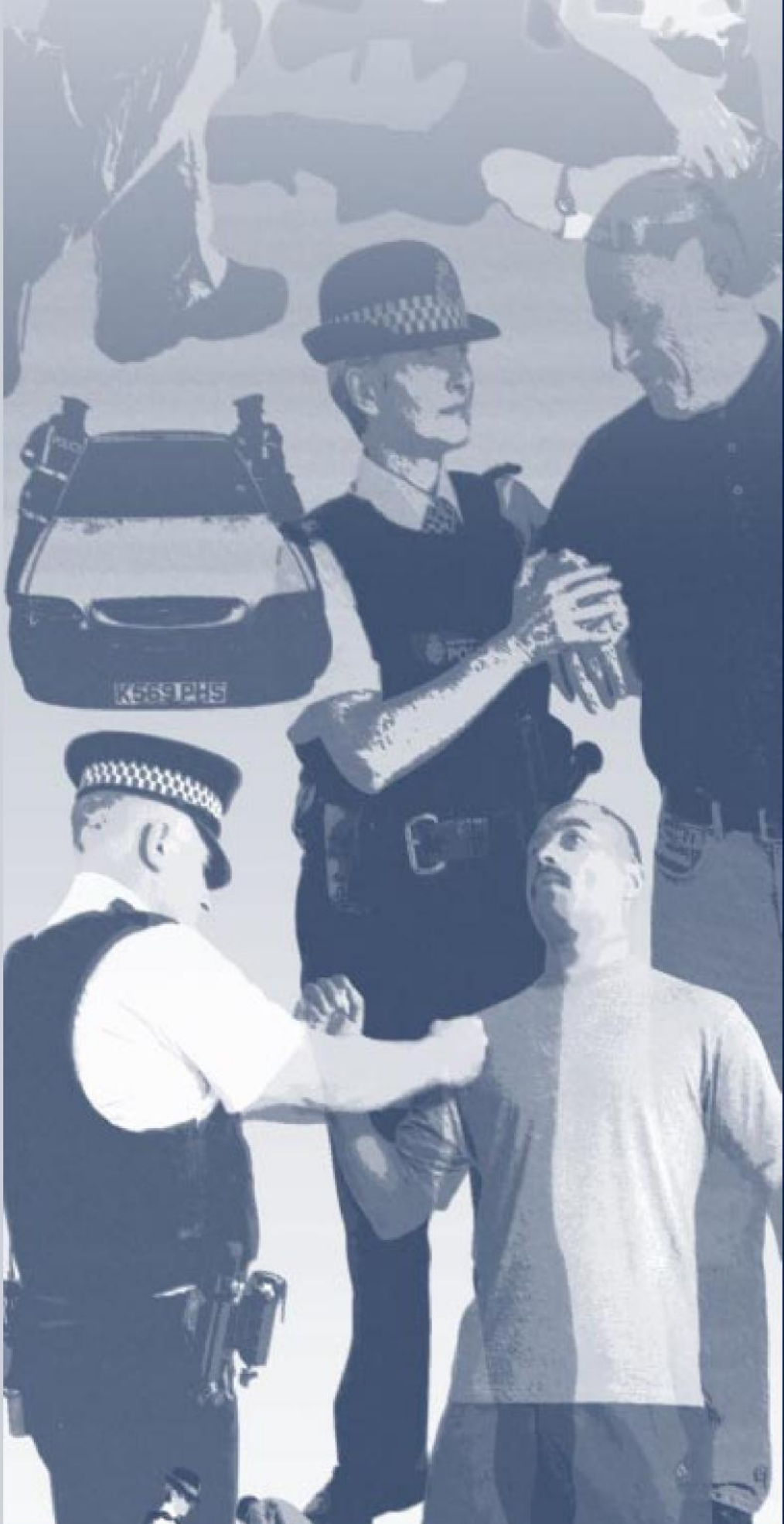


Incapacitant skills



Personal Safety



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INCAPACITANT SKILLS

The aim of this module therefore is to:

- ◆ understand the technical use for using an incapacitant spray
- ◆ understand the potential effects of Incapacitant on a subject
- ◆ understand the after care protocols for subjects and officers who have been sprayed
- ◆ link with other modules contained within this manual.

Introduction

On 1 March 1996, police trials of hand-held sprays began in 16 forces throughout England and Wales. Filled with the chemical 'CS', the sprays were designed to incapacitate violent subjects who could not be restrained without risk to the officer.

On 9th November 2004 the Home Office agreed to support the use of PAVA (Synthetic pepper) as an incapacitant spray.

General Information

CS is a white crystalline solid, **not a gas**, which melts at 94-95°C and boils at 310-315°C. Its chemical name is **2-chlorobenzylidene malononitrile**, but it is commonly called CS from the initials of Corson and Stoughton who were the first people to synthesise it in 1928.

CS itself is not flammable, but some of the solvents, which are used in CS sprays, are flammable. Officers should be aware that CS spray should not be used where there are naked flames (though exceptions may occur).

