

Body Armor

May 2018

The IACP Law Enforcement Policy Center creates four types of documents: Model Policies, Considerations Documents, Concepts & Issues Papers, and Need to Know one-page summaries. Typically, for each topic, either a Model Policy or a Considerations Document is created, supplemented with a Concepts & Issues Paper. This file contains the following documents:

- **Model Policy**: Provides police agencies with concrete guidance and directives by describing in sequential format the manner in which actions, tasks, and operations are to be performed.
- **Concepts & Issues Paper**: Designed to provide context and background information to support a Model Policy or Considerations Document for a deeper understanding of the topic.
- **Need to Know...**: Synthesizes the key points of the topic into a brief, one-page overview. This document is developed by Policy Center staff following the final approval of the policy and paper.

Model Policy

Updated: May 2018

Body Armor

I. PURPOSE

The purpose of this policy is to specify agency, leadership, and officer responsibilities related to body armor.

II. POLICY

It is the policy of this law enforcement agency to maximize officer safety through the use of body armor in combination with prescribed safety procedures. While body armor provides a significant level of protection, it is not a substitute for the observance of officer safety procedures.

III. DEFINITIONS

Body Armor: An item of personal protective equipment intended to protect the wearer from threats that may include ballistic threats,¹ stabbing, fragmentation, or blunt impact.² Body armor generally consists of two armor panel or plates, a front and a back, placed in a carrier.

Carrier: A garment whose primary purpose is to retain the armor panel(s) or plate(s) and to provide a means of supporting and securing the armor panel(s) or plate(s) to the wearer.³

Field Activities: Duty assignments and/or tasks that place or could reasonably be expected to place officers in situations where they would be required to act in enforcement rather than administrative or support roles.

IV. PROCEDURES

A. Selection of Body Armor Protection Level

The agency shall assess the ballistic threats of concern to officers, including their service weapons, and select an appropriate level of protection.⁴

¹ Ballistic threats refer to dangers from projectiles, such as bullets.

² ASTM E3005, *Standard Terminology for Body Armor* (West Conshohocken, PA: ASTM International, 2015), www.astm.org.

³ ASTM E3005, *Standard Terminology for Body Armor*.

⁴ U.S.-based readers, please refer to the current National Institute of Justice (NIJ) standard at www.policearmor.org.

B. Issuance and Replacement of Body Armor

1. Every officer shall be issued agency-approved body armor that complies with the appropriate protective and related requirements.⁵
2. The agency shall specify requirements for the carrier that is part of the agency-approved body armor.
3. Every officer shall be individually measured and fitted for body armor.⁶
4. Body armor that is damaged shall be replaced in accordance with established guidelines and protocols.⁷
5. Body armor that has reached the end of its warranty period should be replaced in accordance with established guidelines and protocols.

C. Use of Body Armor

1. Every officer shall perform a personal armor fit assessment upon receipt of body armor and shall report any issues to his or her supervisor and other designated agency individuals, as applicable.⁸
2. Officers shall wear only agency-approved body armor and shall wear both panels in an agency-approved carrier.
3. Recruit officers shall wear body armor during both classroom, range activities, and field training.
4. Officers assigned to a uniformed function and non-uniformed sworn officers shall wear body armor while engaged in field activities both on duty and during off-duty employment unless the officer is involved in undercover or plainclothes work that his or her supervisor determines could be compromised by wearing body armor.
5. Officers not engaged in field activities shall have their body armor available at the location of their principal assignment.

D. Inspection of Body Armor

1. Every officer shall routinely inspect personal body armor for signs of damage and for general cleanliness.
2. Annual inspections of body armor shall be conducted for fit, cleanliness, and signs of damage.
3. Each officer shall be responsible for reporting damage or excessive wear to the ballistic panels or carrier to his or her supervisor and the individual responsible for the uniform supply function.

E. Care and Maintenance of Body Armor

Officers are responsible for the proper storage, maintenance, cleaning, and care of body armor ballistic panels and carriers in accordance with manufacturer's instructions.

F. Supervision

Supervisors shall ensure that all officers comply with this policy, including ensuring that body armor is worn and maintained as required by this policy through routine observation and periodic documented inspections.

