiology (PACE) suggest a safety margin of greater than 20:1 for human adults greater than 100 lbs -- Acetaminophen has an 8:1 safety margin.

- Peer reviewed study used adult pigs chosen to simulate range of adult human body weights between 30 and 120 kg (66 lbs. and 264 lbs.)
- Peer reviewed study used adult pigs chosen to simulate range of adult human body weights between 30 and 120 kg (66 lbs. and 264 lbs.)
- Results suggest a safety index > 20:1 for human adults > 45 kg (100 lbs.)
What does TASER International recommend for “use of force” guidelines?

More than 13,000 law enforcement agencies worldwide deploy TASER ECDs with 86 percent of these agencies adopting use-of-force policies allowing for the use of a TASER device in circumstances similar to when pepper spray can be deployed. However, it is properly the responsibility of each agency to set their own policy based upon their community standards and the totality of the circumstances for any use-of-force, including the deployment of TASER ECDs.

TASER devices have saved thousands of lives and have greatly reduced the injuries that officers and suspects would typically encounter when using hands-on techniques, fighting, punching, kicking and swing batons to stop suspects from hurting themselves, the public or other officers. TASER devices do not replace firearms and are designed for use in escalating dangerous incidents to prevent the situation from developing to the point where lethal force would be authorized. Policies that recognize this are proven life-savers for police officers and civilians alike.

The success for any use-of-force policy, including ones for the deployment of TASER devices, depends upon good training and strong accountability. Local communities, together with law enforcement agencies and third party advocates have come together in countless communities to develop community standards and to provide court tested use-of-force policies.

When used properly, medical and law enforcement experts have concluded that TASER technology is among the most effective use-of-force interventions available to law enforcement officers to halt violent situations that pose a safety risk to an officer, suspect or innocent citizens.
What about accountability and the TASER Dataport system?

TASER International has taken it upon itself to implement numerous measures to ensure that its electronic control devices are among the safest and most accountable, use-of-force alternatives in the world. TASER devices provide unprecedented accountability through its built-in Dataport system. The Dataport is an on-board computer that records the date, time and duration of every trigger pull. No other use of force option provides this level of accountability through documentation and deployment data.

What is the AFID program?

For citizen accountability, each TASER cartridge is serialized and registered to its user and includes a tracking program that disperses dozens of confetti-sized film at the scene under our Anti-Felon Identification (AFID) program.

To citizens to purchase a TASER X26C or a TASER C2 it comes down three factors: Registration, verification and tracking.
**TASER X26C:** At the time of purchase, we gather extensive personal information to verify the identity and background of the prospective buyer with the understanding that we will not release the information and it will be kept confidential. This data maintains the integrity of our Anti-Felon Identification (AFID) system as private unless a TASER device is used in the commission of a crime in which we can trace the identity of the unit and the owner of the device through the confetti that is deployed any time our TASER devices are deployed. Online purchases of TASER X26C units require a valid Social Security Number in which ChoicePoint verifies this information and reviews for felonies, terrorist watch lists and proof of age. The device can then be purchased via credit card which is also verified.

**TASER C2:** The TASER C2 Personal Protector is the first device to incorporate a revolutionary new public safety background check technology called CheckLok™. Next generation background check technology ensures full compliance with user identification and screening. The TASER C2 ships in a locked state and can only be unlocked by with an activation code received upon successful registration with an identification verification and background check approval from the privacy of using a secure web site or a toll-free number.

The TASER C2 Personal Protector is available in many colors.

- Black Pearl
- Titanium Silver
- Electric Blue
- Metallic Pink
After completing the background check, the user is issued an activation code unique to their serial number. The TASER C2 will work only after entering the activation code. CheckLok ensures compliance, registration, and provides corporate responsibility.

**How does the TASER CAM™ audio/recording system work for improving accountability?**

The TASER CAM™ is an integrated video system accessory that records more than 90 minutes of audio and video during a TASER X26 deployment to provide enhanced accountability above and beyond the TASER Dataport system. The TASER X26 provides an audio/visual black and white MPEG 4 video of any activation. The monochromatic lens can record video in complete darkness.
The system activates whenever the safety is placed in the “off” position and stops when the system is stopped by placing the safety to the “on” position. Now, an officer's report not only is corroborated by its internal audit system but it captures the event on video. Imagine seeing the suspect's behavior and hearing the officer's verbal commands. We are all about effectiveness, accountability and safety.