PAVA contains Nonivamide (Pelargonic Acid Vanillylamide) this is a synthetic equivalent of capsaicin, the active ingredient in natural pepper sprays. Nonivamide has been used for a number of years in pharmaceuticals such as pain relieving balms, and as a flavouring additive in foodstuffs available in the UK and Europe

Incapacitant sprays should generally be used at distances of between one and three and a half metres (three to ten feet) from the subject. At distances closer than one metre (three feet), there is a possibility that the stream of Incapacitant solution could cause damage to the eye; however, circumstances may dictate such use and may need to be justified. At distances greater than three and a half metres (ten feet), accuracy may be lost and the spray may be less effective, particularly in windy weather conditions.

CS may not affect animals such as dogs in the same way as it does people, however, PAVA may be effective on aggressive dogs.

NOTE:

The canister is designed to deliver a specific amount (eg six one-second bursts); however, this may vary. The contents of the canister are therefore very limited. Obviously, this has particular implications for officer safety.

Once the officer has sprayed a subject, they should attempt to move to a more advantageous position, if possible outside the subject's conventional fighting arc. The officer may then appraise the situation and formulate an appropriate response.

How is the spray delivered?

Incapacitants are delivered from a pressurised container.

The design of the canister and degree of pressure affect the amount of agent discharged and the range and degree of coverage. Effective ranges vary with manufactured products.

- ◆ The stream type spray was chosen for its accuracy over greater distances, as this greatly reduces cross-contamination.
- ◆ A cone spray is available which is designed to engulf the subject's face. This type of spray is more suitable during air movement, and cross winds.

Where possible, officers should attempt to **spray downwind**. Spraying upwind may cause a blowback, which could affect officers and innocent members of the public (cross-contamination). It is advisable to shake the canister at the start of each tour of duty and if possible prior to each use.

CS should be aimed directly towards the subject's face, whilst the target area for PAVA is the subject's eyes.



In still air

Officers may attempt to use short bursts; however, exceptions may occur under stress (see General Muscle Tightening - Personal Management Module). If necessary, a short burst may be repeated if the first application was unsuccessful, but this may need to be justified. If the desired effect is not achieved, then officers should consider an appropriate perceived response.

In moving air

A continuous burst may be used in moving air conditions or where the officer is faced with multiple subjects.

Is the spray effective?

The use of an incapacitant spray **should not** be viewed as having the ability to solve all problems and it **will not** be effective in all cases. It may even make certain subjects more aggressive.

Even the production of a spray may not always have the desired effect, and failures of Incapacitants are evident when:

- the canister fails to function
- the subject has a mental disorder
- the subject is under the influence of drink and/or of drugs
- the subject has a positive and determined state of mind
- the subject closes the officer down, thereby preventing the use of the spray.

Officers must not rely on incapacitant spray to the exclusion of other control methods.

When do you use the spray?

The issue of incapacitant spray has widened the range of response options available to police officers, and should not be seen merely as a replacement for other use of force options (see Conflict Management Module).

Physiological effect

A burst of CS into the face will usually affect the eyes, the respiratory system and the skin.

The effect may be virtually instantaneous, delayed, or there may be no effect at all. For this reason, officers must not rely on CS as their only option, but must be prepared to consider other appropriate response options. CS will equally affect those who wear spectacles or contact lenses.

What happens when a subject is sprayed with CS?

When a subject is exposed to CS, the effects are: pain and discomfort in the eyes which may cause excessive watering; involuntary spasm of the eyelids, leading to blinking or closure of the eyes; burning sensation; excess salivation; burning and constriction of the chest; sneezing, coughing, retching; and a stinging or burning sensation on exposed skin.

The extent of these symptoms will depend on the amount of CS, the delivery system and the range it is used at, and may vary between different subjects.

Other common reactions

Due to the potential shock effect of being sprayed with CS, the following common reactions may be also recognised:

- The subject's upper torso may bend forward
- The subject may suffer from impaired hearing, and may not hear the officer



After-effects

Lasting side effects or lasting effects may or may not occur, dependent upon the subject.

spray should not be used to facilitate an easy arrest, or as a threat, as the mere drawing of the spray may need to be justified as a use of force.

General exposure - what it feels like to be sprayed

It is essential that officers are aware of the physiological and psychological effects of CS. Within the training programme, an opportunity may be offered for officers to experience a general exposure to the spray. This should only be carried out under controlled conditions, and in line with individual force policy.

What aftercare is required?

Once an officer has used the spray, and the subject they used it on is controlled, they should follow these procedures.

- Give reassurance that the effect of the spray is temporary.
- Instruct the subject to breathe normally. This will aid recovery and prevent hyperventilation (abnormally deep or rapid breathing caused by anxiety).
- Remove the subject to an uncontaminated area where they can be exposed to fresh air, if possible. This will permit the CS particles to blow off the body. Exposure to fresh air will normally result in recovery from significant symptoms in approximately 15 minutes.
- Advise the subject not to rub their eyes or face as this may worsen their condition. If reactions persist beyond 15 minutes, the use of copious amounts of cool tap water may be used to flush remaining CS from the face.
- Attempting to irrigate the eyes at an earlier stage, when they are being forced closed by the effect of the spray, would be futile.
Under no circumstances should warm water be used. In related incidents subjects, and in some cases officers, who have undergone general exposure training have been affected by taking a warm shower afterwards.
- The use of so-called CS 'antidote' or 'neutralising agents' has been examined, and in some cases the use of these can prove harmful and they should not be used.
- If reactions to CS are thought to be adverse, immediate medical assistance should be



NOTE:

On no account should a CS spray be directed into the face of an officer!

obtained. It is essential that the subject's breathing is monitored. **If the subject is having difficulty resuming normal breathing, the provision of medical assistance must be given precedence over conveying the subject to the police station** (see Medical Implications Module).