⁵ For example, see those requirements prescribed by the National Institute of Justice Body Armor Compliance Testing Program at <https://www.nij.gov/topics/technology/body-armor/Pages/testing.aspx>.

⁶ For an example of sample requirements, please see those specified in ASTM E3003, *Practice for Body Armor Wearer Measurement and Fitting of Armor*.

⁷ See www.policearmor.org for more information.

⁸ See ASTM E3003, *Practice for Body Armor Wearer Measurement and Fitting of Armor*.

G. Training

1. Each officer shall receive initial training on body armor.⁹
2. The training officer or other agency-designated individual shall be responsible for:
 - a. ensuring officers are properly trained on body armor fit and coverage, use, care, and maintenance; and
 - b. providing training programs that demonstrate body armor's stopping power under actual firing conditions and that emphasize its safe and proper use.
3. This individual shall also be responsible for:
 - a. monitoring technological advances in the body armor industry that may necessitate a change in body armor;
 - b. assessing weapons and ammunition currently in use and the suitability of approved body armor to protect against those threats; and
 - c. maintaining statistics on incidents where armor has or has not protected officers from harm, including motor vehicle crashes.

⁹ See www.policearmor.org for more information.

Every effort has been made by the IACP Law Enforcement Policy Center staff and advisory board to ensure that this document incorporates the most current information and contemporary professional judgment on this issue. However, law enforcement administrators should be cautioned that no model policy can meet all the needs of any given law enforcement agency. In addition, the formulation of specific agency policies must take into account local political and community perspectives and customs, prerogatives, and demands; often divergent law enforcement strategies and philosophies; and the impact of varied agency resource capabilities, among other factors. Readers outside of the United States should note that, while this document promotes procedures reflective of a democratic society, its legal basis follows United States Supreme Court rulings and other federal laws and statutes. Law enforcement administrators should be cautioned that each law enforcement agency operates in a unique environment of court rulings, state laws, local ordinances, regulations, judicial and administrative decisions, and collective bargaining agreements that must be considered and should therefore consult their agency's legal advisor before implementing any policy.

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Concepts & Issues Paper

Updated: May 2018

Body Armor

I. INTRODUCTION

A. Purpose of Document

This paper is designed to accompany the *Model Policy on Body Armor* established by the IACP Law Enforcement Policy Center. This paper provides essential background material and supporting documentation to provide greater understanding of the developmental philosophy and implementation requirements for the model policy. This material is intended to assist law enforcement executives in their efforts to tailor the model to the requirements and circumstances of their community and their law enforcement agencies.

This paper is limited to ballistic-resistant body armor intended to provide protection to an officer's torso, typically referred to as a ballistic vest.¹ Body armor intended to protect against stabbing or other threats is not addressed in this document.

B. Wearing Armor Saves Lives

Body armor is one of the most important pieces of safety equipment used by law enforcement officers. Between 2007 and 2016, the Federal Bureau of Investigation (FBI) reports that between 1,925 and 2,377 officers were assaulted with firearms annually.² Of the 509 officers feloniously killed during the same period, 470 were killed with firearms.³

Individual officers are ultimately responsible for wearing body armor. Even with a mandatory-use policy and adequate inspection controls, there is no guarantee that some officers will not temporarily remove their vests during periods when supervisory detection is unlikely and the perception of physical danger is low. The reasons for officers' resistance generally revolve around the issue of comfort.

Because ballistic-resistant vests do not breathe like regular clothing, body heat builds up and remains trapped between the wearer's body and the vest fabric. This causes varying degrees of discomfort depending upon weather conditions, the type of clothing worn, and the wearer's personal physiology. The weight of the armor adds to this

¹ The term ballistics refers to projectiles, such as bullets.

² FBI, Law Enforcement Officers Killed and Assaulted (LEOKA), 2016, table 75, <https://ucr.fbi.gov/leoka/2016/officers-assaulted/tables/table-75.xls>.