How often are TASER systems deployed?

More than 13,400 law enforcement agencies world-wide deploy over 375,000 TASER devices with 86 percent of these agencies adopting use-of-force policies allowing for the use of a TASER device in circumstances similar to when pepper spray can be deployed. These devices have been used on an over 624,000 suspects and are used at an average rate of 490 per day. There have been an estimated 767,000 training exposures given to law enforcement officers for a total of over 1.3 million human exposures.

Who do I contact for more information?

For more information on TASER technology, please contact TASER International, Inc. headquarters at: 1-800-978-2737 or Info@TASER.com.
Why TASER Technology?

The advantages to TASER® technology are dramatic reductions in injuries to both suspects and law enforcement officers. Nationwide with more than 13,400 law enforcement agencies deploying TASER devices, a law enforcement revolution has occurred in which officers can temporarily incapacitate subjects from zero to 35 feet away.

No other non-lethal law enforcement alternative has undergone as extensive international scientific testing and scrutiny as TASER technology. Although, no use of force device is risk free including TASER technology, medical experts and recent independent comprehensive reports from the governments of Canada, United Kingdom and the U.S. have concluded that TASER systems are among the safer use-of-force alternatives to subdue violent individuals who could harm law enforcement officers, innocent citizens or themselves.

When used properly, medical and law enforcement experts have concluded that TASER technology is among the most effective use-of-force intervention device available to law enforcement officers to halt violent situations that pose a safety risk to an officer, suspect or innocent citizens. TASER technology isn't a magic bullet but its 94% actual field rates are impressive and unmatched by any other law enforcement use of force tool.

Whereas traditional use of force tools relay upon pain compliance, the advantage to TASER technology is that it can truly incapacitate a suspect who can overcome pain, might be on dangerous drugs like cocaine or methamphetamines or may even emotionally disturbed. TASER systems don't rely upon pain compliance but instead provide NeuroMuscular Incapacitation (NMI) that immediately stops any coordinated action by the subject while the TASER system's current is applied. Recovery is instantaneous so the TASER system simply provides a window of opportunity to temporarily stop someone's dangerous actions.

Of the 13,400 law enforcement agencies deploying TASER technology, there have been no reports of overall increasing injury rates to suspects or officers. In fact, dramatic decreases in suspect and officer injuries have occurred particularly at law enforcement agencies that deploy TASER technology to the vast majority of its patrol offices. Workers Compensation rates have accordingly shown a decrease as well. Several law enforcement agency insurance agencies/risk management groups actually reimburse law enforcement agencies with funding when TASER devices are purchased based upon the actuarial data of field results of TASER deployments.

TASER Technology Deployment Statistics

As of September 30, 2008, TASER International has sold more than 375,000 TASER® brand devices to more than 13,400 law enforcement and military agencies in 44 countries. More than 5,000 agencies deploy TASER ECDs specifically to all members of their patrol officers. In addition, more than 181,000 citizens in U.S. own TASER ECDs.

The field statistics for TASER Electronic Control Device uses:

Suspects: More than 624,000 field use ± 2%
Volunteers: More than 767,000 volunteer exposures ± 7%
Protecting Lives

TASER technology continues to protect life by providing an effective and safer method of incapacitation. TASER is among many use of force tools, but perhaps none that have risen to the continual and revolutionary ability to actually protect lives.

Perhaps an email dated July 24, 2007 from a line level officer at Cocoa Police Department (FOP Lodge #112) speaks to the heart on this matter as it represents the numerous letters we receive every year. Ultimately an officer’s heartfelt comments provide insight into our relentless quest to provide tools to protect lives of officers and the communities they serve:

“Just wanted to take a minute to thank you for your product. I am a police officer for the City of Cocoa in Florida. While at our main station taking a report a subject was let into our building and was sitting on the floor. As I walked into the room, I asked the subject if I could help him with something. He came to his feet with a knife in his hand. He raised it up and stepped towards me. Your TASER saved his life and mine. This incident took all of 3 seconds and was life altering for the subject and myself. The subject later said his intentions were Suicide-by-COP. I am glad he didn't get his wish. This is the short version of the story, but if you would like more our case number is 200700005477 and our Public Information Officer's phone number is 321-637-6309.”