- Ensure that the control methods

used and the position the subject is placed into does not adversely affect their breathing. Subjects must not be left in or transported in a prone (face down) position. The subject should be carefully monitored throughout the policing process, until the effect of CS has worn off. This is particularly important in monitoring the recovery of subjects who are obese, or are known to be under the influence of drink and/or drugs. It is also important to pay particular attention to subjects on whom the spray appears to be ineffective and those exhibiting bizarre and/or violent behaviour, or those experiencing breathing difficulties.

- Inform the control room at an early stage after the use of an incapacitant spray. This may permit arrangements to be made for medical examination of subjects who have been sprayed. Subjects who have been sprayed should be examined by a police surgeon on arrival at the police station. If officers suffer contamination, they should similarly be examined by a police surgeon.
It will be a matter for individual force policy whether subjects are routinely examined by the police surgeon, or at the discretion of the custody officer.
- The officer should ask the subject if they wear contact lenses, as they may experience greater discomfort. They should be permitted to remove their lenses at the earliest opportunity. On no account should a police officer attempt to remove

contact lenses from a subject. During the removal of contact lenses by a subject, police officers must ensure that the subject is in a safe location or position to prevent an attack upon the officer, or escape by the subject.

- Contact lenses should only be removed by the subject wearing them, or a medical practitioner. Exposure to incapacitant sprays, in common with other substances, may cause damage to certain types of lenses, and subjects who experience problems with their lenses after normal cleaning should consult an optician.
- If the subject requests it or if the symptoms persist, additional medical attention should be provided. This may include the recall of a medical practitioner, or the conveyance of the subject to hospital, dependent upon individual force policy.
- Close monitoring of the subject throughout the recovery period is of the utmost importance. If the subject is detained in a cell they should be given constant cell supervision, as provided to subjects who have consumed alcohol and/or drugs. If there are any signs of adverse or unusual reactions then medical attention should be provided **as soon as possible!**
- Until a full recovery has been made from the effects of the spray, the subject should be supervised in accordance with the guidelines for subjects under the influence of drinks and drugs.



NOTE:

Irrigation of the eyes should be undertaken by a police surgeon only, or other specified trained medical personnel.

- **If reactions persist beyond 15 minutes from the time of spraying, then refer the subject to the medical officer. If the medical officer is likely to be unduly delayed, the provision of other medical assistance should be considered. Do not attempt to irrigate the subject's eyes.**

When is an area clear?

Ventilation may remove the effects of spray in a room within a short period of time. **However, this will depend on many factors, such as the size of room, ventilation system, air conditioning etc.** To speed up decontamination, windows and doors should be left open during this period. Where a spray has been used within a building, officers should advise the owners in respect of decontamination procedures.

Physiological effect of PAVA

When a subject is exposed to PAVA in most cases, the affect will be any or all of three areas:-

- The eyes
- The respiratory system (if inhaled)
- The skin

A spray into the eyes will cause dilation of the capillaries and instant closing of the eyes. Effects can range from severe twitching or spasmodic contraction of the eyelids to involuntary closing of the eyes, an eye shut reflex. The subject will feel a burning sensation; (this is not actual burning) the chemical is causing the body sensors to respond in a similar way. People wearing contact lenses

or glasses will be equally affected if the spray contacts the eyes in any way. If the spray is inhaled it produces immediate respiratory inflammation, which in turn produces uncontrollable coughing as a protective measure, and sometimes shortness of breath. The inflammation of mucous membranes produces difficulty in breathing through the nose. PAVA has been medically tested to its full dose on both healthy and asthmatic subjects with no adverse effects. The face will feel very hot, as will the inside of the nose and mouth if they have been in contact with the spray. The subject's lips and eyelids may become slightly swollen. Depending on the individual's complexion, skin colour may range from slight discoloration to bright red. Normal skin colour should return within 30-45 minutes of spraying, however this may vary from person to person.

The effects may be instantaneous or delayed from anything up to 5 minutes. The extent of these symptoms will depend on the amount of PAVA sprayed, the delivery system and the range it is used at, and may vary between different subjects.

Other common reactions

As well as causing the aforementioned effects, the following sympathetic symptoms may also occur, including:-

- Hands move to face
- Legs become weak - may drop to knees/ Involuntary leg tremors
- Upper body Bends forward
- Whole body shakes
- Impaired Hearing - auditory exclusion
- Impaired Thinking - cognitive dissonance
- Muscles tense
- Rocking from foot to foot (balance)
- Panic attacks due to the pain and all that can go with them such as a belief that they cannot breathe etc.

Subjects can find the experience of being exposed to PAVA very painful. This can lead to high stress, anxiety, panic or aggression. This combined with the experience of being temporarily blind for a longer period of time than they have ever experienced before, can lead to disorientation and a slight feeling of nausea.

What aftercare is required?