³ FBI, LEOKA, 2016, table 28, <https://ucr.fbi.gov/leoka/2016/officers-feloniously-killed/tables/table-28.xls>.

discomfort, as does the relative inflexibility or “stiffness” of some vests. Furthermore, the wearer usually experiences a noticeable decrease in ease of mobility, especially if the vest has not been custom fit. When all of these factors are weighed against the chances of being struck by gunfire on a given day, some officers choose to take the risk, in essence, trading safety for comfort.

Recognizing these concerns, law enforcement management should commit to supplying well-fitting, quality body armor to all officers engaged in enforcement functions. In addition, a mandatory-wear policy for all uniformed officers engaged in field activities is strongly suggested. The term “field activities” includes all assignments or duties in which an officer is or could reasonably be expected to be exposed to situations where he or she would be required to act in an enforcement capacity.

C. How Ballistic-Resistant Body Armor Works

Body armor intended for daily use is typically made of soft armor panels constructed of multiple layers of ballistic-resistant materials. The number of layers within the panel and the order in which these layers are placed influence its overall performance. Additional energy is absorbed by each successive layer of material.

A soft armor panel works much like a baseball catcher’s mitt. When a bullet strikes the panel, it is caught in a “web” of strong fibers. These fibers absorb and disperse the impact energy that is transmitted to the panel from the bullet. This process causes the bullet to deform or “mushroom.”

How well a panel absorbs and disperses the bullet’s energy is key to its ability to reduce blunt force injury to the body resulting from bullets that do not perforate the armor. As the fibers in a panel “catch” a bullet, they move in the direction the bullet was traveling, and the material is pushed into the body of the wearer, resulting in injury.

Soft body armor provides some protection from impacts other than gunfire, such as motor vehicle crashes, falls, and explosions. Soft body armor may also protect against improvised weapons, such as broken bottles, but it is usually not effective against stabs delivered by knives or other sharp objects.

Body armor intended for tactical operations and protecting against rifle fire is typically made up of hard armor plates constructed from ceramics, compressed laminate sheets, metallic plates, or composites that incorporate more than one material. Hard armor plates can either capture and deform or break up the bullet. In both instances, the armor then absorbs and distributes the force of the impact. Hard armor plates may be worn alone or over soft body armor.

Agencies may wish to consider encouraging or requiring officers to wear trauma plates or trauma packs. However, prior to purchasing these items, agencies should examine the limitations of this added level of protection; the additional cost, weight, and bulk of these items; and the fact that a specialized carrier with pockets to insert the plate/pack is necessary for appropriate wear. In particular, agencies must be aware that these items do not provide more ballistic protection; instead, they are intended to reduce the blunt force impact experienced by an officer who is shot.

II. ISSUES CONCERNING BODY ARMOR

A. Selecting Appropriate Protection

Selection of Body Armor Protection Level. When purchasing body armor, the threats that officers on routine patrol are likely to encounter must be identified. Protection against those threats should become an absolute requirement. A higher level of protection may be considered, but reasonable comfort should not be sacrificed.

In identifying an appropriate level of protection, agencies should begin with the officers’ own service weapons. FBI statistics indicate that an average of 5 percent of all officers feloniously killed by gunfire each year are killed with

their own firearm.⁴ An analysis of confiscated weapons and ammunition should be conducted. Consideration should be given to the circumstances involved in their seizures and the geographic locations from which they were seized. Incident reports should be reviewed to determine whether the weapons reported to have been used in assaults on officers differ significantly from those weapons recovered.

After analyzing the above factors, the most common level of threat that officers in a particular jurisdiction are likely to encounter during the course of normal duties should be determined. Greater threats may exist, but because additional protection usually involves additional discomfort, higher level protection should be reserved for specialized and unusually dangerous assignments, including narcotics raids, homeland security operations, barricade situations, and high-risk warrant service.

Once the appropriate threat level has been identified, steps should be taken to ensure that the armor eventually selected will defend against that threat.

Performance Standards and Certification. It is strongly recommended that agencies purchase and allow only the use of body armor that has been certified to a recognized performance standard that specifies minimum performance requirements and test methods for assessing whether requirements are met. The standard should not dictate how armor must be designed; rather, it prescribes what it must be able to do. This ensures that body armor meets officers' needs, yet the standard leaves manufacturers free to innovate.