Thanks again.
Patrol Officer from Cocoa Police Department, Cocoa, FL 32922

Field Results after Initial Deployment to Line Officers

- In a study sponsored by the U.S. Justice Department and conducted by a Wake Forest University School of Medicine, a team of researchers examined the safety of TASER electronic control devices used by law enforcement agencies which suggested the devices are safe, causing a low occurrence of serious injuries. According to the research, in a review of the 962 people tracked between July 2005 and June 2007, only three of these people (or 0.3%) sustained moderate or severe nonfatal injuries that required hospitalization.
- San Diego County Sheriff’s Department (CA) had zero deputy involved shootings in 2007 for the first time in 11 years following a heavy deployment of TASER ECDs to patrol members
- El Paso Police (TX) 86% drop in officer assaults from 2003-2007 as TASER ECDs were provided to all patrol officers while
- Sarasota Police (FL) 65% drop in officer injuries in 2006
- Cincinnati Police (OH) 23% drop in officer injuries in 2005 and 24% drop in prisoner injuries in 2005

Citizen Sales Responsibility

TASER® technology has proven itself an effective and safe self-protection tool since 1994 for over 181,000 private citizens, many of whom do not want firearms in their homes for safety reasons.

Registration, verification and tracking are the three core principles for our sales to citizens to protect community members.
First, several safeguards make TASER technology a responsible personal safety tool through our successful institution of the cutting edge Anti-Felon Identification (AFID) program. The AFID system disperses 20-30 serialized confetti and identifies the owner of the TASER device. Our unique AFID program has successfully deterred criminal use for the past decade. A comprehensive Social Security Number identity identification and criminal background search for felonies. The system verifies the age and identity of citizen purchaser.

Our next generation technology for citizens is the TASER C2 Personal Protector and is the first device to incorporate a revolutionary new public safety background check technology called CheckLok™. With CheckLok, TASER C2 units are shipped in an inactivated state. They cannot be used until the end user successfully completes a background check from the privacy of their own home using a secure web site or a toll-free number. Before the background check begins, the owner must first pass an identification confirmation so TASER International can confirm beyond a reasonable doubt of who has purchased the TASER C2. Once the identification has been confirmed, then a background check is conducted. After completing the background check, the user is issued an activation code unique to their serial number. The TASER C2 will work only after entering the activation code. CheckLok ensures compliance, registration, and provides corporate responsibility.

These safeguards ensure maximum protection to all parties while enhancing overall community safety.

History

- The first TASER brand devices were sold to the public since 1994 called the AIR TASER Model 34000 with Anti-Felon Identification tracking capability
- The second generation personal protection units were called the ADVANCED TASER M18 series and were available in 1999
- The third generation technology available to citizens was the TASER X26C in September 2004
- The TASER C2 began its first shipments July 28, 2007

TASER Foundation for the Families of Fallen Officers

To protect and serve – every day over 850,000 law enforcement officers in the United States and Canada work to fulfill this mission. Sometimes these officers make the ultimate sacrifice and are tragically killed in the line of duty.

In response to these tragedies, and as a way to give back to the law enforcement community, TASER International, Inc. established the TASER Foundation for Fallen Officers in November 2004. The initial endowment of $1,000,000 came from TASER International and the direct contributions from TASER International employees. To date the TASER Foundation has awarded over $2 million to more than 575 families of fallen law enforcement officers in the United States and Canada.
Tasers score high for safety in study
Batons deemed most dangerous

Sherri Zickefoose
Calgary Herald
Wednesday, July 30, 2008

As the national debate over the safety of Tasers rages on across the country, a new study finds batons are causing the greatest rate of injury when used by police during arrests.

The two-year Calgary study, the first use-of-force examination of its kind in Canada, also found pepper spray was the safest tool employed by police to subdue suspects who were resisting arrest.

The Canadian Police Research Centre report examines 562 cases in which Calgary police used Tasers, pepper spray, batons, unarmed techniques and choke holds -- against people resisting arrest.

The 14-page study found Tasers "scored high" in safety for both suspects and officers in Calgary. Though they were used in nearly half of all cases involving suspects resisting arrest, one per cent ended up hospitalized and 87 per cent sustained either minor injuries or no injuries, according to the report.

