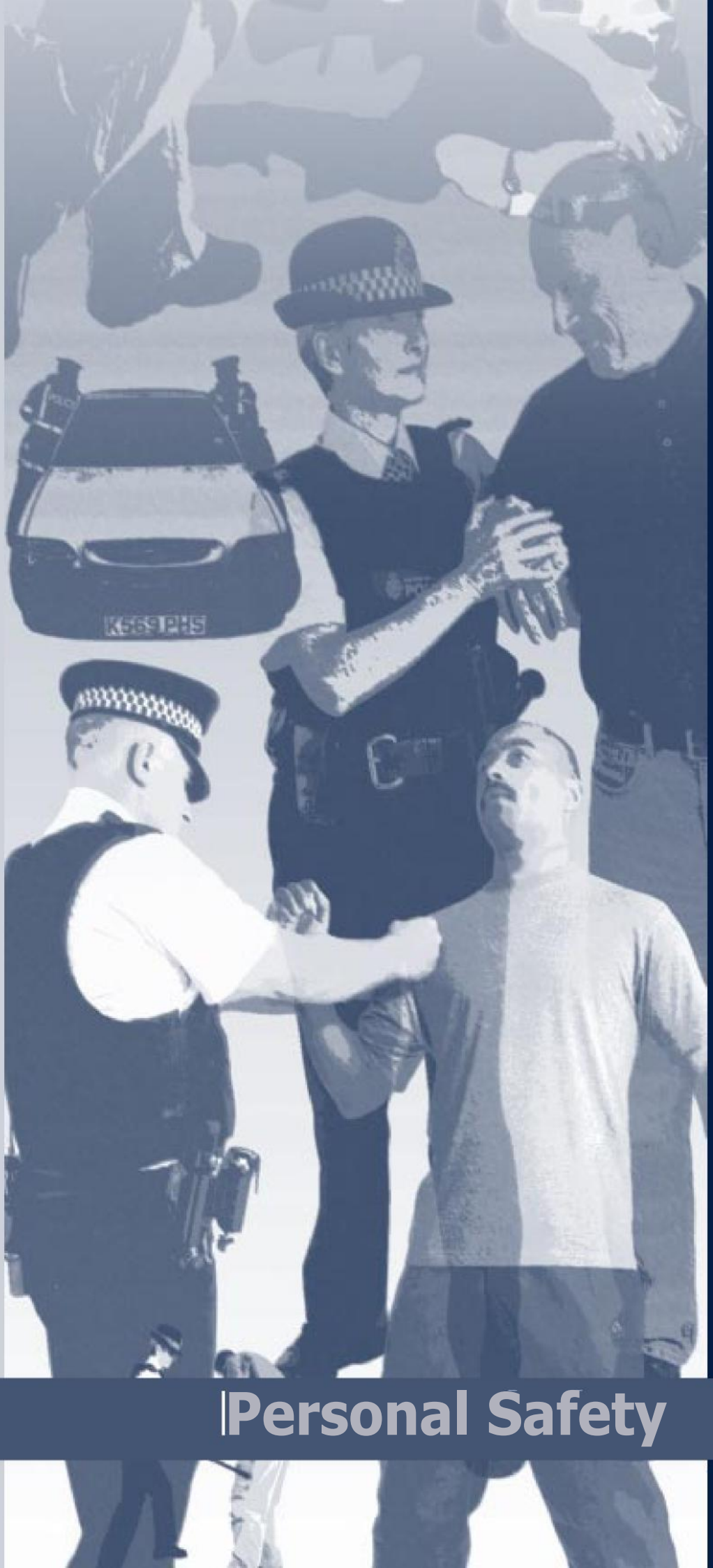


Medical implications

Personal Safety

Medical Implications

MEDICAL IMPLICATIONS

The aim of this module therefore is to:

- Consider preventative measures
- Highlight known phenomena
- Examine the possible and probable application of techniques
- Apply a duty of care to subjects and officers
- Link with other modules contained within this manual

Introduction

When implementing any personal safety training programme, or operational application the primary considerations must include technique effectiveness and system liability. In addition, it must also consider the potential liability for the officer as well as the police service, and attempt to eliminate unnecessary injury to both the subject and the officer. Although this is a pre-examination of the possible and less likely implications associated with the application of techniques illustrated, it is accepted that a caveat exists, whereby an officer may use a technique that is not contained within the pages of this manual. In such cases a post examination by medical practitioners may be sought. Also, the constant monitoring and updating of techniques, their appropriateness and application will be a prime concern for medical and other specialists.

Known medical conditions

Positional Asphyxia

What is Positional Asphyxia?
In simple terms a subject can stop breathing because of the position they have been held in, i.e., 'asphyxiated'.

Positional asphyxia is likely to occur when: **a subject is in a position that interferes with inhalation and/or exhalation and cannot escape from that position**.

NOTE:

Officers should be aware that body weapons and body targets need not be technically referred to. For simplicity i.e. common peronel nerve motor point = side of the leg.

When is it likely to occur?

- When a subject is prone causing their stomach to press up to the ribs
- When a subject is sat (possibly in a vehicle) and their head drops between their knees compressing their chest and abdomen
- When the subject's head falls forward restricting their windpipe.

This can occur rapidly, and post mortems have failed to identify any other anatomical or toxicological findings sufficient to explain the death.

Risk factors

The following are factors which have been shown to contribute to this phenomenon:

- Subject's body position results in partial or complete airway constriction
- Alcohol or drug intoxication (the major risk factor)
- Inability to escape position
- The subject is prone
- Obesity (particularly large beer bellies)
- Restraints
- Stress
- Respiratory muscle fatigue, following violent muscular activity (such as fighting or running away).

Signs and symptoms

Officers should pay close attention when they recognise the following symptoms, taking immediate action to remedy them, and apply emergency aid.

- Body position restricted to prone, face down
- Cyanosis (face is discoloured blue due to lack of oxygen)
- Gurgling gasping sounds
- An active prisoner suddenly changes to passive - loud violent to quiet/tranquil
- Panic
- Subject tells the officer that they cannot breathe.

Transporting a subject

- The condition of the subject should be checked prior to transporting
- Where possible the subject should be monitored during the journey
- The subject must not be transported in a prone, face down position
- The condition of the subject should be checked at the conclusion of the journey.

Reception in a custody office and/or hospital

- Inform the custody officer or medical staff of the nature and circumstances surrounding police involvement
- The officer should inform the custody officer or medical staff of any restraint techniques or equipment used during arrest as well as the method of transporting the subject.

