

# Sudden In-Custody Death

Presented by MedicEd.com, Inc.  
by Eric Stratton EMT-P & David Walsh

## 2 Credit Hour Course Approved for the Following Levels:

- » First Responder
- » EMT Basic
- » EMT Intermediate
- » EMT Paramedic

In today's world, medical professionals see a host of diseases, trauma and acute illnesses amongst patients they treat on a daily basis. This lecture will deal with conditions referred to as In-Custody Death Syndrome. This condition has gained in public awareness due to several deaths after contact with law enforcement.

This lecture will define several terms, explain each condition separately, it's etiology, signs/symptoms and possible treatments. As always treatments explained in this lecture are examples and state or local protocols should always be followed.

### Outline for course

- 1) Why is this information important ?
- 2) Physiologic key points to breathing and restraints
- 3) The Stress Response
- 4) Natural Disease
- 5) Acute Alcohol Intoxication & History of Alcohol Abuse
- 6) Cocaine Intoxication
- 7) Amphetamine Intoxication
- 8) PCP or LSD Intoxication
- 9) Restraint & Struggle
- 10) Pepper Spray
- 11) Excited Delirium or Agitated Delirium Syndrome
- 12) Neuroleptic malignant syndrome (NMS)
- 13) Positional Asphyxia
- 14) Treatment methods for in-custody death syndromes
- 15) Effective methods of transporting these patients
- 16) Review
- 17) References

### What is Sudden Custody Death Syndrome?

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- In custody death syndrome was first used to describe unexplained deaths when there was no apparent cause other than police arrest.
- Sudden custody death syndrome is defined as “the unexpected death of a subject which occurs during an arrest or while the subject is in the custody of law enforcement or corrections and is the result of several different external and internal factors acting alone or in concert.
- Some of these factors are:
  - Violent or bizarre behavior
  - Use of force
  - Use of restraints
  - Intoxication with drugs and / or Alcohol
  - Health Risk Factors
  - Intense physical activity
  - Hypothermia / Hyperthermia
  - Positional Asphyxia

#### **Other names of Sudden Custody Death Syndrome**

- Sudden In Custody Death Syndrome
- Positional Asphyxia- **due to the position of the individual and the lack of oxygen or an increase of carbon dioxide in the blood causing unconsciousness**
- Excited Delirium
- Cocaine Intoxication
- Neuroleptic Malignant Syndrome

#### **Causes of Sudden Custody Death Syndrome**

- **A growing body of documented experiences, autopsy results, and data compiled by various sources supports the theory that many in custody deaths are not the result of a single cause but a cascade of multiple factors that is often set in motion long before law enforcement ever gets involved. Physicians and medical examiners have ascribed these tragedies to cocaine intoxication, restraint/ positional asphyxia and metabolic acidosis.**
- **Positional or restraint asphyxia- the most common type of sudden in custody death.**
- **Excited Delirium Syndrome**

#### **When does Sudden Custody Death Syndrome occur?**

- **When**
  - ✓ a subject encounters a violent police encounter
  - ✓ A subject is restrained during the violent encounter while also under the influence of psychiatric medication, alcohol, or illicit drugs

#### **Facts about Sudden Custody Death Syndrome**

- Autopsies are of little help due to lack of physical markers, no anatomical change, no cardiac or aneurism rupture. Typically the heart and lungs just stop which raises all sorts of questions.
- Death typically occurs within one hour of first contact with police.
- More than 75% of patients die either at the scene or during initial transportation.

- Sudden Custody Death Syndrome is not yet fully explained due to many factors. There have been many suits filed against police officers who people think use too much physical force while subduing a suspect, but there is no evidence against police officers to reveal they were the direct cause of death.
- It appears there are many factors that play a role in death of a suspect, such as poor physical condition, extreme agitation, and substance abuse; sometimes in combination with hog tying or placing the subject in the prone position.