Batons, on the other hand, used in roughly five per cent of arrests that required force, caused the greatest rate of higher-level injury. More than 39 per cent of subjects were injured. More than three per cent were hospitalized and nearly 26 per cent required outpatient treatment.

"The commonly held belief" that Tasers carry "a significant risk of injury or death . . . is not supported by the data," according to the report, researched by Dr. Christine Hall and Calgary use-of-force expert Staff Sgt. Chris Butler. The stun guns are "less injurious than either the baton or empty-hand physical control."

On Friday, the Saskatchewan Police Commission announced it will not be authorizing the general use of stun guns by members of the province's 14 municipal and First Nation police services until more information is available.

SWAT team members in Saskatchewan will continue to be allowed to use the stun guns.

In Calgary, pepper spray, used in roughly five per cent of force-involved arrests, produced the lowest rate of injury to suspects. More than 80 per cent of people sprayed suffered no injuries. Fifteen per cent had minor injuries and four per cent had what researchers called "minor outpatient" injuries that needed medical attention, but not hospitalization.

Police who used the spray suffered no injury in nearly 89 per cent of cases.

"No use of force technique available to police officers can be considered 'safe.' . . . Every use of force encounter between the police and a citizen carries with it the possibility for injury for one or all of the participants, however unexpected that injury might be," a synopsis of the report reads.

The study is expected to be posted online by the Canadian Police Research Centre at the end of August as part of a larger study on the use of force and restraint expected to be done by 2009.
"The whole point was to look at all subjects and situational features to see where the problems lay in injury and death," said Hall, an epidemiologist based in Victoria. "Use of force by police officers is really, really low. In two years and 827,000 face to face interactions, use of force occurred in 0.07 per cent."

U.S. agencies are also participating in the larger study, Butler said, because American and Canadian police encounters are surprisingly similar. More Canadian fatality inquiries are highlighting the need for consistent use of force tracking, he said.

"That database isn't available anywhere else in Canada. To my knowledge, we're the first agency to develop it. We could search hundreds of incidents to compare subject injuries, officer injuries. We're trying to come up with a retrospective look at police use of force and in-custody death and looking to see if there's a safest way of managing these types of events," said Butler.

"We're looking at the features of people who die in a state of excited delirium. Are there features they present that are predictive, are they more at risk of dying if a particular restraint methodology is used?"

Other findings include the fact roughly 88 per cent of all subjects requiring force were under the influence of drugs and alcohol or "some degree of emotional illness," while almost 94 per cent of resistant offenders requiring force were male.

Although the study finds use of force to be low, injuries are still worrisome, according to a watchdog.

"When use of force has to be used, I don't know what the incidence of harm is when they simply use their bodies and empty-hand techniques," said Stephen Jenuth, president of the Alberta Civil Liberties Association.

"I don't think Tasers or pepper spray is something that is the first in line. I think what we have to do is ensure proper training is there for police so they can handle tough situations without having to resort to use of force."

Author: szickefoose@theherald.canwest.com

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Force Science News #102 July 18, 2008

**New study ranks risks of injury from 5 major force options**

How would you rank the relative risk for officers and suspects suffering injury from these 5 force options:

- Empty-hand control techniques
- Baton
- OC spray
- Conducted energy weapons (Tasers)
- Lateral vascular neck restraint
If you judged OC to be the “safest” and baton to be “most injurious” to both officers and offenders, you’re in agreement with the findings of a new study of force encounters involving officers on a major municipal department.

The study, the first of its kind in Canada, was conducted by S/Sgt. Chris Butler of the Calgary (Alberta) Police Service and Dr. Christine Hall of the Canadian Police Research Center.

They analyzed 562 use-of-force events that occurred across a recent 2-year period as officers effected the arrests of resistant subjects in Calgary, a city of more than 1 million population. The threatened or actual use of firearms were omitted from the review, as were handcuffing, low-level pain compliance techniques like joint locks and pressure points, K-9s, and tactical responses such as chemical agents, flashbangs and less-lethal projectiles.

Here’s what they discovered:

- **OC, used in roughly 5% of force-involved arrests, produced the lowest rate of injury.** More than 80% of sprayed subjects sustained no injury whatever. About 15% had only minor injuries (“visible injuries of a trifling nature which did not require medical treatment”) and some 4% had what the researchers termed “minor outpatient” injuries (some medical treatment required but not hospitalization). No cases resulted in hospitalization or were fatal.