Custody Officer

The custody officer should:

- Note the condition of the subject
- Consider the likleyhood of alcohol/drug abuse
- Observe any signs of toxicity
- Summon a police surgeon or, in the case of an emergency, arrange transportation to hospital, if they consider the subject may be suffering from positional asphyxia
- Complete documentation of everything witnessed.

Note: In some cases transportation in a face down position may be unavoidable. In this situation constant supervision is of paramount importance.

Excited delirium

What is excited delirium?

In simple terms, this is when a subject exhibits violent behaviour in a bizarre and manic way rather than just being simply violent. Excited delirium, or delirious mania, is a rare form of severe mania, sometimes considered part of the spectrum of manic depressive psychosis, and chronic schizophrenia.

Excited delirium is also known as:

- Agitated delirium
- Cocaine induced psychosis
- Acute exhaustive mania.

Excited delirium can be caused by:

- Psychiatric illness
- Drugs, of which cocaine is the best known cause
- Alcohol
- A combination of drugs, alcohol and psychiatric illness.

Identifying a case of excited delirium-

Symptoms:

- Bizarre and/or aggressive behaviour
- Impaired thinking
- Disorientation
- Hallucinations
- Acute onset of paranoia
- Panic
- Shouting
- Violence towards others
- Unexpected physical strength
- Apparent ineffectiveness of incapacitant sprays
- Significantly diminished sense of pain
- Sweating, fever, heat intolerance
- Sudden tranquillity after frenzied activity.

However, many of the signs indicating excited delirium are common to anyone behaving violently.

Why is a subject in an excited delirium state of particular concern?

Subjects suffering from excited delirium can die suddenly during, or shortly after, a violent struggle - whilst at hospital or in custody.

Death can occur:

BEFORE a struggle

DURING a struggle or DURING restraint

AFTER a struggle.

Death is most likely to occur in two ways:

1. The state of excited delirium causes the subject to have a cardiac arrest
2. The efforts to avoid being restrained by police officers make an 'excited delirium' subject at greater risk from positional asphyxia.

Dealing with a case of excited delirium

It is important to recognise the difference between excited delirium and a violent outburst.

Once identified there then lies the problem of how a subject in an excited delirium state should be handled without endangering the public, the police officer, medical staff as well as the subject him/herself.

How do you control a subject like this?

This will always be very difficult. Officers will probably have to place them face down on the ground in order to handcuff them safely. The risk of positional asphyxia affecting a subject who is in an excited delirium state is far greater than for a normal violent subject.

They may continue to struggle beyond their point of exhaustion and it will be very difficult to prevent this regardless of whether or not they are handcuffed.

Once they are handcuffed do not hold them face down. They should be moved onto their side or into a sitting, kneeling or standing position as soon as it is safe to do so. They may continue to kick out. However, officers must get them off their stomach in some way or other as soon as they can.

Once they are controlled what should be done then?

They may continue to be extremely violent in spite of the use of handcuffs, sprays or batons. Such bizarre, exhaustive and persistent violent resistance is a classic indication of an excited delirium case. The officer must monitor them carefully, treating them as a medical emergency as they could collapse and die at any time. The officer should have them examined at hospital - even if they suddenly calm down before the officer arrives at the scene. If the officer thinks they are dealing with an excited delirium subject then get them checked out at hospital - there is no harm done if they turn out to be fine. They can collapse very suddenly and attempts to resuscitate them usually fail.

Officers may have experienced dealing with violent subjects who might have been in an excited delirium state. The likelihood of police officers encountering people in such a violent delirium state is rare but is definitely on the increase.

Danger!

Certain restraint positions of subjects exhibiting excited delirium increase the risk of death.

Restraining a subject in a prone, stomach down position, is particularly hazardous. This is increased if the subject's hands are handcuffed behind their back or to their feet.

It should be remembered that obesity, alcohol and drugs increase the hazard still further by restricting diaphragm and lung function.

Remember!

The following actions may reduce the risk of death to a restrained subject who is displaying signs of **EXCITED DELIRIUM.**

Actions to reduce risk of death in a restrained subject exhibiting excited delirium:

- Get the subject onto their side, into a kneeling or seated position as soon as possible
- Never transport in prone position if at all possible
- Pay close attention to the life signs of the subject and monitor closely, especially if the subject should suddenly become very passive.

Any subject exhibiting symptoms of excited delirium should be treated as a:

Medical Emergency

and should be medically examined immediately at a hospital regardless of any subsequent behaviour or apparent recovery.

Examination at a police station may not be appropriate because equipment for heart resuscitation may not be available (to the level that may be required).

Sickle Cell Anaemia

This is an inherited blood disease that occurs primarily in black people, and less commonly in people of Mediterranean origin. In sickle cell, the red cells are abnormal, resulting in a chronic, very severe form of anaemia (reduced oxygen carrying capacity of the blood).

Sickle cell anaemia occurs in people who have inherited haemoglobin S from both parents. If haemoglobin S is inherited from one parent, the person has sickle cell trait, and is usually free of symptoms. If two such carriers have a child, there is a one in four chance that the child will have sickle cell anaemia, a two in four chance that the child will have sickle cell trait, and a one in four chance that the child will have neither.

In the United Kingdom, about one in 100 black people of West African origin and one in 200 of West Indian origin suffer from sickle cell anaemia. About one in 10 black people have sickle cell trait.

In police use of force terms, it is important to realise that haemoglobin S crystalises, distorting the red blood cells, making them fragile. These now abnormal cells are also unable to pass easily through tiny blood vessels, and this difficulty causes intermittent blockage of the blood supply to various organs.

This can cause fatigue, headaches, shortness of breath on exertion, pallor and jaundice. There is no cure at present for sickle cell anaemia and sufferers are usually treated to a lifelong course of medication. Sickle cell anaemia can be life threatening, therefore officers need to be cautious when dealing with potential sufferers and bear in mind that the object of police use of force is to control subjects with reasonable, necessary, proportionate and justifiable force.

MENTAL DISORDERS

What is mental disorder?

A mental disorder can be described as any condition which results in behaviour considered to be abnormal or excessive.

Broadly, mental disorders can be divided into five groups. These are:

1. The psychoses (conditions in which the subject is detached from reality eg paranoid schizophrenia, severe depression)
2. The neuroses (aberrations of coping mechanisms eg excessive hand-washing, ritualistic behaviour)
3. Organic mental disorders (conditions in which the brain and its function are affected eg Parkinsons disease)
4. The personality disorders (bizarre behaviour resistant to treatment eg deliberate self-harm)
5. Learning disabilities (difficulties in intellectual development that can cause behaviour inappropriate for the physical age).