- Immediately after spraying the subject should be advised to allow their eyes to remain closed for as long as necessary, and not to rub their eyes or face as this will only aggravate the effects. The immediate application of water or saline to the effected area increases the burning sensation.
- Standing the subject facing cool moving air such as from a fan or a breeze is most soothing.
- Experience has shown that the earlier a subject forces themselves to open their eyes and natural, unimpeded tearing takes place, the quicker their recovery.

- If effective tearing takes place, recovery from the significant symptoms of exposure i.e. eyes opening, should take place within 20 minutes. Trying to open the eyes is very uncomfortable but increases visual recovery rapidly. If discomfort to the eyes and face persists beyond this period ideally, cool, running water should be used to flush the remaining spray from the eyes and face.
- Experience has shown that flushing with water is soothing but this does sometimes prolong the recovery time of the subject. However, as the eyes will recover of their own accord in around 20 - 35 minutes after initial exposure, it may not be possible or necessary to provide irrigation immediately after exposure.
- Exposed subjects should be allowed to bathe their face and eyes if they so wish. Under no circumstances should warm water be used.
- The subject's breathing should be monitored. If the subject has difficulty in breathing then medical attention should be sought, and must be given precedence over conveying to the police station.
- Ensure that the control methods used and the position the subject is placed in does not adversely affect their breathing. Subjects must not be left in or transported in a prone (face down) position. The subject should be carefully monitored throughout the policing process, until the effect of PAVA has worn off. This is particularly important in monitoring the recovery of subjects who are obese, or are known to be under the influence of drink and or drugs. It is important to pay particular attention to subjects on whom the spray appears to be ineffective and those exhibiting bizarre and or violent behaviour, or those experiencing breathing difficulties.
- Subjects who have been sprayed should be asked if they wear contact lenses. People wearing contact lenses may experience greater discomfort. They should be allowed to remove their lenses at the earliest opportunity. Exposure to PAVA, in common with other substances, may cause damage to certain types of lens and individuals who experience problems with their lenses after normal cleaning should consult an optician. Only the subject or a medical practitioner should remove contact lenses. Exposure to incapacitant sprays may cause damage to certain types of lenses, and subject who

experience problems after normal cleaning should consult an optician

- PAVA may saturate the subject's hair or clothes, simple washing or showering with copious amounts soap and water will remove all residues.
- Throughout the treatment it is helpful to reassure the subject that they will recover.
- Until a full recovery has been made from the effects of the spray, the subject should be supervised in accordance with the guidelines for subjects under the influence of drink and drugs.
- There is always a chance that a person could have a hypersensitive reaction to Nonivamide. Although such reactions are extremely rare they include symptoms such as swelling of the face and localized skin reactions - tingling, rashes, pain or blistering. If any of these symptoms occur medical attention should be sought as soon as possible.

How do you report the incident?

Each force may issue its own policy on reporting use of force. Officers should refer to their own force's policy (see Use of Force Reporting and Writing Module).

Storage and administration

Incapacitant sprays are classified as firearms by Section 5(i)(b) of the Firearms Act 1968.

A system of administration should be in place for the issue and replacement of incapacitant sprays. There should be an accounting system that provides an 'audit trail' for canisters held centrally and issued to officers.

In storing an incapacitant spray the following legislation must be complied with:

- Health and Safety at Work Act 1974.
- Management of the Health and Safety at Work Regulation 1992.
- Control of Substances Hazardous to Health Regulations 1989.

The manufacturers' guidelines for storage of canisters should also be complied with. The area used for storage must be clearly marked in accordance with current legislation. This may include the display of appropriate hazard codes. Containers and packaging of Incapacitants products should also be properly marked.

Containers should be stored in dry, well-ventilated areas. They should not be exposed to direct light or be placed near any open flame.

Smoking should be prohibited in areas where Incapacitants is stored. CS must be stored in an upright position in order to prevent the formation of crystals on the dip tube (the tube which feeds liquid to the dispenser).

The advice of the Health and Safety Executive and Fire Prevention Officer should be obtained in relation to areas deemed suitable for storage. The use of protective clothing and respirators may be required in dealing with spillage or seepage of spray products.

Any 'inert' canisters used for training should be clearly marked so that they can be easily identified. They should be stored in an area which is clearly marked and reserved for such canisters. It is considered good practice to ensure that operational canisters are stored separately from inert training canisters, in order to avoid confusion and possible accidental use.

Because incapacitant sprays are classified under firearm legislation, arrangements must be made for their disposal in a manner which prevents unauthorised access and does not contravene health and safety procedures.

Risk assessment

Each force will need to complete its own 'risk assessment' in relation to the storage and operational use of the spray.

Handouts that officers need to be aware of

- Information sheet for custody officers.
- Information sheet for subjects sprayed with Incapacitants.

The following information sheets are examples of those available as a guideline to forces. Other sheets specific to other manufactured products must be provided in the future if other products are being used.

Information sheet for custody officers for dealing with subjects who have been exposed to CS

On arrival at the custody suite, process the subject, but first:

- Check the physical condition of the subject
- If the subject has not recovered from the effects of CS after 15 minutes from the time of spraying, arrange for them to wash (under supervision) with copious amounts of cold water. **The subject should not wash their eyes.**
- Arrange for the subject to be examined by the police surgeon, if necessary.
- Place any clothing that has been in contact with the CS spray in a sealed bag (see individual force policy).
- Upon returning the clothing the subject should be advised to have the items washed prior to use.
- Segregate the subject from other subjects.
- Provide subjects with enhanced cell supervision as for subjects who are under the influence or drink and/or drugs.
- If the symptoms persist the subject should be removed to hospital.
- Prior to releasing the subject they should be handed a leaflet informing them of the spray which has been used, and the action they should take if they suffer any additional problems.

