

Aerosol Subject  
Restraint Course

Student Manual



# Aerosol Subject Restraint Course

## Student Manual



STATE OF NEW YORK  
Division of Criminal Justice Services  
Office of Public Safety

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## **Foreword**

For years, Police Officers have been carrying chemical sprays as a tool to use when conditions of a specific incident warranted the use of less than lethal force. After many law enforcement agencies began carrying chemical agents in the late 1960's, they discovered that it is not always effective on people under the influence of drugs or alcohol, those who were enraged, demented, or other persons having a reduced sensitivity to chemical agents.

The use of Oleoresin Capsicum (OC) is considered to be the same level of force as chemical agent's CN and CS. However, OC spray in tests and in field applications has been shown to be up to 95% effective. It may not work on people who are under the influence of drugs or alcohol, on those who are enraged, or other persons having a reduced sensitivity to Chemical Agents. In addition, it is effective against animals.

## **Preface**

This manual contains 7 hours of materials dealing with chemical agents specifically oleoresin capsicum and is divided into three sections. The course is a combination of class room lectures and hands on practical experience. We suggest that the course administrator recruit instructors who have a sound knowledge of the subject matter. An experienced instructor can really enhance the course through practical experiences gained in the field.

As always, your job as an instructor is to ensure that the student learns in the most effective way possible. The techniques we suggest, or others you might use, must give the student the opportunity to practice the knowledge gained in a non-threatening environment. Mistakes should be made in the workshop, rather than in real-life situations. It is your responsibility to ensure that the learning experience is as realistic as possible.

For instructors and students who desire additional information, they should research books, films, magazines and other relevant materials about the topic. Should you need assistance, the staff at the Office of Public Safety Police stands ready to assist you.

## ACKNOWLEDGMENTS

A project such as curriculum development is extremely time consuming and requires much research and knowledge of many varied areas of concentration. As well, it must be organized in such a way as to offer the most beneficial instruction within a limited time frame and presented in a logical manner.

This could not have been accomplished without the cooperation and efforts of the following recognized professionals who added to this training guide.

Our thanks to the following individuals who assisted in this project:

Peter Tarley, Use of Force Coordinator  
Rockland County Police Academy

Richard T. Germain, Captain  
Oswego City Police Department

John Lima, Sergeant  
Ulster County Sheriff's Department

Andrew Smith, Sergeant  
Chemung County Sheriff's Department

Kevin Williams, Police Officer  
Albany City Police Department

Patrick Clark, Senior Training Technician with the Office of Public Safety, was the coordinator of this project. These individuals have provided a great service to the law enforcement community of the State of New York.

## Instructional Objectives

**Upon completion of this training each student will,  
without reference to notes:**

- ① Articulate under what circumstances an officer may use OC spray.
- ② Articulate where in the use of force continuum OC spray may be used.
- ③ Articulate the actions of an officer if sprayed with OC spray.
- ④ List the five (5) groups of people that may have severe reaction to OC spray.
- ⑤ Articulate the specific target areas on a person that are to be sprayed with OC spray.
- ⑥ List the decontamination procedures for persons and areas.

## History of Chemical Agents

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*2000 BC* - Chinese warriors rolled black pepper up into a tube of rice paper and blow it into their opponent's face.

*1920's* - Chemical agents first used by a police agency to quell riots in Paris.

*1930-* Scientists began developing an inflammatory made from hot peppers.

## History of Chemical Agents

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- 1968** - Berkeley, Ca. Police discovered that chemical agents *do not always work* on people under the influence of drugs.
- 1970** - Aerosol spray of hot pepper is marketed and fails.
- 1978** - **OC** is marketed under the brand name: "**Cap-Stun**".
- 1989** - FBI study of OC spray finds there are no long or short term health risks associated with use.