These conditions will vary in their presentation and can be precipitated, aggravated or modified by physical disease, injury, stress, pain, drugs and alcohol.

Within these group headings there are a series of specific illnesses, some of which have symptoms which include violent or aggressive behaviour. Some examples of disorders that do include violence or aggressive behaviour which are of concern to officers are:

Catatonic Schizophrenia:

Prominent psychomotor disturbances alternating between abnormally increased and sometimes uncontrollable activity or repetitive muscle movements and stupor, or

obedience and negativism. Episodes of violent excitement may be a striking feature of this condition.

Emotionally Unstable (Borderline) Personality Disorder:

Marked tendency to act impulsively without consideration of the consequences.
The ability to plan ahead may be minimal and outbursts of intense anger may often lead to violence or "behavioural explosions".
Outbursts of violence or threatening behaviour are common, particularly in response to criticism by others.

Dissocial (Antisocial) Personality Disorder:

Callous unconcern for the feelings of others and a gross and persistent attitude of irresponsibility and disregard for social norms. There may be a low tolerance to frustration and low threshold for discharge of aggression, including violence.

Mania with Psychotic Symptoms:

Inflated self-esteem and grandiose ideas may develop into delusions, and irritability and suspiciousness into delusions of persecution. In severe cases, grandiose or religious delusions of identity or role may be prominent, and flight of ideas and pressure of speech may result in the individual becoming incomprehensible. Severe and sustained physical activity and excitement may result in aggression or violence, and neglect of eating drinking and personal hygiene may result in dangerous states of dehydration and self neglect.

General guidance for dealing with subjects with mental disorders

- Consider the effect of approaching without warning from behind. If it is necessary, do so in a non-threatening, cautious manner.

Reason: This can appear to be an attack.

- Stay calm as this has a calming effect. Give the subject more space than usual
- Don't touch the subject unless:
  1. You are sure he or she does not feel threatened by you
  2. You have to establish control
- Try not to leave them to guess your intentions - their imagination may run riot
- Be open and honest
- Reduce distractions.

Reason: To aid concentration.

- Bring the subject back to the point, use simple language, you may need to repeat simple messages
- If possible allow the subject to carry out any ritualistic behaviour they feel compelled to carry out.

Reason: To reduce anxiety.

- Don't stare.

Reason: This may be seen as a threat.

- Keep your movements to a minimum and keep your hands in view.

Reason: To reduce fear and surprise.

NOTE:

In dealing with subjects with mental disorders links must be made with the other modules in this manual.

Medical implications of issued personal safety equipment Handcuffing

Every officer may handcuff a subject sometime in their career, and some officer's may handcuff several times during a tour of duty. With each handcuffing event there is potential for injury.

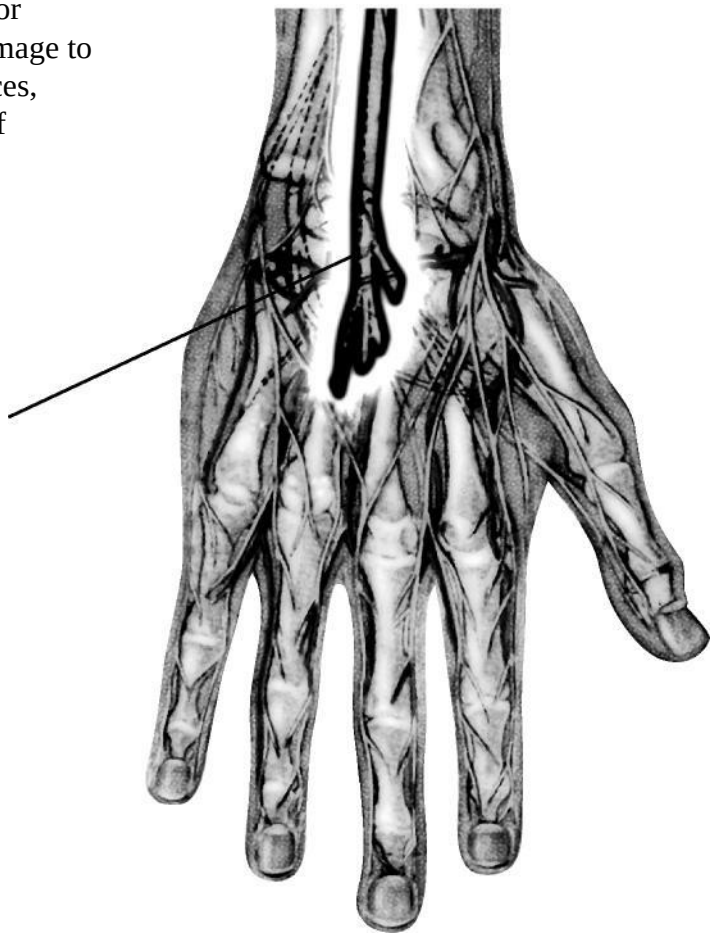
Officers should consider that a subject might already have an injury prior to interaction with them. There are many legal, medical, training, research and literature articles throughout the world that relate to subjects who have suffered, cuts, bruising, swelling, reddening of wrists and pain, fractures and trapped nerves as a result of being handcuffed.

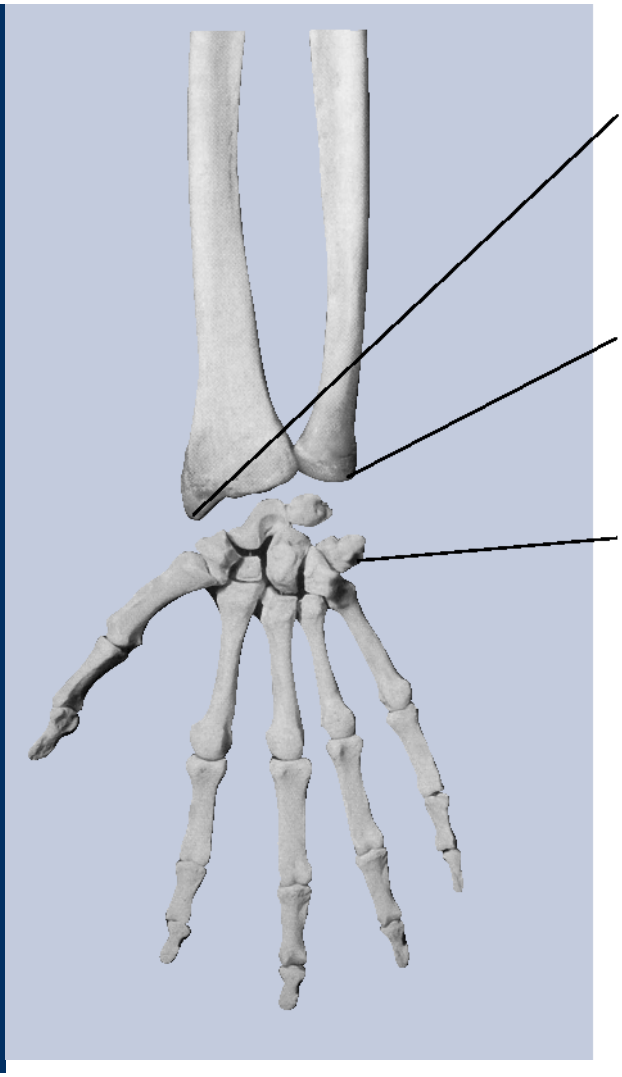
Carpal tunnel syndrome (Handcuff neuropathy)