### **Why is this Information Important**

#### **Federal Public Law**

In 2000, the federal government passed federal public law 106- 297, the deaths in custody reporting act (DICRA) is defined as a death in custody as a “death of an arrested person or an arrestee that occurs during the process of an arrest, in the custody of law enforcement officers, or as a result of lethal force by officers- the law specifically excluded deaths of individuals in correctional facilities. **This Law was active from 2000 through 2006.**

### **Why is this Information Important**

#### **Death Custody Reporting Act of 2009**

<b>Status:</b>	<input checked="" type="checkbox"/> Introduced	Jan 28, 2009
	<input checked="" type="checkbox"/> Referred to Committee	<a href="#">View Committee Assignments</a>
	<input checked="" type="checkbox"/> Passed House	Feb 4, 2009
	<input type="checkbox"/> Voted on in Senate	(pending)
	<input type="checkbox"/> Signed by President	(pending)

This bill has been passed in the House. The bill now goes on to be voted on in the Senate. Keep in mind that debate may be taking place on a companion bill in the Senate, rather than on this particular bill. [Last Updated: Feb 14, 2009 3:35PM]

**Last Action:** Feb 5, 2009: Received in the Senate and Read twice and referred to the Committee on the Judiciary.

**Related:** See the [Related Legislation](#) page for other bills related to this one and a list of subject terms that have been applied to this bill. Sometimes the text of one bill or resolution is incorporated into another, and in those cases the original bill or resolution, as it would appear here, would seem to be abandoned.

#### **Death Custody Reporting Act of 2009**

In General- For each fiscal year after the expiration of the period specified in which a State receives funds for a program referred to in subsection (c)(2), the State shall report to the Attorney General, on a quarterly basis and pursuant to guidelines established by the Attorney General, information regarding the death of any person who is detained, under arrest, or is in the process of being arrested, is en route to be incarcerated, or is incarcerated at a municipal or county jail, State prison, State-run boot camp prison, boot camp prison that is contracted out by the State, any State or local contract facility, or other local or State correctional facility (including any juvenile facility).

## **Why is this information Important**

### **The Cost of Wrongful Death**

From the U.S. Department of Justice 2001 Statistics:

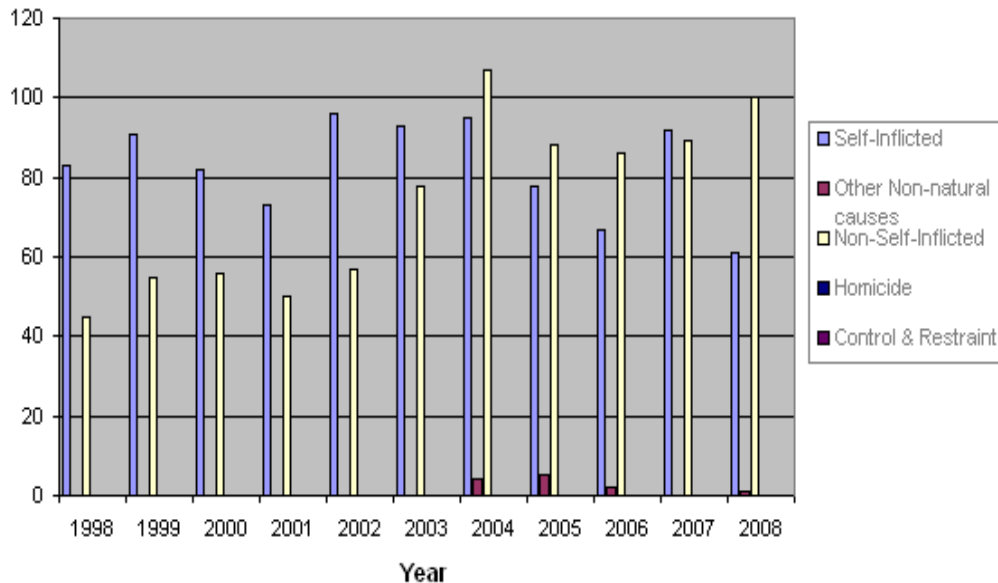
Estimated overall cost from all types of civil cases = 4 Billion Dollars.

Juries awarded over \$3.9 Billion and Judges awarded \$318 Million Dollars.

11,908 civil trials were wrongful death with 30 % winning their cases at a minimum of \$961,000 Dollars, with the mean award at least \$1 Million Dollars.