**OC** (Oleoresin Capsicum)

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***Defined:***

**Oleoresin:**

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**Capsicum:**

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## **OC** (Oleoresin Capsicum)

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### **Characteristics:**

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**OC** (Oleoresin Capsicum)

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**Effects:**

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## Legal Issues

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**My departments Use of Force Policy as it pertains to OC spray:**

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## Effects of OC Spray

1. Subjects **eyes close** within \_\_\_\_\_
2. \_\_\_\_\_ will start to feel very hot.
3. \_\_\_\_\_  
\_\_\_\_\_, triggers **cough reflex**.
4. \_\_\_\_\_, the more effective the spray due to skin pore dilation.

## Exposure to OC Spray

### **Accidental or Deliberate**

If the officer is sprayed with **OC** by an *assailant*  
or *another officer*:

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## **Types of Delivery Systems**

### **Cone Shaped Mist Spray Patterns -**

- filled with microscopic droplets
- covers a wide area
- easily inhaled
- optimum for indoor use
- minimum spray distance -

## Stream Spray Patterns-

- greater range in delivery system
- requires greater accuracy
- hits subject with a or \_\_\_\_\_  
effect (dependant upon distance)
- effective from as far as \_\_\_\_\_
- *target at an individual* in a crowd
- minimum spray distance - \_\_\_\_\_

## Foam Patterns -

- fast acting foam that coats the face and obstructs vision
- hits with greater impact
- better surface adhesion
- virtual no cross contamination
- *ideal for* \_\_\_\_\_
- minimum spray distance \_\_\_\_\_

## Fogger Spray Patterns -

- full cone spray dispersal system designed to *distribute large amounts of OC*
- extended ranges with multiple blasts up to \_\_\_\_\_
- *excellent* for \_\_\_\_\_
- **extreme caution** when using in small room as it can displace oxygen supply
- minimum spray distance \_\_\_\_\_

## Canister Sizes

**1 oz.** > 8 - 10 bursts maximum distance  
(*detective use*)

**1 to less than 3 oz.** > 14 - 16 bursts  
maximum distance  
(*patrol use*)

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**3 oz.** or more > 35 - 40 bursts maximum distance  
(*detention facilities & large crowds*)

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## **Potential for Injury**

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Five categories of individuals who have shown a potential for injury when sprayed with OC, are:

(1)

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(2)

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(3)

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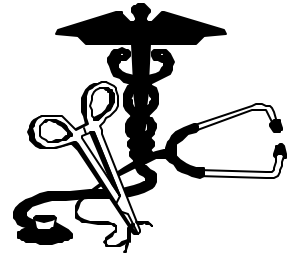
(4)

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(5)

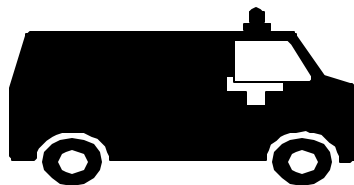
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## Medical Concerns

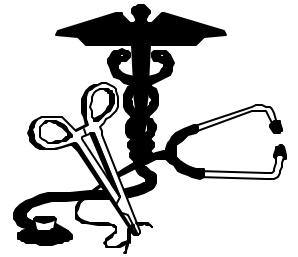


The cited medical complications *must be known* to the officer.

Any questions concerning the subjects reaction to OC, he / she **should** be transported to a medical facility for treatment.



## Other Medical Concerns



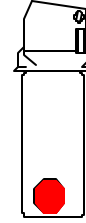
### Hydraulic Needle -

- Spraying at close proximity, in the eye there is a possibility of injury to the eye.
- This is caused by the stream directly striking eye tissue and injuring it.

# Canister Operation

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Effective ranges depends on *type* and

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*General Rule:*

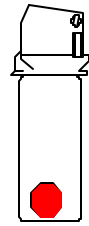
**Minimum of** \_\_\_\_\_

**Maximum of approximately** \_\_\_\_\_

## **Canister Operation -** *Target Areas*

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Because OC sprays are agents, they are:\_\_\_\_\_