This condition can result from pressure on the median nerve where it passes into the hand via a gap (the carpal tunnel) under a ligament at the front of the wrist. The median nerve carries sensory messages from the thumb and some fingers, and also motor stimuli to the muscles in the hand. Damage to the nerve can cause sensory disturbances, particularly numbness, tingling, loss of flexion and weakness.

In terms of subjects who have suffered nerve damage to one or both wrists, this often results from one or both bracelets of the handcuffs being cinched down on a subject's wrists too tightly, or the handcuffs being tightened by the subject or by a third party, when the officer has failed to double lock them to prevent them from becoming tighter. Many medical findings show that the median nerve within the carpal tunnel is vulnerable to indirect injury from a variety of causes. It is also known that handcuffs can block blood flow from the hand if they are left on a subject for an extended period of time which can cause the contents of the carpal tunnel to swell, which can in turn give rise to neuropathic symptoms.

Although the focus so far has been related to potential damage to the inside of a subject's wrist, officers could also fracture the wrist. Bone breakage may be rare from handcuffs except for a minor area on the wrist known as the Styloid Process. This is a small bone extension at the end of the radial and ulna bones on either side of the wrist.





Styloid Process Radial Bone
(inside of the wrist, thumb side)

Styloid Process Ulna Bone
(outside of the wrist, little finger side)

Pisiform Bone

If handcuffs are inadvertently double locked prior to attempting application they may fracture a wrist, lacerate the skin and do other trauma type damage.

General Medical Implications

A full appreciation of the possible and probable medical implications associated with this manual are specifically illustrated. However, application can generally be described as follows.

Initial target areas

These are aimed at soft tissue areas and are likely to produce:

- reduced possibility of permanent injury
- temporary bruising of target areas
- temporary disturbance of affected target areas.

However, exceptions may occur.

Interim target areas

These are aimed at skeletal or bony areas and are likely to produce:

- soft tissue damage
- dislocation
- bone fracture
- transient nerve dysfunction
- compartment syndrome (this may occur if muscles have become enlarged as a result of injury, and are thereby compressed, causing cramps due to the obstruction of the blood flow through the muscles).

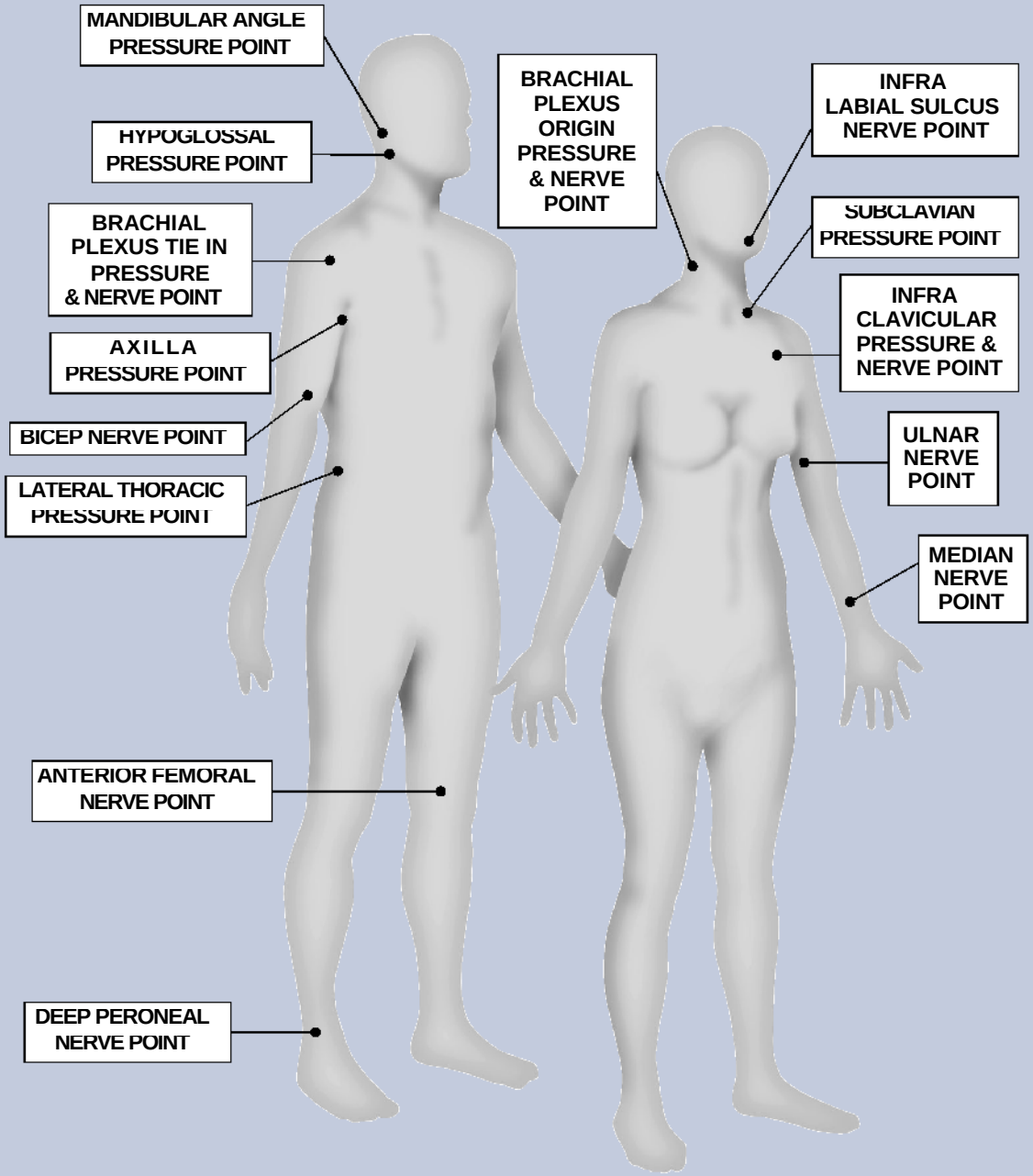
However, exceptions may occur.