In some countries, including the United States and the United Kingdom, government agencies administer law enforcement body armor programs and are responsible for establishing the minimum performance requirements for body armor, writing the standard, and certifying body armor. For example, the U.S. organization responsible for law enforcement body armor certification is the Department of Justice's National Institute of Justice (NIJ). There are two components to NIJ's program: the first is the performance standard, and the second is the accompanying Compliance Testing Program (CTP). For agencies operating in countries that do not have their own standards and certification programs, it is recommended that the NIJ program be used.

Agencies should refer to the current NIJ standard regarding ballistic resistance of body armor, to include protection levels and associated threats. The standard sets minimum performance requirements and prescribes test methods for determining if those requirements are met. For U.S. purchasers, it is strongly recommended that only armor compliant with the most current NIJ standard be purchased; armor compliant to previous versions of this standard should not be purchased. Body armor is tested to the NIJ body armor standard at approved, accredited test laboratories through the CTP.⁵

Selection of Carrier. Body armor panels are generally inserted into a garment referred to as a carrier, whose primary purpose is to both support and secure the panels to the wearer. Two types of carriers are available for daily-wear body armor: (1) concealable for wear under the uniform shirt, and (2) external for wear over the uniform shirt. Each agency should establish its own policy regarding the type of carrier required for use by its officers. Some agencies may seek a uniform appearance and therefore require all officers to utilize a single type of carrier. Others may allow officers to choose based on comfort or personal preference. However, agencies should confirm that the type of carrier is chosen in conjunction with the purchase of the body armor panels to ensure that they are compatible. Agencies should be aware that some manufacturers require that their brand of carriers be used, otherwise the body armor warranty is void.

⁴ FBI, LEOKA, 2016, table 19, <https://ucr.fbi.gov/leoka/2016/tables/table-19.xls>.

⁵ Body armor tested and found to meet the requirements of the current NIJ Standard is listed on the Ballistic-resistant Body Armor Compliant Product List (CPL) at https://www.justnet.org/other/ballistic_cpl.html.

B. Proper Fit, Coverage, and Comfort

Soft body armor is the most important protective equipment used by law enforcement, but a single bullet exploiting a gap in a poorly-fitting vest can have devastating results. FBI statistics show that, for the past 10 years, approximately 28 percent of officers killed while wearing body armor were killed by rounds hitting unprotected areas of the torso.⁶ While FBI data provide information only regarding the general area of the torso that was struck and do not indicate whether gaps in coverage were an issue, improved vest fit and coverage may reduce that number.

Body armor should ensure maximum coverage without hindering an officer's mobility or ability to perform required job functions. Although comfort is a subjective term, increased comfort through proper fit is an important objective, and armors that have been fitted by the supplier, working with agency representatives, will likely be the most comfortable.

There are three ways in which body armor creates discomfort: reduced mobility, increased weight, and heat build-up under the armor. Heat is the most frequently cited concern, especially during the summer months or in year-round tropical and semitropical areas. There are, however, a few things that can be done to relieve some of the discomfort.

Some suppliers offer products to facilitate evaporation of perspiration. Ribbed undershirts, sometimes known as "cool shirts," have also been designed specifically for armor wearers to allow some breathing space between the wearer's body and the armor. Undergarments that wick away perspiration are also good additions in efforts to reduce heat generated by soft body armor. Increasing comfort at the expense of coverage is dangerous and should be done only if the heat factor is so severe that without the coverage reduction, the armor most likely would not be worn at all.

With respect to weight, significant strides have been made. Many new ballistic fibers and vest manufacturers have entered the marketplace and contemporary fabrics are far lighter and less bulky. The reduction in bulk also allows the newer vests to feel less stiff.

Ensuring officers are properly measured for their body armor and having it fitted and adjusted to them individually are both necessary to obtain sufficient coverage of the torso and vital organs, while allowing full range of motion to perform duties.⁷ Wearing body armor is not the same as putting on a regular shirt, and some discomfort is inevitable. To further reduce the discomfort and to ensure that the armor is properly tailored and fitted, many suppliers will custom fit their vests to the specific body contours of individual officers.⁸ It is recommended that each officer perform a body armor fit assessment upon receipt of a new vest and when the officer's body shape or size changes.