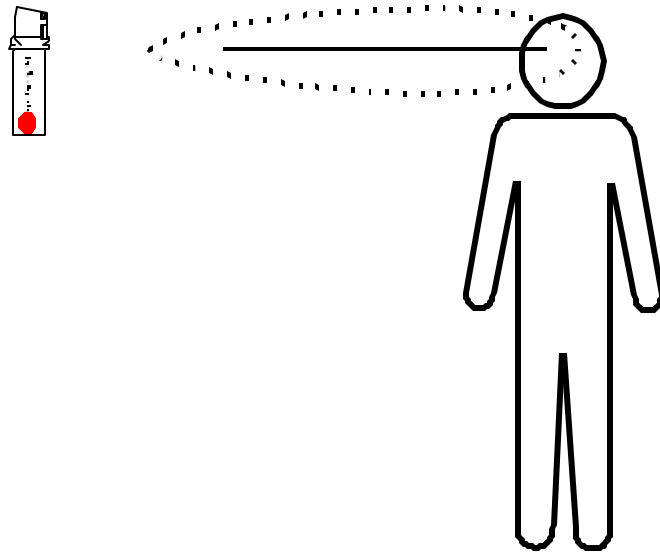
OC must be applied to the,\_\_\_\_  
in particular the\_\_\_\_\_

A \_\_\_\_\_ **burst to the face** is usually sufficient.

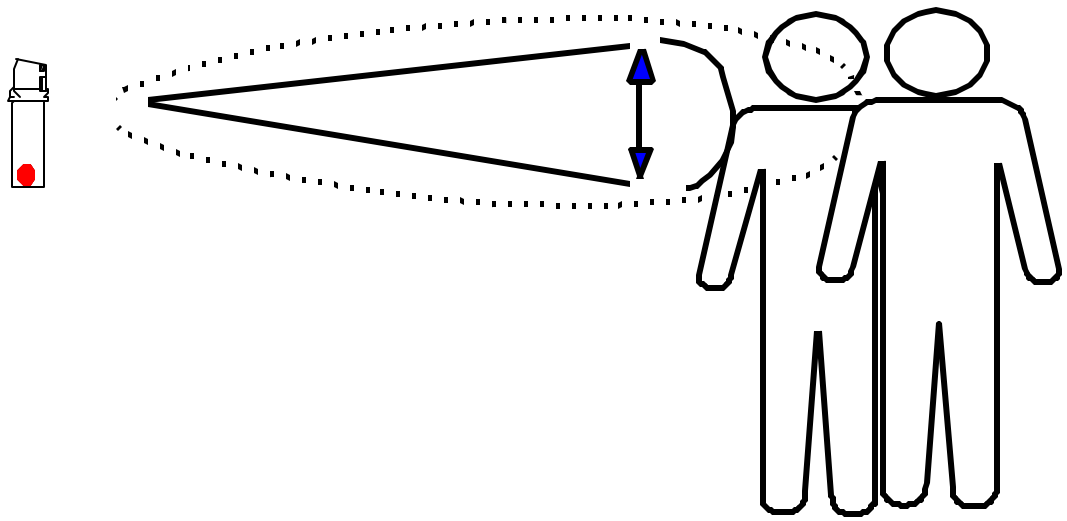
OC must strike the\_\_\_\_\_to be effective.

Subjects *can* effectively cover up.