  Officers involved in OC use fared even better. They suffered no injury in nearly 89% of cases and only minor damage the rest of the time.

  The pepper spray involved was Sabre Red, with 10% oleoresin capsicum.

- **Batons, deployed in 5.5% of force-involved arrests, caused the greatest rate of higher-level injury.** Fewer than 39% of subjects receiving baton contact remained uninjured. More than 3% were hospitalized and nearly 26% required outpatient treatment, combining to be “most injurious,” according to the researchers. About 32% of batoned subjects sustained minor injuries requiring no treatment.

  Of officers involved in baton incidents, nearly 13% required outpatient treatment. Some 16% sustained minor injury and the rest were uninjured.

  In Calgary, the baton used is the Monadnock Autolock expandable with power safety tip.

- **Empty-hand controls, applied in 38.5% of the force events, also ranked high for more serious injuries.** For purposes of the study, physical controls included “nerve motor point striking and stunning techniques, grounding techniques such as arm-bar takedowns, and other balance displacement methods.”

  Nearly 14% of these subjects required outpatient medical care and about 4% had to be hospitalized. Almost 50% had minor injuries and about 33% remained uninjured.

  Among officers, 1% required hospitalization and 4.5% needed outpatient aid. The vast majority (77.8%) were uninjured and nearly 17% had minor injuries.

  Judging from these findings, the researchers conclude, agencies need to seek out alternatives to hands-on physical control tactics and the baton if they wish to reduce the frequency and seriousness of citizen and police officer injuries.
• The second safest force mode for suspects proved to be the lateral vascular neck restraint. Used in 3% of force-related arrests, the LVNR left more than half (52.9%) of offenders uninjured. About 41% sustained minor injuries and less than 6% required minor outpatient treatment. There were no hospitalizations and no fatalities.

Officers applying a LVNR remained uninjured more than 76% of the time and those who were hurt suffered only minor injuries.

• Conducted energy weapons also scored high in safety for both suspects and officers. The Taser X26, the CEW issued to Calgary officers, was the most frequently deployed of the 5 force options studied, being used against nearly half (48.2%) of resistant arrestees. About 1% ended up hospitalized, about 12% needed minor outpatient treatment and more than 42% had only minor injuries. Nearly 45% sustained no injuries and there were 0 fatalities.

Of officers using Tasers, about 83% were uninjured and about 13% sustained minor injuries. Only about 2% and 1% required outpatient medical attention or hospitalization respectively.

³The commonly held belief⁴ that CEWs carry a significant risk of injury or death is not supported by the data.⁶ Indeed, they are less injurious than either the baton or empty-hand physical control,⁶ which often would be alternative options where electronic weapons were not available.

In a 14-page report of their study, Butler and Hall point out that ³[N]o use of force technique available to police officers can be considered safe¹ ² in the dictionary sense that it is free from harm or secure from threat of danger. ³[E]very use of force encounter between the police and a citizen carries with it the possibility for injury for one or all of the participants, however unexpected that injury might be.²

The best that can be hoped for is an appropriate, proportional balance between ³the degree of risk of harm² and the ³resistance faced by police² that requires the use of force.

The public has been fed ³a large amount of incomplete or incorrect information and even intentional artifice² about some force options, the researchers charge. Their study, they say, may help eliminate the resulting confusion. Plus, knowing the level of injury likely to result from a given force method can aid trainers and administrators in developing sound policies and practices.²

³This study is a great snapshot about force and its associated injuries and is a valuable addition to the discussion of force issues in Canada and elsewhere,² says Dr. Bill Lewinski, executive director of the Force Science Research Center at Minnesota State University-Mankato.

³Hopefully, the researchers will now be encouraged to probe further into some of the issues they touched on, exploring in greater depth the decision-making that led officers to apply various types of force, the level of emotional and physical intensity generated by subjects receiving the force, the causes of injuries to both officers and subjects, and so on. There is still much to be learned in these areas.²

As part of their study, Hall and Butler compiled statistics on the broad overview of force encounters among Calgary officers, which closely mirror findings regarding U.S. law enforcement.