C. Procurement of Body Armor

Budgetary and Funding Considerations. Finding sufficient funds necessary to purchase, upgrade, and replace body armor can be a difficult task; however, direct budget outlays are not the only means of providing for armor purchases. Several alternative sources of funding for body armor purchase exist. For instance, grant funding provided through both federal and state government or private-sector sources should be considered. An example of an available grant in the U.S. is the Office of Justice Programs' Bulletproof Vest Partnership (BVP), which provides up to 50 percent matching funds to state, local, and tribal governments to purchase ballistic vests for use by law enforcement and court officers.⁹

⁶ FBI, LEOKA, 2016, table 35, <https://ucr.fbi.gov/leoka/2016/tables/table-35.xls>.

⁷ See NIJ's ASTM E3003, Standard Practice for Wearer Measurement and Fitting of Body Armor, <http://www.astm.org>. This document gives detailed descriptions and instructions for necessary measurements, plus guidance on how to assess whether body armor fits.

⁸ Details on how armor should fit is provided in ASTM E3003.

⁹ Details on the program may be found on the Office of Justice Program webpage "Bulletproof Vest Partnership," <https://ojp.gov/bvpbasi>.

Alternative sources of funds include soliciting contributions from the community, either directly or by sponsoring fundraising events; by specifically earmarking proceeds from drug-related or other asset forfeitures; and by enlisting the aid of police benevolent associations and officers' unions.

Purchase Guidance. Obtaining objective information on body armor performance to base purchasing decisions on can be challenging. Suppliers will naturally tend to present their models in the best possible light, which makes comparison between competing models difficult. The NIJ Compliant Product List (CPL) provides the performance baseline for body armor by identifying models that have been tested and determined to comply with the standard, thus allowing comparison based on cost and other considerations.

Procurement documents for equipment should always ensure that the purchase specifications are clear and not ambiguous in any way. At the same time, over-specification should be avoided. An immediate determination as to whether a given company's model is certified for the required threat level should be made, and those that are not certified should be rejected. Production methods and materials, pricing, warranties, related equipment (such as carriers), and options with respect to custom fitting should also be considered. Samples of the models under consideration should be obtained, physically examined, and tried on by officers of varying sizes and shapes. If possible, arrangements should be made for the supplier to loan samples for trial use and examination by officers.

Bids should be solicited from suppliers who have demonstrated suitable models. The specification should be clearly written, requiring certification to a recognized standard, identifying the required threat level, and specifying the type(s) of carrier.

Once a decision has been made to purchase a particular model from a given supplier, the sales contract must be carefully considered.¹⁰ Cooperative purchasing programs should be considered because they allow agencies to share procurement contracts, saving significant time and money in contract production and resulting in lower contract prices through the power of aggregation. One such program available in the United States is the National Association of State Procurement Officials (NASPO) ValuePoint program, which offers the opportunity for agencies to take advantage of public cooperative contracting for the purchase of body armor. Multiple states participate in the development of the request for proposals, review and evaluate vendor proposals, and develop contracts and agreements.

Rather than the lowest price, agencies should consider best value purchasing. This will provide the agency the ability to buy from the supplier offering the armor that best meets its needs.

Warranty. Prior to making any purchasing decisions, the agency should carefully review the warranty information for the selected body armor. This crucial step will ensure that the agency is aware of any items that may affect liability or other legal considerations.

Information for U.S. Agencies. Agencies planning to purchase NIJ-compliant armor, should not accept statements, written in the bid or verbally made by a salesperson, that the model shown is "just like" or "identical to" a model from the NIJ CPL or "meets the NIJ Standard." Only armor that is listed on the current CPL is NIJ compliant. Armor that is not listed on the CPL does not qualify for funding through either the BVP or Edward Byrne Memorial Justice Assistance Grant (JAG) programs.