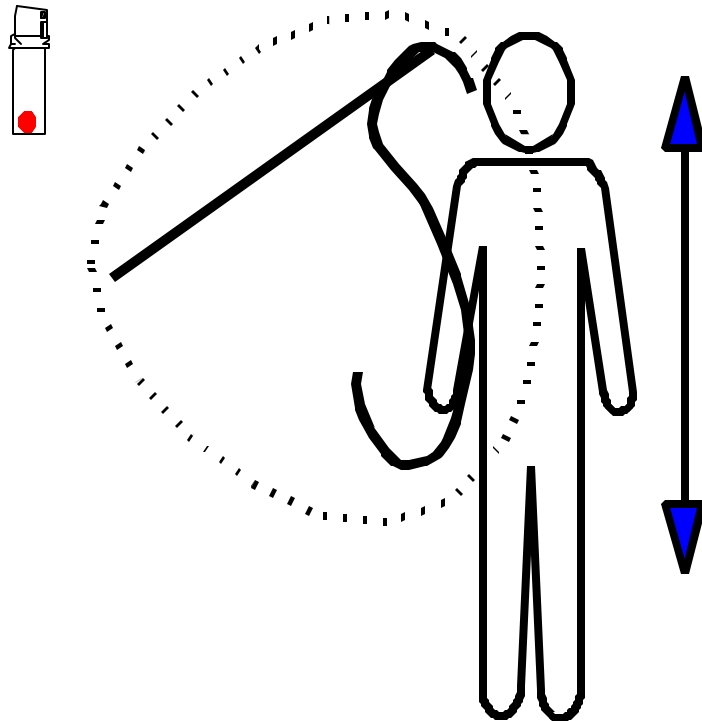
# Direct Spray Pattern



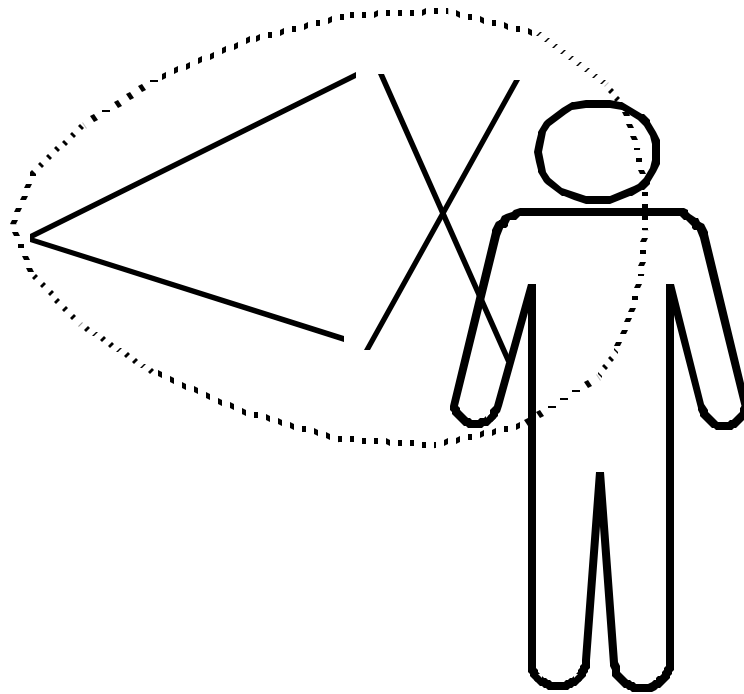
# Horizontal Spray



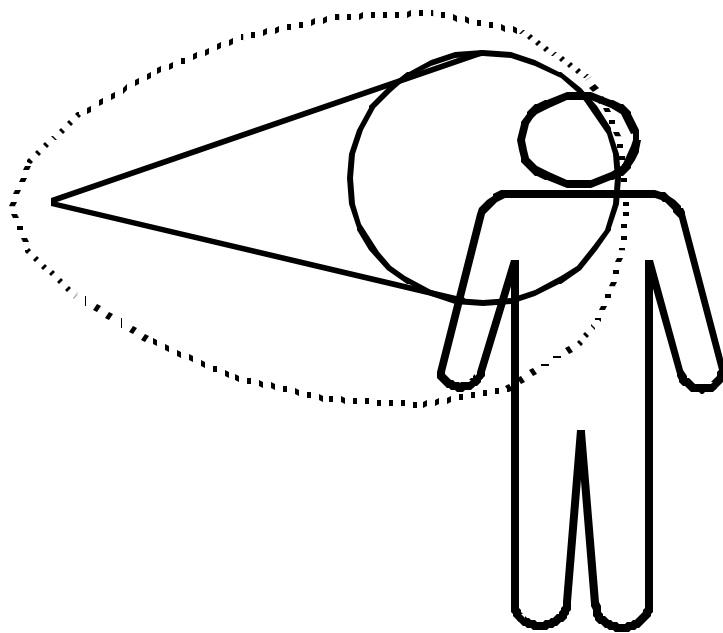
# Vertical and/or Serpentine Spray Pattern



# Cross Spray



# Circular Spray Pattern



## **Prior to Decontamination**

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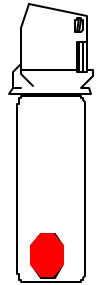
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Give specific verbal commands and apply  
handcuffs **.A.S.A.P. !**

Remove subject to area of uncontaminated  
air.