Information sheet for subjects sprayed with CS incapacitant

- You have been sprayed with approximately a 5% solution of CS in the solvent methyl isobutyl ketone (MIBK), with a nitrogen propellant. This may have the following effects.
- **CS**
This may cause discomfort to your eyes and a burning sensation to your skin. You may also have difficulty in breathing and tightness of the chest accompanied by coughing.

Exposure to fresh air will normally result in recovery from most symptoms within 15 minutes. If the symptoms persist you should consult your doctor. Take this sheet with you.

CS may cause damage to certain types of contact lens. If you have problems with your lenses, you should consult an optician. Take this sheet with you.
- **MIBK**
This may cause your skin to go red after time and you may have flaking or blistering of the skin, which could continue for up to a week. If this happens you should consult your doctor. Take this sheet with you.

Information sheet for custody officers dealing with subjects who have been exposed to PAVA.

- Ascertain that the spray has actually been used.
- Check the condition of the prisoner.
- If the prisoner has not recovered from the immediate effects, arrange for the prisoner to wash (under supervision) with copious amounts of **Running, cold water**. Irrigation of the eyes **WILL** only be undertaken by the prisoner themselves or other suitably trained personnel.
- Arrange for examination by a Medical Practitioner if in your opinion the subject is in distress or the subject requests it.
- The subject should be segregated from other prisoners.
- If the breath test procedure is to be used, ensure that a minimum of 30 Minutes has expired since being sprayed.
- As a safeguard, ensure that any directly contaminated clothing is kept away from any breath measuring instruments and that the subject has been given the opportunity to wash their face / hands before submitting to the procedure.
- The prisoner should be subjected to enhanced cell supervision as for prisoners who are under the influence of alcohol or drugs.
- Prior to release the prisoner should be handed a leaflet informing them of the spray which has been used and action to be taken if they suffer any further problems.

Information sheet for subjects sprayed with PAVA

- You have been sprayed with:
NONIVAMIDE - (PAVA) at a concentration of 0.3% in a 50 / 50 solvent of Ethanol and Water with a Nitrogen propellant. This may have the following effects:
- This will cause discomfort to the eyes and a burning sensation to the skin. If you have swallowed any you should not experience any internal discomfort at all although your mouth will feel as though you have eaten very spicy food such as curry.
- Most symptoms will subside of their own accord within 35 minutes of being exposed. It may cause your skin to go red and feel hot and remain so for up to 1 hour, when normal colour will start to return. This is normal as Nonivamide stimulates blood circulation giving similar effects to the use of muscle pain relief cream.
- If the symptoms continue, then washing / bathing the face and eyes in cool, clean running water should bring rapid relief. If PAVA has got into the eyebrows, hair or beard it is possible that it could re-activate the first time that it comes into contact with water. For example; taking a shower the next day. The effect will not be as strong and can be avoided by keeping the eyes tightly closed and washing and rinsing the area thoroughly.
- If symptoms persist you should consult your doctor. Take this sheet with you.
- PAVA may cause damage to certain types of contact lens. If you have problems with your lenses, you should consult an optician. Take this sheet with you.
- Ethanol and Water mix: This is a 50 \ 50 mixture. There should be no other reactions to your skin as a result of this solvent. If you are concerned for any reason you should consult your doctor. Take this sheet with you.

Proper grip

While it is possible to spray with either the index finger or thumb on the activator button, it is recommended that the thumb is used.

This method tends to be more accurate and it can be used from a suitable position between waist and eye level.

The canister should be firmly held with four fingers and the thumb on the activator button.

Officers should always try to use their strong hand to spray, although there may be occasions where circumstances dictate otherwise. Therefore, officers are encouraged to train with both hands for familiarity.



Drawing techniques

There are three drawing techniques:

- **strong side draw**
- **cross draw** - by reaching across the body with the strong hand (**the wearing of body armour may inhibit this draw**)
- **assisted draw** - where the officer carries the canister on their weak side, they may draw it with their weak hand to use or transfer it to their strong hand, ensuring that such a changeover is carried out close to their body.

Carrying positions

There are three carrying positions:

- **Low carry** - held behind the officer's strong leg.
- **Mid carry** - held in close to the front of the officer's body, protected by the officer's weak hand.
- **Covert carry** - held under the officer's weak armpit.

- **Incapacitant spray retention** (see Equipment Retention - Personal Management Module)
- **Holsters**
These may vary according to force policy and budgets (see Belt Management - Personal Management Module).
- Officers should insert the canister into the holster, ensuring that the nozzle faces away from the officer (forwards or towards the weak side) in preparation for spraying.
- The holster should be placed on the officer's strong or weak side according to personal preference, not beyond the reach of officer's arms, for example around their back where it is possible for another to take it from the officer.
- While wearing body armour the spray should be positioned on the strong side only, due to potential difficulty when drawing the spray spontaneously.
- It is advisable to carry the spray in a suitable holster whenever possible. Carriage in a pocket should only be used with a suitable and secure covert holster.