Agencies should request a copy of the compliance letter issued by the NIJ CTP to the supplier for that model. If the supplier or bidder cannot provide this letter, the agency should use a different supplier or choose a different model. Additionally, agencies should consider requesting test data from the supplier and information from the NIJ Compliance Test Reports. These reports provide information relating to the performance of the armor at the time of initial NIJ CTP testing.

¹⁰ Procurement guidance and sample contract language are provided by the NIJ in their Selection and Application Guide at <https://www.nij.gov/publications/Pages/publication-detail.aspx?ncjnumber=247281>.

III. POLICY CONSIDERATIONS

A. Mandatory-Wear Policy

Perhaps the most important question regarding the use of body armor is whether use should be mandatory or left to the discretion of the officer. Agencies should adopt a mandatory-wear policy for all uniformed and non-uniformed sworn officers engaged in field activities both on duty and during off-duty employment, unless the officer is involved in undercover or plainclothes work that his or her supervisor determines could be compromised by wearing body armor. Officers not engaged in field activities should have their body armor available at the location of their principal assignment. Recruit officers should also wear body armor during classroom, range activities, and field training to allow them the opportunity to become accustomed to wearing body armor.

The reason for a mandatory-wear policy is painfully clear: law enforcement officers are assaulted every day, and the benefits of wearing body armor are obvious. An NIJ article notes that the risk of sustaining a fatal injury for police officers who do not wear body armor is 14 times greater than for officers who do.¹¹ This is the result of officer saves not only from hostile encounters, but also from motor vehicle crashes, which are statistically more likely for officers than being shot. Additionally, many grant programs require that agencies receiving funding for purchasing body armor have mandatory-wear policies.

Voluntary-use policies may be implemented because of pressure from groups who regard the use of body armor to be a matter of personal choice and believe that officers should have the right to decline uncomfortable equipment. However, body armor should not be viewed as a freedom of choice issue, but rather as an occupational safety issue. Just as construction workers are not allowed to work without their hard hats and reinforced boots, officers should not be allowed to engage in potentially fatal activities without wearing their body armor. Management has a clear right to require officers to respect safety procedures and utilize agency-approved safety equipment.

Body armor is just as critical as the service weapon. Handguns are primarily issued to law enforcement officers for defensive purposes. The purpose of the handgun is to defend the officer and others if deadly force is encountered, and without it the officer is needlessly endangered. Similarly, body armor is intended to defend an officer from that same deadly force. It stands to reason, therefore, that agencies should require the full-time use of body armor just as they require officers to carry a firearm.

If a mandatory-wear policy is implemented, the agency must enforce that policy. Since failure to properly train officers or enforce regulations will open an agency to liability, training in body armor issues should be well documented. Routine inspections should occur to ensure that officers are complying. Moreover, supervisors must dispense appropriate discipline when violations are detected.

Another potential risk in the United States involves workers' compensation rights for officers. In some states, workers' compensation laws specify that employees are not covered or receive reduced coverage when injuries result from employee negligence or misconduct. If a mandatory armor-use policy is implemented, failure to wear armor might well be considered "misconduct," and benefits may be lost if an officer violates the policy and is subsequently injured. Law enforcement executives considering a mandatory-wear policy should check applicable state workers' compensation laws, as well as any insurance regulations that may apply to their agencies, prior to making a decision.

B. Issuance of Body Armor

Every officer should be issued agency-approved body armor that complies with the appropriate protective and related requirements as determined by the agency. The agency should require officers to wear only agency-approved

¹¹ Dan Tompkins, "Body Armor Safety Initiative: To Protect and Serve... Better," NIJ Journal, 254 (July 2006), https://www.nij.gov/journals/254/pages/body_armor.aspx.

body armor and should wear both front and back panels in an agency-approved carrier, with the strike face correctly oriented. The agency should specify requirements for the carrier that is part of the agency-approved body armor.

Every officer should be individually measured and fitted for body armor. Agencies should require officers to perform a personal armor fit assessment, upon receipt of body armor, and report any issues to supervision.¹²

When armor is issued, the issue date should be noted on the label with a permanent marking pen or stamp. This will facilitate determining whether a particular in-service armor is within its ballistic warranty period. It is also important that the agency maintain accurate property records for all armor in its inventory. At any time, an agency should be able to determine which armor was issued to a given officer, the issue date, supplier name, model designation, armor type, and production lot number.¹³ This information can also be used to track replacements and to plan purchases of new armor.