Majority of Wrongful Death were Medical Malpractice Cases.

**Deaths in Prison 1998 - 2008**



**BME Deaths in Prison 1998 - 2008**

## **What we need to know about Oxygenation**

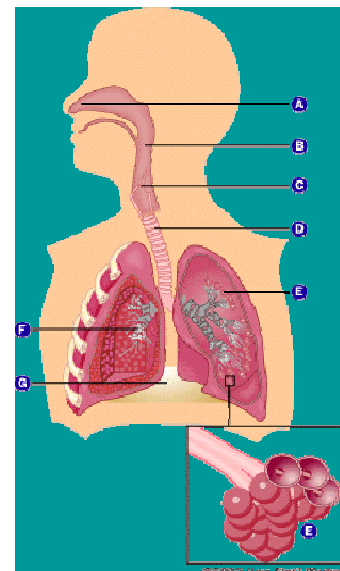
**Over view of Respiratory System.**

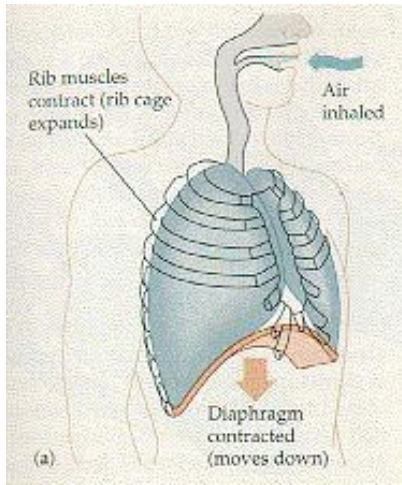
**Overview of Circulatory system.**

**The Important parts of the human Anatomy to be aware of during a subjects' restraint.**

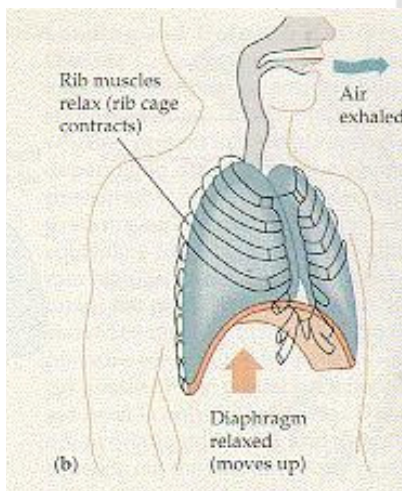
### **The Anatomy of a Breath**

- Nasal cavity
- Pharynx
- Larynx
- Trachea
- Alveoli
- Bronchial tree
- Diaphragm



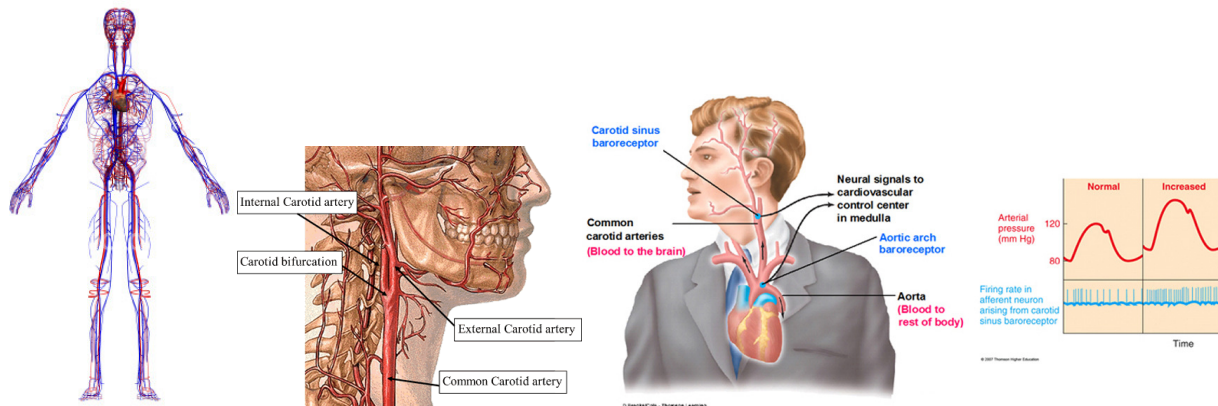


During inhalation, the diaphragm and intercostal muscles (the muscles between the ribs) contract and expand the chest cavity. This expansion lowers the pressure in the chest cavity below the outside air pressure. Air then flows in through the airways (from high pressure to low pressure) and inflates the lungs.