♦ Mid carry -

Covert carry -

Spraying positions

There are two spraying positions depending on the officer's operating range.

♦ Long range position -



♦ Close range position -



Spraying techniques

♦ Verbal warning - communication skills - [REDACTED]

[REDACTED]

♦ Vertical spraying - [REDACTED]

[REDACTED]

♦ Horizontal spraying - [REDACTED]

[REDACTED]

♦ 'Z' spraying - [REDACTED]

[REDACTED]



NOTE:

[REDACTED]

6 o'clock and 360-degree spraying

[REDACTED]



NOTE:

[REDACTED]

Spray and move

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]:

- [REDACTED]
- [REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
[REDACTED]

Elevated spraying contamination

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

COMPETENCES

- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]

Misdirection, contact, movement/disengagement and drawing skills

[REDACTED]
[REDACTED]:

- [REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

COMPETENCES

- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
- [REDACTED]

Incapacitant groundwork

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]



IMPORTANT.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

Canister malfunction or emptying

[REDACTED]

Multiple officer engagement

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

COMPETENCES

- [REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]

Retention of Incapacitant canister

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

COMPETENCES

- [REDACTED]
[REDACTED]
- [REDACTED]

COMPETENCES

- [REDACTED]
[REDACTED]
- [REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]

Multiple officer protection

[REDACTED]

FIREARMS AND MUNITIONS WITHIN CONFINES OF A PRISON

Incapacitants

[REDACTED]

[REDACTED]

[REDACTED]

Further reading

- ◆ The Truth of CS. Dispatches. Channel 4
- ◆ ACPO/Centrex Personal Safety Programme
- ◆ CODA training services consultancy notes
- ◆ A review of preparatory work for the PAVA operational pilot in Sussex
- ◆ Comparison of OC, CS and PAVA Toxicological and Operational Aspects. Restricted draft document.



**Association of Chief Police Officers of England,
Wales & Northern Ireland**

Incapacitant Sprays

Notes for Guidance on Police Use

1. Introduction

- 1.1 This guidance was written on behalf of the Association of Chief Police Officers (ACPO) by the Conflict Management Portfolio Working Group on Self-Defence, Arrest and Restraint. Its purpose is to support and inform decision-making in relation to the deployment and use of incapacitant sprays.

2. Status

- 2.1 As its title suggests, this document exist only for the guidance of chief constables and those police officers that may be required to use incapacitant spray.
- 2.2 The nature of policing is so diverse that it will never be possible to document guidance to cover every encounter or eventuality; what is important is that any action taken is lawful. Action must be proportionate to the competing rights of individuals and any force used should be no more than absolutely necessary in the circumstances. In this regard individual officers must be prepared to account for their decisions and to show that they were justified in doing what they did and that they acted reasonably within the scope of the law on the use of force. Similarly, chief officers will need to be in a position to justify any decision or action in order to avoid or defend civil claims.

3. CS Incapacitant Spray - Description of Equipment

- 3.1 Irritant is dispensed from a hand held aerosol canister in a liquid stream that contains a 5% solution of CS in the solvent Methyl Isobutyl Ketone (MIBK). The propellant is nitrogen.
- 3.2 A 5% solution has been selected because this is the minimum concentration which will fulfil the purpose of the equipment; namely to minimise a person's capacity for resistance without unnecessarily prolonging their discomfort.
- 3.3 The liquid stream is directional and has a range of up to 4 metres. Maximum accuracy, however, will be achieved over a distance of 1.25 - 2 metres. The operating distance is the distance between the canister and the subject's eyes not the distance between the officer and the subject.

4. Effects of CS

- 4.1 CS is a peripheral sensory irritant. In most cases spraying will result in the subject's eyes being forced shut, a burning sensation on the skin around the eyes and face, when inhaled, their breathing may be affected. In most cases this action will be sufficient to render a subject incapable of continuing an attack. The effects may be instantaneous or can be delayed for up to 20 seconds. It should, however, be remembered that no incapacitant is universally effective and there may be individuals on whom an incapacitant may not be effective at all or only partially so.
- 4.2 Exposure to fresh moving air will normally result in a significant recovery from the effects of CS within 15 - 20 minutes.

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5. PAVA Incapacitant Spray - Description of Equipment

- 5.1 Irritant is dispensed from a hand held canister in a liquid stream that contains a 0.3% solution of PAVA (Pelargonic Acid Vanillylamide) in a solvent of aqueous ethanol. The propellant is nitrogen.
- 5.2 A 0.3% solution has been selected because this is the minimum concentration which will fulfil the purpose of the equipment; namely to minimise a person's capacity for resistance without unnecessarily prolonging their discomfort. It should be noted that PAVA is significantly more potent than CS.
- 5.3 The liquid stream is a spray pattern and has a maximum effective range of up to 4 metres. Maximum accuracy, however, will be achieved over a distance of 1.25 - 2 metres. The operating distance is the distance between the canister and the subject's eyes not the distance between the officer and the subject.