Final target areas

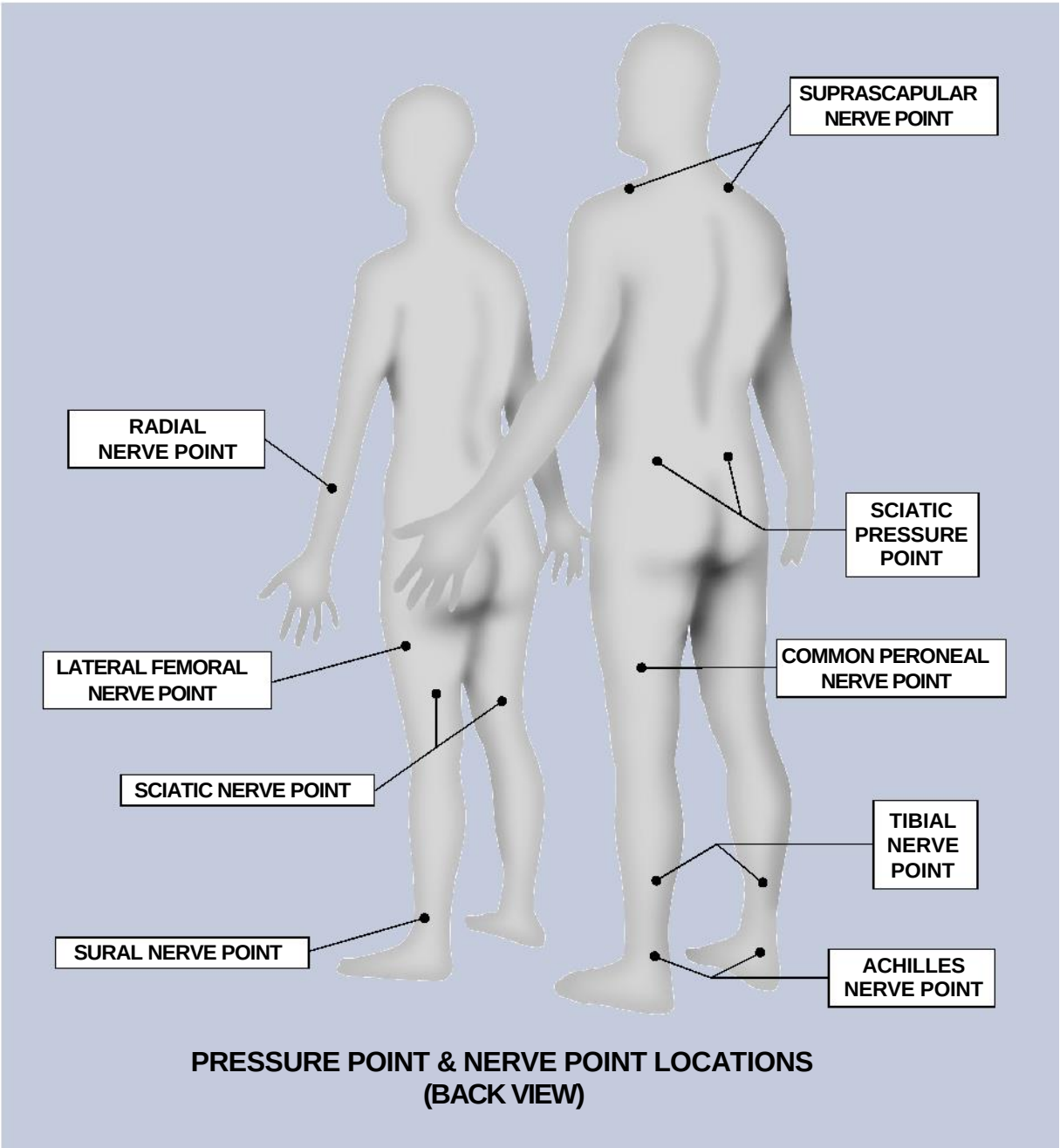
Officer's should note that the word 'final' does not mean that officers have to start at an initial target area and work up. If circumstances so dictate, it may be appropriate in worst case scenarios to escalate immediately.

Striking the head, throat, neck, clavicle and solar plexus area may cause:

- ♦ death or
- ♦ serious injury, or
- ♦ unconsciousness, or
- ♦ permanent disfigurement.



PRESSURE POINT & NERVE POINT LOCATIONS (FRONT VIEW)



PRESSURE POINT & NERVE POINT LOCATIONS (BACK VIEW)

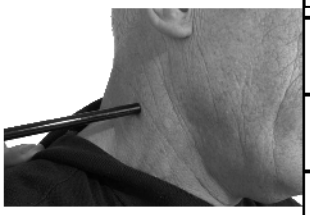
SPECIFIC MEDICAL IMPLICATIONS

SUBJECT		PROBABLE	LESS LIKELY
Mandibular angle pressure point	Finger Tip:	Transient pain discomfort	Vagal Stimulation Bruising Salivary gland damage Facial nerve palsy
	Thumb Tip:	Ditto	Ditto
	Knuckle:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments: Vagal Stimulation is a medical technique capable of reducing heart rate and blood pressure in a subject. Although voiced as a concern it is extremely unlikely in operational use.

SUBJECT		PROBABLE	LESS LIKELY
Hypoglossal pressure point	Finger Tip:	Transient pain discomfort	Vagal Stimulation Bruising Salivary gland damage
	Thumb Tip:	Ditto	Ditto
	Knuckle:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments:

SUBJECT		PROBABLE	LESS LIKELY
Brachial plexus origin 	Finger Tip:	Transient pain discomfort	Bruising
	Thumb Tip:	Ditto	Ditto
	Knuckle:	Ditto	Ditto
	Hammer Fist:	Potential serious injury deadly force	Ditto
	Ridge Hand:	Ditto	Ditto
	Palm Heel:	Ditto	Ditto
	Palm:	Ditto	Ditto
	Back Hand:	Ditto	Ditto
	Elbow:	Ditto	Ditto
	Inside Forearm:	Ditto	Ditto
	Outside Forearm:	Ditto	Ditto
	Knife Hand:	Ditto	Ditto
	CS Canister:	Ditto	Ditto
	Baton:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments: Strikes to the neck area carries an extremely high risk of permanent injury or death, and if taught must be reserved for use ONLY in high threat situations this technique can be considered deadly.