For instance:

• Out of more than 827,000 police-public interactions, the 562 instances which ended up involving use of force represented less than 1% (.07%) of the total. (Other studies have pegged that figure in the U.S. at 1.5%.)
• Arrests occurred in only 4.6% of police-public interactions, and 98.5% of the time the arrests were finessed without force.
• Roughly 88% of all subjects requiring force were under the influence of drugs and/or alcohol or some degree of emotional illness. Almost 94% of resistant offenders requiring force were male.
• The researchers found a notable pattern of relationship between the number of officers present and the frequency and nature of injuries sustained by both citizens and officers. Namely: [M]ore injuries occurred in circumstances where only one officer was present.

The researchers state bluntly that biased reporting of events has led the lay-public to have the impression that the police use of force is frequent when compared to the overall number of police and public interactions.

They mentioned also a bias that results in extensive media coverage of events where subjects have died after use of a CEW and a lack of publication of CEW uses without an adverse outcome.

Such skewed reporting prevents the public from forming an informed opinion about the actual risk presented by various force modalities, they stated.

The study's official jaw-breaking title is: Public-Police Interaction and Its Relation to Arrest and Use of Force by Police and Resulting Injuries to Subjects and Officers; a Description of Risk in One Major Canadian Urban City. It is expected to be posted online in mid- to late-August by the Canadian Police Research Center at www.cprc.org


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'Suicide by cop' foiled
Deputies disable distraught man with gun on roof of Marathon Twp. house

By KRSTAL JOHNS - Contributing writer
PUBLISHED: Wednesday, July 23, 2008

MARATHON TWP -- A distraught man attempted suicide by cop early Monday, but was instead saved by the very deputies by whom he wanted to be shot.

Sgt. Don Brady, Deputy Jeremy Howe and Deputy Theron Homer of the Lapeer County Sheriff's Department were dispatched to a Klam Road address just before 1 a.m. after the suicidal 25-year-old man's parents called 911. Their intoxicated son had been beating himself in the head with a flashlight, and when the deputies arrived, they weren't sure where he was.

The deputies checked the home but did not find the man until Howe noticed an open window that led to the roof. Brady and Howe crawled out onto the roof and eventually located the man crouched under some low-hanging branches.

The man told Brady he didn't want to talk to the deputies, and then Howe noticed the man had a gun, which he pointed at the deputies. The deputies then left the roof.

The man began yelling at the deputies, telling them to shoot him and refusing to drop the gun because he wanted them to shoot him. He kept pointing his gun at the deputies, who had taken cover behind some trees, taunting them to shoot him.

The man's father made his way onto the roof and spoke to his son for several minutes, finally convincing him to give up the gun. The father threw the gun to Brady, who checked it and found it unloaded.

The suicidal man went to the peak of the roof and sat down, hanging over the edge. He said he did not want to live, and was going to jump if the deputies would not shoot him. Brady began talking to the man, who requested a cigarette. Brady got the man a cigarette, took it to him on the roof, and began to talk to him. The man said he didn't like life, didn't like himself and wanted it all to be over. He became agitated again, saying he was going to jump off the roof. When he saw his mother below, he told her to go in the house because she didn't want to see what was going to happen.

After speaking to Brady for a while longer, the man went back up to the roof peak and hung over the edge. He asked Brady if he thought he could do a handstand up there, and Brady told him he didn't want to do that. The man came back to talk to Brady for a while longer.

In the end, there was a brief struggle on the roof between the deputies and the suicidal man. He was subdued with a Tazer (TASER), handcuffed and escorted off the roof.

The man was taken to Lapeer Regional Medical Center for evaluation, and the report will be forwarded to the Lapeer County Prosecutor's Office for review.

Lt. Gary Parks is proud of the way the deputies handled the extremely tense situation.

"Here's a case where our guys went out there... They could see that this guy wanted the police to shoot him, and our guys are trained in that scenario," he said. "It's just a good example of some really good police work our guys are doing out there on a day-to-day basis."

Parks said the deputies "showed good restraint and control."

"They saved this guy's life," he said.
Scottsdale, AZ – Pink is traditionally a frilly, rather girlish color. But there is a new pink in town, and it has an edge. Thanks to Scottsdale-based Taser International, ladies can pack some pink heat. The C2, the newest consumer model of the much-talked-about stun gun used by numerous law enforcement agencies in the U.S., now comes in the girliest of colors, as well as three other less feminine choices. Regardless of color, it'll still zap an attacker with 50,000 volts.