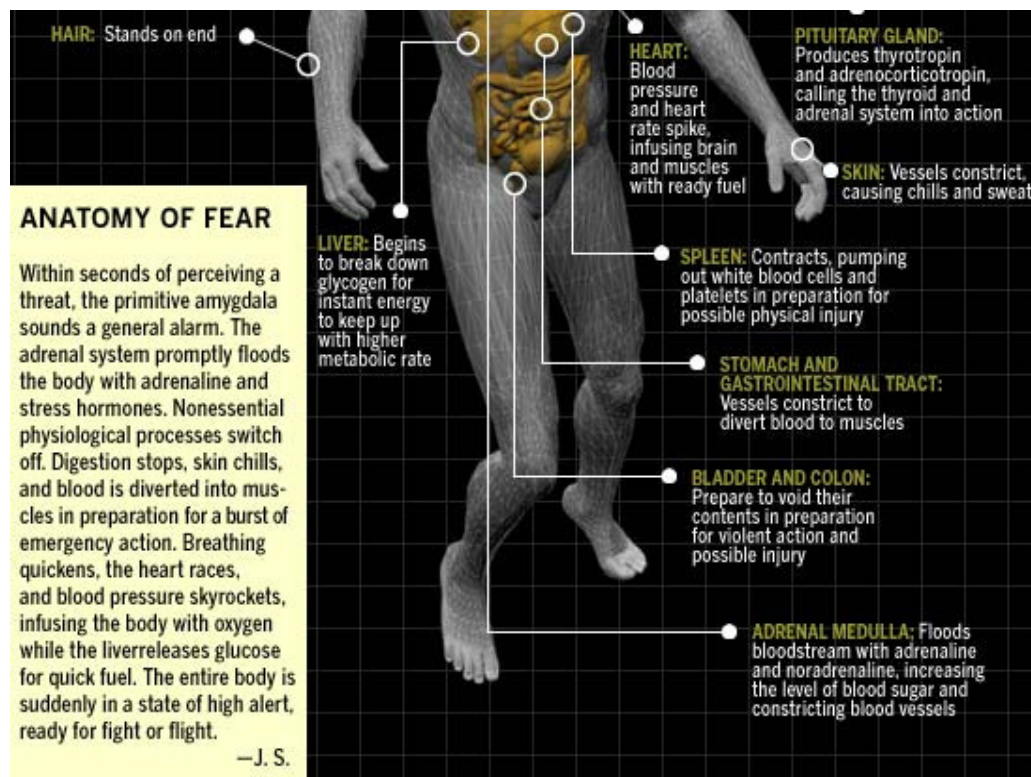
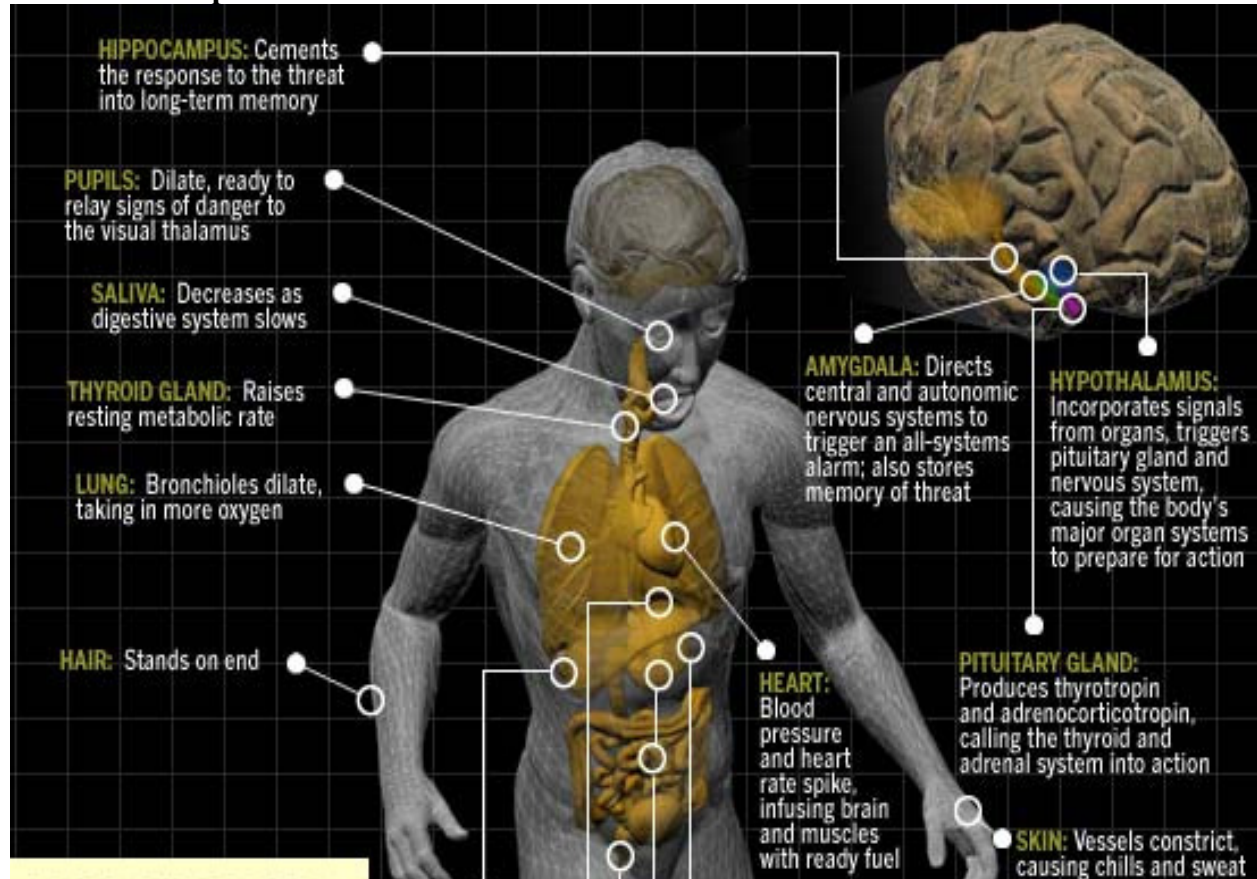