SUBJECT		PROBABLE	LESS LIKELY
Subclavian pressure point	Finger Tip:	Transient pain discomfort	Bruising
	Thumb Tip:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments:

SUBJECT		PROBABLE	LESS LIKELY
Axilla pressure point	Finger Tip:	Transient pain discomfort	Bruising
	Thumb Tip:	Ditto	Ditto
	Back Hand:	Rib Fractures, Lung injury	Ditto
	CS Canister:	Ditto	Ditto
	Baton:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments:

The application of force to pressure points at both the axilla and lateral thoracic pressure points have a low injury potential for digital pressure but a significant risk of rib fractures with possible underlying plural and lung damage when strikes are applied. The risk of liver and spleen damage exists for blows to the lower of these two areas (lateral thoracic point).

SUBJECT		PROBABLE	LESS LIKELY
Lateral thoracic pressure point	Finger Tip:	Transient pain discomfort	Bruising
	Thumb Tip:	Ditto	Ditto
	Knuckle:	Ditto	Ditto
	CS Canister:	Rib Fracture, Lung injury	Ditto
	Baton:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments:

SUBJECT		PROBABLE	LESS LIKELY
Sciatic pressure point	Finger Tip:	Transient pain discomfort	Exacerbation of pre-existing back problems
	Thumb Tip:	Ditto	Ditto
	Knuckle:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments: Generally a very safe technique however some subjects may cite it as a cause of backache in litigation. This may be difficult to prove or disprove clinically.

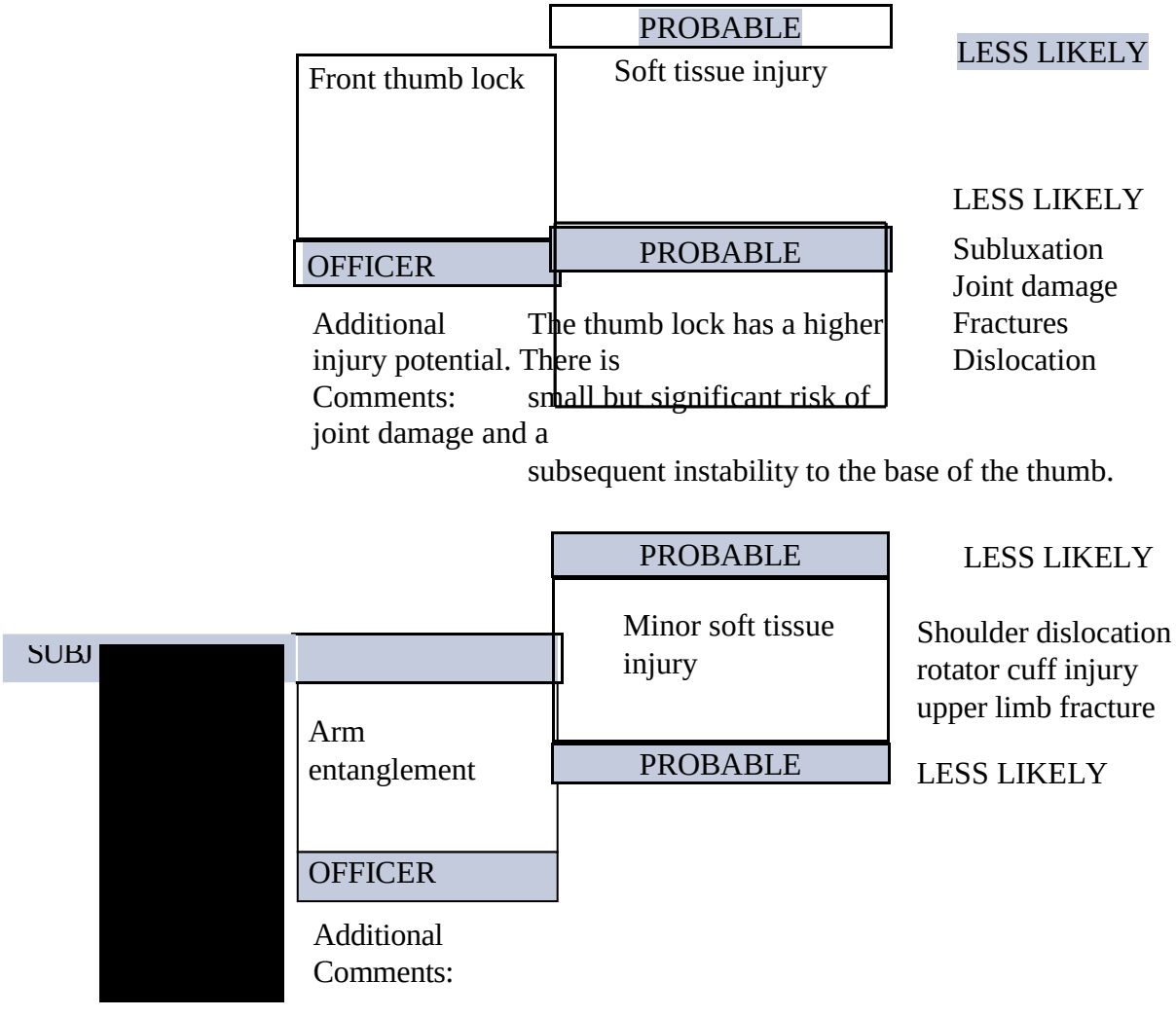
SUBJECT	PROBABLE	LESS LIKELY
Brachial plexus tie in pressure point 	Finger Tip:	Transient pain discomfort	Soft tissue injury rotator cuff injury
	Thumb Tip:	Ditto	Ditto
	Knuckle:	Ditto	Ditto

OFFICER	PROBABLE	LESS LIKELY
Additional Comments:		

S		
[redacted]	Front transport Wrist lock	
OFFICER	PROBABLE	LESS LIKELY
Additional Comments:	Subluxation is an incomplete dislocation of a joint that displaces the bony surfaces so that they remain in partial contact. A	

SUB	
[redacted]	

sprain may occasionally follow clumsy or over zealous application



SU [redacted]		PROBABLE	LESS LIKELY
	Rear double arm restraint	Minor soft tissue injury	Soft tissue injury shoulder dislocation upper limb fractures
	OFFICER	PROBABLE	LESS LIKELY