"Pink is the universal color for women," Kathy Hanrah an, Taser's president and CEO, said. "For me, it's a great solution for women."
The pink C2, which sells for $300 to $349, looks less like a gun and more like an electric shaver. It's lightweight, and its size allows it to slide into your evening clutch alongside your cell phone and iPod. As a bonus, you'll probably never need to recharge the battery - good for 50 uses - unless you're an international spy or merely much disliked.
The C2 isn't the first civilian model that Taser has produced. Hanrahan said there are already at least 120,000 consumer Tasers in the homes of qualified buyers, who are only able to activate their Tasers after they have been screened by a felony background check.
"It fills a void," Hanrahan said. "For pepper spray or mace to be effective you have to come in very close contact."
Not so with the rose-hued stun gun.
The C2 can hit an attacker up to 15 feet away. Once fired, two small probes connected to wires propel out of the gun and attach to the target. The wires transmit electrical pulses that ultimately affect the nervous system's sensory and motor functions.
And that gives the person holding the Taser 30 seconds to make a mad, screaming dash to safety.
"We don't want people who carry this product to stay around and see what happens next," Hanrahan said.
Billy Coleman and Mark Spencer, with the Phoenix Law Enforcement Association, said they think the pink Tasers are a great idea. Spencer, PLEA's president, said he considers the stun guns a step above pepper spray.
"I don't think it's a bad thing that civilians are able to protect themselves," he said. "I think it's a good thing."
Coleman said the Taser is a good compromise for personal protection.
"Short of a firearm, which most folks will not practice and be proficient with, this is a good, intermediate device that doesn't require the practice a firearm would," he said.
On a personal level, Hanrahan said she wants to offer more options for personal security. And she knows some groups oppose the device for fear they would be used against the very people they are designed to help.
"The reality is anything can be used against anyone," she said. "They don't have to take a life to protect their own."

By Lisa Nicita - The Arizona Republic / (602) 444-8546 or lisa.nicita@arizonarepublic.com
Electroshock Therapy

Taser International tries to soften its weapon's harsh image, with a civilian model designed just for her.

By Ashley R. Harris | NEWSWEEK
Dec 24, 2007 Issue

Every Saturday afternoon in Scottsdale, Ariz., women gather at Dana Shafman's house to watch demonstrations of her sleek new wares, which come in such enticing colors as "metallic pink" and "electric blue." It's like a Tupperware party … only not. Shafman is peddling Tasers. Hers look a lot different from those bulky blasters carried by cops: they resemble something you'd shave your legs with, and at five and a half inches in length, they're small enough to slip into a purse. But don't be fooled. These babies deliver the same 50,000 volts of muscle-paralyzing electroshock therapy.

Looking for the perfect Christmas gift for that special someone who wants to pack heat but doesn't want to mess with bullets? At $299 to $349, the C2 Personal Protection System may be the ticket. Taser International thinks its compact new device will be a Christmas hit with women like Shafman, who's loath to carry a gun but never felt safe enough with the knives or baseball bats she kept by her bed to ward off potential intruders. "We have customers who don't want to look like Dirty Harry," says Tom Smith, chairman and cofounder of Scottsdale-based Taser International, which owns the Taser brand name and is the biggest producer of the "electronic-control weapons." In ads on its Web site, the company features a C2-loving Santa, as well as a self-assured businesswoman on a Manhattan street and the tag line "I will control my own destiny."

Taser International has had trouble controlling its own destiny of late, thanks to a heap of negative publicity about its products. In September, a University of Florida student who disrupted a speech by Sen. John Kerry was caught on camera being subdued by Taser-wielding campus police as he shouted, "Don't Tase me, bro." (For the record, Taser International says "Tase" is not a verb.) In October, a Polish man at Vancouver airport died after he was shocked with a Taser by Royal Canadian Mounted Police. And last month a United Nations committee raised concerns that Taser use "constitut[ed] a form of torture."
calls the torture claim "absurd.") Since 2001, 290 people have died after being shocked with Tasers, according to Amnesty International. The company has been sued 102 times for product liability, with claims of wrongful death or injury, but hasn't lost a case yet (62 have been dismissed by the courts).