Proper records are invaluable if a production lot is found to be defective after issuance. If one body armor is found to be flawed, the agency should immediately inspect all armor from the same supplier and production lot.

C. Inspection, Replacement, and Disposal of Body Armor

Every officer should routinely inspect personal body armor for signs of damage and for general cleanliness. Inspection should include examining not only the ballistic panels, but also the carrier since wear-through of the carrier exposes the panel to potential damage. The armor panel label should be periodically inspected to ensure that it remains legible. When checking the label, the officer should note the issue date and compare it to the supplier's ballistic warranty, also found on the label. If the armor is damaged, shows sign of excessive wear to the ballistic panels or carrier, or has been in service beyond its declared warranty period, the officer should report this to his or her supervisor and the appropriate agency contact. In addition to regular inspections, annual inspections of body armor should be conducted for fit and signs of damage.

Body armor that is damaged or that has reached the end of its warranty period should be replaced as soon as possible. Serviceable armor should never be retired until replacement armor is available for immediate wear. An officer with no armor is at greater risk than an officer wearing older, worn, or damaged armor. Agencies may choose to require individual officers to pay for body armor that requires replacement due to misuse or abuse by the officer. Repair of damage to body armor panels should not be attempted under any circumstances; rather the agency should contact the supplier for guidance on how to proceed.

Armor that is shot, as well as the armor used in tests, must be permanently retired. Because body armor is very difficult to cut, will not burn, and cannot be incinerated, there are serious limitations on disposal methods. It is recommended that disposal of retired armor be carefully monitored to prevent the possibility of later use by criminals. Disposal in landfills is not recommended for this reason and the fact that ballistic material is not biodegradable.

Agencies are advised to contact the armor supplier to determine if they maintain a disposal facility for use by their clients. Also, agencies should consider using old body armor to provide ballistic resistance in areas that may need, but do not have such capability. For example, used body armor may be installed behind desks that are exposed to the general public, as part of partitions in officer work stations, or as added backstop material at firing ranges.

D. Care and Maintenance of Body Armor

Service Life of Armor. Every piece of armor must eventually be replaced for one or more of several potential reasons, such as change in officer weight and shape, change in ballistic threats, being shot or otherwise damaged, or

¹² See ASTM E3003, Standard Practice for Wearer Measurement and Fitting of Body Armor.

¹³ The NIJ CTP requires that body armor suppliers maintain records for tracking lot numbers, serial numbers, and purchasing agencies. The NIJ CTP also requires that body armor panel and plate labels include a blank line for the date of issue.

wear and tear of daily use. Body armor should not be considered a one-time purchase, and periodic replacement is to be expected.

Frequent inspections, to include checks by officers prior to each wear and regularly scheduled formal inspections, and proper care of body armor help maintain the integrity of the ballistic panels and the carrier. Officers should follow the supplier-recommended care instructions, making certain that anyone else who cares for their armor is also aware of these instructions. Officers are responsible for the proper storage, maintenance, cleaning, and care of body armor ballistic panels and carriers in accordance with supplier's instructions.

Cleaning and Storage. Improper cleaning can damage an armor panel or carrier, and damaged panels can cause the body armor to fail when struck by a projectile. Supplier instructions for cleaning the armor panels and carriers should be followed.¹⁴

Armor panels should not be dry-cleaned, machine washed, or machine-dried—either in the home or commercially—because detergents, dry-cleaning solvents, and laundry equipment can damage or degrade panels. Body armor should be stored as recommended by the supplier.¹⁵

E. What to Do if an Officer Is Shot

If an officer is shot—but saved by the vest, there will likely be severe bruises and damage to the internal structures of the body, such as muscles, bones, ligaments, organs, and blood vessels, and may later result in death. Therefore, all officers who are shot and subsequently saved by their body armor should receive prompt medical examinations. Additionally, it is suggested that these officers be routinely interviewed and counseled by a qualified mental health professional familiar with the treatment of post-traumatic stress.