## **Initial Procedures for Decontamination**

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Provide fresh air (Fan or A/C) and irrigate with copious amounts of water.

- Spray bottle that is kept in the vehicle.
- Eye wash at the booking area.
- Restroom sink.

A mild, oil-free soap may be necessary to remove sticky OC.

Ice packs or wet towels may be used to reduce inflammation.

- Paper towels (use once and throw away)
- Towels (rinse out before using again)

## **Initial Procedures for Decontamination**

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Decontamination sprays or towels may be used in remote locations devoid of water.

**A.S.A.P.** check to see if subject is wearing contacts, they must be removed and cleaned as OC has a propensity to stick to contacts.

\_\_\_\_\_ should salves, oils or creams be used.

**Recovery** can generally be expected within

\_\_\_\_\_

## **Procedures for Decontamination**

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Continue monitoring subject who has been exposed to OC spray.

If unusual discomfort, breathing difficulties or pain become evident, subject requires medical attention ***immediately***.

Since OC lacks a vapor level, it will remain on the person, clothes and surfaces until it is washed.



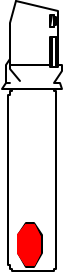
## **BE CAREFUL !**

**OC is transferable** to all officers who come in physical contact with OC, especially while it is still wet.

# Exposure to OC Spray By Students

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It is recommended that all students be exposed to OC for the following reasons:

- (1) Builds confidence in the OC, you know that it really works.
- (2) Developed awareness for safety concerns when using OC.
- (3) Knowledge of what the subject will experience and how to react accordingly.
- (4) Court room testimony and civil liability.

## **In-Custody Death**

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Mount Vernon, NY Police Dept.  
October 13, 1993

- Officers sprayed an emotionally disturbed 34 year old male with OC.
- Subject was handcuffed and then collapsed and expired.
- Autopsy reported that death occurred from a combination of factors.

## In-Custody Death

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Concord, North Carolina Police Dept  
July 11, 1993

- Subject sprayed with OC for disorderly conduct, cuffed and transported to H.Q (7 minutes)
- Subject expired during transport from asphyxia due to bronchospasm precipitated by the OC spray.

## **In-Custody Death**

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An **FBI** review of **thirty in-custody deaths** in which OC was used:

- found **no specific evidence** that OC caused or contributed significantly to these deaths.

# **Advisement**

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The people who are at particular risk for sudden death, with or without OC exposure. They can exhibit some or all the following features:

- male gender, age generally in 30's.
- obesity
- large size
- bizarre behavior due to psychotic illusional agitated or stimulant drug induced mental states
- (all 30 cases)
- drug or alcohol involvement (75% of the cases)
- chronic heart disease or pulmonary disease

## **Advisement (Cont.)**

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- failed to be subdued by OC (more than half the cases)
- are or have been engaged in struggle or are involved in violent or high exertion activity (all 30 cases)
- have been placed in restraints in positions of possible respiratory compromise such as prone position, "hog-tied" or tightly strapped

## **Advisement (Cont.)**

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### Positional Asphyxia -

-  Death as a result of a body position that interferes with or ability to breathe.
- Where a subject is placed in a position that they are unable to breathe such as laying down or in a hogtie position.

# Advisement (Cont.)

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## Positional Asphyxia

A study conducted by the University of California at San Diego Medical Center revealed:

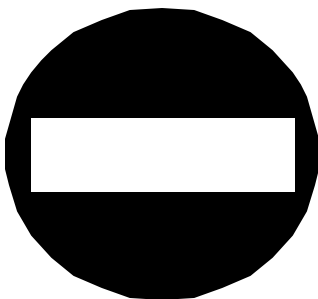
- Hogtying **does not** induce asphyxia

## **DANGER SIGNS - during**

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- cessation of conversation
- change in breathing pattern
- cessation of movement



**Do not** place persons in custody in any position that would interfere with the body's natural ability to breathe.