Can the C2, with its curvy lines and happy hues, soften the Taser's image? The company, which last year had $68 million in sales, mostly to police and military, says it's pleased with the C2's performance so far—6,900 sold in the third quarter after its July 23 release, with a backlog of 5,900. That's fast growth for a company whose prior consumer model, an intimidating-looking device only Rambo could love, sold just 125,000 units in 10 years. Customers "asked us, could we change the shape to make it less aggressive-looking?" says Smith, who cofounded the company in 1993 with his brother, Rick. "And we found that no matter what the tool is, it's not going to be any good if they are not comfortable using it."

Smith doesn't want people to get too comfortable using it, however (imagine the temptation to Tase that bro whose cell phone goes off in the theater). "We are really emphasizing that this is a serious device," Smith says. "But [incidents] can happen with any tool. So we need to make sure that people know they will be held accountable if they misuse it." The company does a criminal background check via Internet or telephone of all buyers before allowing them to activate the weapon (the right to bear this particular arm doesn't apply to residents of New York, Washington, D.C., Hawaii, Massachusetts, Michigan, New Jersey, Rhode Island or Wisconsin, because of various state and local laws). Each Taser C2 is filled with small pieces of confetti with serial numbers on them that fall out when it's fired so that the owner can be identified. Customers can get a free replacement Taser after they've fired it—but only after filing a police report. Many law-enforcement agencies seem to be taking a hands-off approach for the time being, saying that as long as Tasers are used legally, they have no objections to civilians having them.

For the time being, the C2 doesn't have any direct competition. Although there are other electroshock weapons, most are "stun guns" that require physical contact with a target. That differs from a Taser, which fires an electrified cable that attaches to the target, delivering the shock; the C2 can shoot 15 feet, and some of the police models can reach 30 feet. The only other company that makes a Taser-like device, Tampa, Fla.-based Stinger Systems, has considered introducing its own consumer model, but says it's concerned about the potential for negligence. "As much as Taser wants to sell to the consumer, these are not toys," says Robert Gruder, Stinger's CEO.

In other words, think twice before you stuff someone's stocking with a shiny new Taser. Or you could be in for a shock.

Source: http://www.newsweek.com/id/78151
After scrutiny over safety, Taser rebounds with profits, good outlook

10:00 PM PDT on Sunday, March 11, 2007

By CHRIS KAHN
The Associated Press

SCOTTSDALE, ARIZ. - Taser International Inc. co-founder Tom Smith has never understood the hostility directed at his company’s stun guns.

Taser's electroshock weapons were created to reduce injuries, Smith said. Police no longer need to hit people with billy clubs or shoot them with bone-cracking rubber bullets.

"I figured the people that were going to lead the parade for us would be Amnesty International and the ACLU," Smith said. "Instead they're our biggest detractors."

Human rights groups continue to warn that Tasers may cause heart attacks. But two years after its stock price plunged under the weight of intense government scrutiny, wrongful death lawsuits and a storm of negative press, Taser is back on the rise.

The sleek, battery-powered weapons are now strapped to officers' hips in more than 10,000 of 18,000 law enforcement agencies in the United States. Internationally, Taser sales have exploded, with products now sold in 44 countries.
Though its stock remains flat and well below its peak in 2004, analysts have big expectations this year. Taser has boosted profits each of the past four quarters as Smith aggressively defended his weapons in the media and the courtroom. Taser paid for research into the health risks of stun gun shocks, and, on occasion, has sued coroners who included Tasers as a possible cause of someone’s death.

Matthew McKay, an analyst with Jefferies & Co., predicts Taser will be Wall Street’s top performing stock in 2007. McKay expects Taser to record $105 million in sales this year and its stock to more than double in value as investors realize the company isn’t going away.

“You’ve got a company that a lot of people have written off,” McKay said.

In May, Taser will begin selling a smaller version of its police weapons to the public. Available in a variety of colors, including metallic pink, the Taser C2 can stop people from 15 feet away “allowing you to protect yourself and your family from a safe distance,” the brochure says.

Taser also plans to expand its product line to the military, a market with a potentially huge interest.

Smith said he envisions a day when U.S. Marines can shock insurgents from 100 feet away using a wireless Taser tucked into a shotgun shell. He sees national borders and embassies protected by a mine-like Taser device that shoots electrically charged darts at people who come too close.