IV. TRAINING

Agencies should ensure that officers receive initial, as well as periodic, training on body armor.¹⁶ An individual should be identified to assume the following responsibilities related to body armor:

- Ensure officers are properly trained on body armor protection levels, fit and coverage, use, care, and maintenance. Training should include the benefits of wearing body armor and what the armor does and does not protect against (e.g., ballistic-resistant body armor might not be effective against a knife or other sharp instrument).
- Provide training programs that demonstrate body armor's stopping power under actual firing conditions and that emphasize its safe and proper use.

In addition, this individual should

- monitor technological advances in the body armor industry that may necessitate a change in body armor;
- assess weapons and ammunition currently in use and the suitability of approved body armor to protect against those threats; and
- maintain statistics on incidents where armor has or has not protected officers from harm, including motor vehicle crashes.

¹⁴ In the absence of supplier instructions, NIJ provides general industry procedures for cleaning armor panels and carriers.

¹⁵ In the absence of supplier instructions, NIJ provides general guidance for proper storage.

¹⁶ NIJ provides instructional body armor videos that may be used for initial training or periodic reminders at <https://www.youtube.com/playlist?list=PLVz4yB8NoLXu-PmZhkJ0ipIHh2QaJIPwo>. NIJ also provides information on body armor, including downloadable brochures, measurement sheets, personal armor fit assessment worksheet, and more at <https://policearmor.org/basics/index.html>.

V. AWARDS AND RECOGNITION

Agencies should consider the use of awards and recognition to encourage officers to wear body armor. Many agencies recognize officers for professional performance through the issuance of citations and uniform ribbons, and some agencies include injury citations among those awards. These agencies may also want to consider a “survivor’s” citation or ribbon for officers saved through use of their body armor.

The IACP-DuPont Kevlar Survivors’ Club is a partnership that supports and enhances the IACP’s officer safety and wellness efforts with the following three-fold mission: to reduce death and disability by encouraging increased wearing of body armor; to recognize and honor those deserving individuals who, as a result of wearing body armor, have survived a life-threatening or life-disabling incident; and to serve the law enforcement community by collecting this important data and sharing valuable information relating to these survivor incidents.

For more information or to honor an officer who has survived a life-threatening or life-disabling incident, please go to <http://www.theiacp.org/IACP-DuPONT-KEVLARSURVIVORS-CLUB>.

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Need To Know...

Updated: May 2018

Body Armor

Body armor is one of, if not the most, important pieces of safety equipment used by law enforcement officers. Agencies can maximize the protection provided to officers by their body armor through proper selection, fit, and care, coupled with routine inspection.

- Soft body armor works much like a baseball catcher's mitt. When a bullet strikes the panel, it is caught in a "web" of strong fibers. These fibers **absorb and disperse** the impact energy that is transmitted to the panel from the bullet.
- When selecting body armor, agencies should consider the **ballistic threats** faced by their officers. This may include an analysis of confiscated weapons, as well as the officers' service weapons.
- Only body armor that has undergone **rigorous testing** and that meets **established standards** should be considered for purchase. Agencies in countries without body armor standards and testing programs should refer to those provided by the United States Office of Justice Programs National Institute of Justice (NIJ).
- **Every officer** should be issued body armor that has been approved by the agency to meet the previously determined protective requirements.
- Body armor is not one-size-fits-all. Every officer should be **individually measured and fitted** to ensure maximum protection and comfort.
- Body armor should be **inspected** by the officer prior to wear. Any damage or signs of wear should be reported to the appropriate agency personnel.
- Agencies should adopt a **mandatory-wear policy** for body armor. Officers should be required to wear body armor any time they are engaged in field activities, whether on or off duty. Very limited exceptions may be made by a supervisor for officers who are involved with undercover or plainclothes work that could be compromised by wearing body armor.
- Officers are responsible for and should follow **manufacturer recommendations** for the proper storage, maintenance, cleaning, and daily care of their body armor.
- Body armor should be **replaced** when it has reached the end of its warranty period, has been shot, is damaged, shows signs of excessive wear, or if the officer has changed in size or shape.



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