Additional Comments:

SUBJECT [redacted]		PROBABLE	LESS LIKELY
	Conventiona l groundpin position	Minor soft tissue injury	Positional asphyxia joint sprains subluxations rib fractures abdominal injury facial grazing
	OFFICER	PROBABLE	LESS LIKELY

Additional Comments:

[redacted]		PROBABLE	LESS LIKELY
	Modified groundpin position	Minor soft tissue injury	Positional asphyxia joint sprains subluxations rib fractures abdominal injury facial grazing
	OFFICER	PROBABLE	

Additional Comments:

LESS LIKELY

SUBJECT	PROBABLE	LESS LIKELY
Seated position take down	Minor soft tissue injury	Soft tissue injury sprains grazing
OFFICER	PROBABLE	LESS LIKELY
Additional Comments:		

	PROBABLE	LESS LIKELY
Straight arm bar take down	Minor soft tissue injury	Soft tissue injury sprains grazing
OFFICER	PROBABLE	LESS LIKELY
Additional Comments:		

	PROBABLE	LESS LIKELY
Front transport wristlock take down.	Minor soft tissue injury	Soft tissue injury sprains grazing
OFFICER	PROBABLE	LESS LIKELY
Additional Comments:		

		LESS LIKELY
Arm entanglement take down	PROBABLE Minor soft tissue injury	Soft tissue injury sprains grazing
OFFICER	PROBABLE	LESS LIKELY
Additional Comments:		

	PROBABLE	LESS LIKELY
Front thumblock take down	Minor soft tissue injury	Soft tissue injury sprains grazing thumb injury (higher risk)
OFFICER	PROBABLE	LESS LIKELY
Additional Comments:		

[redacted]		LESS LIKELY back injury
	PROBABLE	
	Minor soft tissue injury	

SUBJECT

Rear take down

OFFICER	PROBABLE	LESS LIKELY
Additional Comments:		

SUBJECT		PROBABLE	LESS LIKELY
[redacted]	Rear double arm restraint take down	Minor soft tissue injury	back injury
	OFFICER	PROBABLE	LESS LIKELY
	Additional Comments:		

SUBJECT	Additional Comments:	PROBABLE	LESS LIKELY
[redacted]	Front/inside take down	Minor soft tissue injury	Soft tissue injury
	OFFICER	PROBABLE	LESS LIKELY
	Additional Comments:		

		PROBABLE	LESS LIKELY
[redacted]	Turning the subject from supine to prone position	Minor soft tissue injury	Sprains soft tissue injury fractures
	OFFICER	PROBABLE	LESS LIKELY
	Additional Comments:		

SUBJECT		PROBABLE	LESS LIKELY
[redacted]	Inverted wrist lock	Minor soft tissue injury	Sprains soft tissue injury fractures
	OFFICER	PROBABLE	LESS LIKELY

SUBJECT		PROBABLE	LESS LIKELY
Suprascapular nerve point	Ridge Hand:	Transient pain discomfort	Clavicle fractures neck injury
	Knife Hand:	Ditto	Ditto
	CS Canister:	Ditto	Ditto
	Baton:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments:

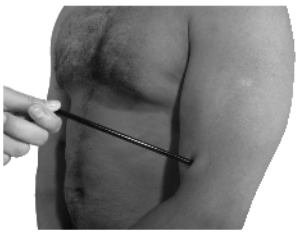
SUBJECT		PROBABLE	LESS LIKELY
Brachial plexus tie in nerve point	Thumb Tip:	Transient pain discomfort	Soft tissue injuries Rotator cuff injury fracture
	Knuckle:	Ditto	Ditto
	Hammer Fist:	Ditto	Ditto
	Palm Heel:	Ditto	Ditto
	Elbow:	Ditto	Ditto
	CS Canister:	Ditto	Ditto
	Baton:	Ditto	Ditto
	Fist:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments:

SUBJECT		PROBABLE	LESS LIKELY
Infra clavicular nerve point 	Hammer Fist:	Transient pain discomfort	Chest injury Rib fracture Clavicle fracture Brachial plexus injury
	Ridge Hand:	Ditto	Ditto
	Palm Heel:	Ditto	Ditto
	Knife Hand:	Ditto	Ditto
	Elbow:	Ditto	Ditto
	Fist:	Ditto	Ditto
	CS Canister:	Ditto	Ditto (more potential re impact weapon)
	Baton:	Ditto	Ditto

OFFICER	PROBABLE	LESS LIKELY

Additional Comments:

SUBJECT		PROBABLE	LESS LIKELY
Bicep nerve point 	Hammer Fist:	Transient pain discomfort	Chest injury Rib fracture Clavicle fracture Brachial plexus injury
	Ridge Hand:	Ditto	Ditto
	Palm Heel:	Ditto	Ditto
	Knife Hand:	Ditto	Ditto
	Elbow:	Ditto	Ditto
	Fist:	Ditto	Ditto
	CS Canister:	Ditto	Ditto (more potential re impact weapon)
	Baton:	Ditto	Ditto

SUBJECT		PROBABLE	LESS LIKELY
Radial nerve point	Knuckle:	Transient pain discomfort	Soft tissue injury neuraproxia (nerve bruising)
	Ridge Hand:	Ditto	Ditto
	Knife Hand:	Ditto	Ditto
	Hammer Fist:	Ditto	Ditto
	Palm Heel:	Ditto	Ditto
	Elbow:	Ditto	Ditto
	Fist:	Ditto	Ditto
	CS Canister:	Ditto	Ditto (more fracture potential)
	Baton:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments:

SUBJECT		PROBABLE	LESS LIKELY
Ulna nerve point 	Palm Heel:	Transient pain discomfort	Soft tissue injury neuraproxia
	Ridge Hand:	Ditto	Ditto
	Knife Hand:	Ditto	Ditto
	CS Canister:	Ditto	Ditto (more fracture potential)
	Baton:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments:

SUBJECT		PROBABLE	LESS LIKELY
Median nerve point	Hammer Fist:	Transient pain discomfort	Neuraproxia soft tissue injury fractures
	Ridge Hand:	Ditto	Ditto
	Palm Heel:	Ditto	Ditto
	Fist:	Ditto	Ditto
	Elbow:	Ditto	Ditto
	CS Canister:	Ditto	Ditto
	Baton:	Ditto	Ditto

OFFICER	PROBABLE	LESS LIKELY
Additional Comments:		