6. Effects of PAVA

- 6.1 PAVA primarily affects the eyes causing closure and severe pain. The pain to the eyes is reported to be greater than that caused by CS. The effectiveness rate is very high once PAVA gets into the eyes. However, there have been occasions where PAVA has failed to work, especially when the subject is under the influence of alcohol. It should be remembered, however, that no incapacitant is universally effective and there may be individuals on whom an incapacitant may not be effective at all or only partially so.
- 6.2 For PAVA to work effectively it must enter the eyes. The effects of PAVA are usually instantaneous if this happens. Exposure to fresh moving air will normally result in a significant recovery from the effects of PAVA within 15 - 20 minutes.

7. Issue / Possession

7.1 General

- 7.1.1 Individual chief constables will wish to establish policy and guidelines on the extent and appropriateness of issue and carriage by officers under their command. The sprays should, however, only be issued to those officers who have successfully completed an approved training course.
- 7.1.2 Incapacitant sprays should not be regarded as a replacement for other routinely issued protective equipment but rather one of a number of tactical options. An officer may need to resort to the use of another item of equipment if the incapacitant is used but does not have the effect intended.

7.2 Possession off duty

- 7.2.1 Aerosol incapacitants are classified as 'prohibited weapons' by virtue of Sec. 5 Firearms Act 1968. Police officers, whilst acting in their capacity as such, are exempt from the requirements of the legislation and do not need any additional authority to possess them. Officers can therefore have lawful possession of the spray whilst off duty provided that this is necessary for the purposes of police duty. Chief officers may wish to consider the need for such possession in their own force area and introduce a system for authorising the same and for ensuring the safe custody of devices stored temporarily away from police premises.



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7.3 Possession in HM Prisons

7.3.1 Incapacitant spray should not be taken into HM Prisons during routine visits. Arrangements exist at establishments for the secure depositing of canisters prior to entry. However, such arrangements must be in accordance with an appropriate assessment of risk.

7.3.2 Where police officers are deployed operationally inside prisons the decision as to whether incapacitant spray should be carried will be made by the officer in overall command of the police operation.

7.4 Possession outside force area

7.4.1 A protocol (copy attached at Appendix A) exists which accepts that on those occasions when the carriage of incapacitant spray outside an officer's own force area is necessary, individual chief officers will remain vicariously liable in civil law for their own officers' actions. Guidance for the use of the spray, whether within or outside the force area is set out at Para. 8 below.

7.5 Possession at public order events

7.5.1 Chief officers may wish to consider policies relating to possession of incapacitant spray at pre-planned public order events. It should be noted that there are no group tactical options for its use at such events and therefore use will be at the discretion of individual officers in accordance with the overriding principle of reasonableness and necessity.

7.5.2 Such action on the part of an officer may have a profound impact on crowd dynamics with obvious implications for public safety and public order. The spraying of incapacitants in these circumstances may, particularly in the case of CS, lead to cross contamination causing panic or even hysteria. Similarly, the use of incapacitant spray, again primarily CS although PAVA in a more limited way, in crowded public areas may cause significant cross contamination and another use of force option may be more appropriate. The decision to use incapacitant spray against a person in these circumstances must be capable of subsequent justification and the closest scrutiny.

8. Use

8.1 Use of the spray is one of a number of tactical options available to an officer who is faced with violence or the threat of violence. Its use must be lawful in all the circumstances. The decision to use the spray is an individual one for which the officer will be accountable. The impact factors referred to in the 'Conflict Management Model' may assist officers in making such judgements.

8.2 The spray should not be used at a distance of less than 1 metre unless the nature of the risk to the officer is such that this cannot be avoided. In such cases, officers must be prepared to justify not only their use of the spray but also their decision to use it at a distance which may cause damage to eyes due to the discharge pressure of the liquid.

8.3 Since the spray may only cause temporary incapacitation, its use against a subject armed with a firearm may not be appropriate. Where a subject actually has hold of a firearm the effects of the spray may cause them to fire indiscriminately. However, if the firearm is merely close to hand the spray may be useful in preventing subjects actually arming themselves. Because of the extreme dangers, use in such circumstances should be carefully considered.



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- 8.4 Because of the effects of the spray the decision to use it on a person in charge or control of a motor vehicle must also be careful considered.
- 8.5 Occasions will arise where it is necessary to use incapacitant spray on persons whose violent behaviour is due to a mental disorder or illness. In such cases, where it is practicable, advice should be sought from mental health professionals present at the scene. In pre-planned joint activities such discussions could form part of the briefing and risk assessment for the event. Consultation with friends, relatives etc. who are likely to know the person well may also assist in deciding on the most appropriate use of force response. The final decision to use the spray in these circumstances will rest with the officer concerned. Chief officers are encouraged to consider local protocols with health authorities /social services in this respect.

9. Training

- 9.1 The aims and objectives of training in the use of incapacitant spray are contained in ACPO's Personal Safety Programme.
- 9.2 Tactical training in the use of the spray should emphasise precautions in relation to self / cross contamination and the use of appropriate restraint techniques after spraying.
- 9.3 Chief officers should ensure that all officers are familiar with the dangers associated with the conditions known as positional asphyxia and acute behavioural disorder.
- 9.4 It is important that officers have an appreciation of the physical and psychological effects of incapacitant sprays. This may assist if they are inadvertently exposed to, or cross-contaminated by, an incapacitant spray during a confrontation. Forces may consider familiarising officers with its effects through 'general exposure' as part of their training. This aspect should at all times be carried out in accordance with the general exposure training guidelines, which are included in the Personal Safety Programme. Officers who, due to a known medical condition, are concerned about being exposed to incapacitant spray should be advised to consult their force medical or occupational health officer before being exposed.

10. Aftercare

- 10.1 After spraying and once the subject has been properly restrained it is important that the officer provides verbal reassurance as to the temporary effects of incapacitant spray and instructs the subject to breathe normally. This will aid recovery and lessen the risk of hyperventilation.
- 10.2 The person sprayed should be removed to an uncontaminated area where they can be exposed to cool fresh air. This will assist their recovery. Although they should not be forced to open their eyes, they should be advised to do so as soon as they are able. This will allow their tears to flush the incapacitant from the eyes. They should be told not to rub their eyes or face, as this will only increase the effects of the spray. Exposure to fresh air will normally result in a significant recovery from the effects of the incapacitants within 15 - 20 minutes.



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- 10.3 If reactions do persist beyond this period then copious amounts of cool tap water should be used to flush remaining incapacitant from the face. Under no circumstances should warm water be used. The affected individual, a Forensic Physician or other medical personnel should only undertake irrigation of the eyes. The use of so called incapacitant 'antidote' or 'neutralising' agents has been examined and they are not considered appropriate, in some cases their use may prove harmful.
- 10.4 Close monitoring of a subject throughout the recovery period is of utmost importance. If the individual has been restrained either by hand or through the use of handcuffs or other restraint devices then particular attention should be given to monitoring their breathing. If the individual experiences difficulties in resuming normal breathing then medical assistance must be sought immediately and must be given precedence over conveying the subject to the police station.
- 10.5 If the individual is detained in a cell they should be subject to the same cell supervision provided for individuals who have consumed alcohol or drugs. If there are any signs of adverse or unusual reactions then medical attention should be sought immediately. It is essential that the subject's breathing continue to be closely monitored.
- 10.6 Generally, individuals who have been sprayed with incapacitants need not be routinely examined by a medical staff. Such examinations will be at the discretion of the custody officer who will act in accordance with the PACE Codes of Practice relating to medical treatment of detained persons.
- 10.7 On release from custody any person who has been sprayed with incapacitant should be given an information leaflet similar in wording to that agreed by ACPO. They should also be advised to seek medical attention if they experience any further related medical problems.
- 10.8 Persons who are sprayed and who are wearing contact lenses may experience greater discomfort. They should be permitted to remove their lenses at the earliest opportunity. On no account should a police officer attempt to remove contact lenses from another person. The individual, an optician or a medical practitioner should only do this. Exposure to incapacitants, in common with other substances, may cause damage to certain types of lens and individuals who experience problems with their lenses after normal cleaning should consult an optician.
- 10.9 Ventilation will usually remove the effects of CS in a room within 45 minutes. To enhance decontamination, windows and doors should be left open during this period. Where CS aerosols have been used within a building, officers should advise the owners in respect of decontamination procedures. They should be provided with an explanatory leaflet, the wording of which has been approved by ACPO, and advised that if the effects have not dissipated within one hour, they should seek further advice from the police. Although primarily applicable to CS the same process would apply to PAVA if necessary.



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11. Storage and administration

11.1 Individual chief constables will wish to establish policy and systems for the safe storage and administration of incapacitant sprays. Such systems should provide an audit trail to enable the identification and location of devices. Ideally, a device that has been used operationally should be removed from circulation and, where appropriate, marked as an exhibit and stored in accordance with manufacturers' instructions.

11.2 In storing an incapacitant the following legislation must be complied with:

- ◆ Health and Safety at Work Act 1974
- ◆ Control of Substances Hazardous to Health Regulations 1989
- ◆ Management of the Health and Safety at Work Regulations 1992

11.3 In addition, the manufacturer's guidelines for storage of canisters should be complied with and areas for storage should be clearly marked. This may include the display of appropriate HAZMAT codes.

11.4 The advice of the Health and Safety Executive and local Fire Prevention Officer can be obtained in relation to areas suitable for storage. The use of protective clothing and respirators may be required in dealing with spillage or seepage of incapacitants.

11.5 Individual forces should undertake appropriate risk and COSHH assessments in relation to all aspects of incapacitant sprays.



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Appendix A

Incapacitant Spray Cross Border Protocols

1. All forces have equipped officers with an incapacitant, CS or PAVA.
2. On borders of forces, it is not uncommon for patrols to cross boundaries when operationally necessary.
3. With the likelihood of mutual aid between forces a cross border protocol is required in the deployment of incapacitant sprays.
4. It is clear that chief constables have a duty of care to their officers regardless of whether they are operating within their own force boundaries or in other force areas.
5. In order to get a unified approach to this issue, the following draft protocol is agreed:

"It is agreed that the chief constable of a constabulary has a duty of care to his/her officers, regardless of whether they are operating within their own or OTHER force areas. It is agreed, therefore, that forces will ALLOW the carriage and operational use of incapacitant spray, as per national guidelines in line with the Conflict Management Model"

ACPO Conflict Management Portfolio

Self Defence, Arrest & Restraint Working Group

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