SUBJECT		PROBABLE	LESS LIKELY
Common peroneal/lateral femoral nerve point	Thumb Tip:	Transient pain discomfort	
	Knuckle:		
	Hammer Fist:		
	Palm Heel:		
	Knife Hand:		
	Elbow:		
	Fist:		
	Shin:		
	Knee:		
	CS Canister:		
	Baton:		

Ditto	Neuraproxia
Ditto	soft tissue injury
Ditto	fractures
Ditto	Ditto
Ditto	Ditto
Ditto	Ditto
Ditto	Ditto
Ditto	Ditto
Ditto	Ditto
Ditto	Ditto
Ditto	Ditto
Ditto	Ditto
Ditto	Ditto

SUBJECT		PROBABLE	LESS LIKELY
Sciatic nerve point	Thumb Tip:	Minor pain discomfort	Bruising neuraproxia fractures
	Knuckle:	Ditto	Ditto
	Hammer Fist:	Ditto	Ditto
	Palm Heel:	Ditto	Ditto
	Knife Hand:	Ditto	Ditto
	Elbow:	Ditto	Ditto
	Fist:	Bruising	Ditto
	Shin:	Ditto	Ditto
	Knee:	Ditto	Ditto
	CS Canister:	Ditto	Ditto
	Baton:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments:

SUBJECT		PROBABLE	LESS LIKELY
Anterior femoral nerve point 	Thumb Tip:	Minor pain discomfort	Bruising neuraproxia fractures
	Knuckle:	Ditto	Ditto
	Hammer Fist:	Ditto	Ditto
	Ridge Hand:	Ditto	Ditto
	Knife Hand:	Ditto	Ditto
	Elbow:	Ditto	Ditto

SUBJECT		PROBABLE	LESS LIKELY
	Palm Heel:	Ditto	Ditto
	Fist:	Bruising	Ditto
	Shin:	Ditto	Ditto
	Knee:	Ditto	Ditto
	CS Canister:	Ditto	Ditto
	Baton:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments:

SUBJECT		PROBABLE	LESS LIKELY
Tibial nerve point	Thumb Tip:	Minor pain discomfort	Bruising neuraproxia fractures
	Knuckle:	Ditto	Ditto
	Hammer Fist:	Ditto	Ditto
	Palm Heel:	Ditto	Ditto
	Ridge Hand:	Ditto	Ditto
	Knife Hand:	Ditto	Ditto
	Elbow:	Ditto	Ditto
	Fist:	Bruising	Ditto
	Shin:	Ditto	Ditto
	Knee:	Ditto	Ditto
	CS Canister:	Ditto	Ditto
	Baton:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY

Additional Comments:

SUBJECT		PROBABLE	LESS LIKELY
Deep peroneal nerve point 	Foot:	Soft tissue injury	Fractures
	Baton:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY
	Additional Comments:		

SUBJECT		PROBABLE	LESS LIKELY
Unsupported take down from groundwork		Soft tissue injury	Higher risk of fractures head injury

SUBJECT		PROBABLE	LESS LIKELY
Bladder strike [redacted]	Hammer fist:	Transient pain discomfort	Ruptured bladder testicular injury abdominal injury
	Head:	Ditto	Ditto
OFFICER		PROBABLE	LESS LIKELY
	Additional Comments:		

OFFICER		PROBABLE	LESS LIKELY
Rear neck lock: [redacted]		Sprain	Strangulation neck fracture neck dislocation death
SUBJECT		PROBABLE	LESS LIKELY
	Additional Comments:		

OFFICER	PROBABLE	LESS LIKELY
Side neck lock: [redacted]	Sprain	Strangulation neck fracture neck dislocation death
SUBJECT	PROBABLE	LESS LIKELY
Additional Comments:		

SUBJECT	PROBABLE	LESS LIKELY
Head/shoulder butt	Transient pain discomfort	Fractures
OFFICER	PROBABLE	LESS LIKELY
Additional Comments:	Officers may experience transient pain discomfort and rotator cuff injury upon application	

SUBJECT	PROBABLE	LESS LIKELY
Supine leg lock [redacted]	Transient pain discomfort	Soft tissue injury back injury head injury
OFFICER	PROBABLE	LESS LIKELY
Additional Comments:		

SUBJECT	PROBABLE	LESS LIKELY
Prone leg lock [redacted]	Transient pain discomfort	Soft tissue injury facial injury
OFFICER	PROBABLE	LESS LIKELY
Additional Comments:		

SUBJECT		PROBABLE	LESS LIKELY
Front take down handcuffing [redacted]		Soft tissue injury	Sprain fracture
	OFFICER	PROBABLE	LESS LIKELY
	Additional Comments:		

SUBJECT		PROBABLE	LESS LIKELY
Rear take down [redacted]		Soft tissue injury	Sprain fracture
	OFFICER	PROBABLE	LESS LIKELY
	Additional Comments:		

SUBJECT		PROBABLE	LESS LIKELY
Turning subject over from supine to prone handcuffing [redacted]		Soft tissue injury	Sprain fracture
	OFFICER	PROBABLE	LESS LIKELY
	Additional Comments:		

SUBJECT		PROBABLE	LESS LIKELY
Limb restaints placed around upper and lower legs [redacted]		Minor soft tissue injury (reddening of the skin)	Deep Vein Thrombosis
	OFFICER	PROBABLE	LESS LIKELY
	Additional Comments:		

NOTE:

It is important to ensure your own safety when attending a casualty and before undertaking any first aid procedures.

Do not take chances.

Be alert to the risk of attack from the casualty or from others.

First Aid

Whenever confrontations of a physical nature occur there will be a risk of persons suffering injuries of a varying degree. Officers have a duty of care to ensure that the appropriate first aid is provided for casualties. They should also continue to consider their own safety, an injured subject may become even more violent.

Officers should possess an adequate knowledge of first aid and first aid techniques. For guidance in first aid reference should be made to the Centrex First Aid Manual.

Further reading

- ACPO Centrex Personal Safety Manual
- Dr Tony Smith. The British Medical Association Complete Family Health Encyclopedia Colour Library books
- Preventing deaths in police custody A trainers resource pack Metropolitan Police Service Criminal Justice Office PRS5(3)
- First Aid Manual Dorling Kindersley ISBN 0-7513-0399-2
- Centrex First Aid Programme
- Medical Implications of Restraint Metropolitan Police Service training video
- Safety review of the draft National Police Training Personal Safety Manual Anthony Bleetman PhD FRCSEd FFAEM DipIMC RCSEd.