During exhalation, the diaphragm and intercostal muscles relax and the chest cavity gets smaller. The decrease in volume of the cavity increases the pressure in the chest cavity above the outside air pressure. Air from the lungs (high pressure) then flows out of the airways to the outside air (low pressure). The cycle then repeats with each breath.

## Circulatory System



## The Stress Response



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## Natural Diseases

Some Natural Diseases increase the risk of Sudden In-custody Death.

- Heart Disease
- Respiratory Disease
- Sickle Cell Trait

## Heart Disease

- **Cardiac hypertrophy (Enlarged Heart)**
- **Arteriosclerosis of coronary arteries**
- **Other risk factors to consider**
  - ✓ Male over 50
  - ✓ Hx of Smoking
  - ✓ Alcoholism
  - ✓ Cocaine abuse
  - ✓ Obesity
  - ✓ High Blood Pressure
  - ✓ The Stress Response during restraint

## Respiratory Disease

- **Asthma**
  - ✓ Attacks can be precipitated by stress response
  - ✓ Decrease levels of O<sub>2</sub> in blood
- **Emphysema**
  - ✓ Even moderate disease can be associated to increase respiratory arrest during the stress of physical restraint.
- **COPD (chronic obstructive pulmonary disease)**
  - ✓ a group of diseases of the lungs in which the airways become narrowed.
    - Emphysema
    - Chronic Bronchitis

## Pepper Spray

- **Asthma**
  - ✓ There are some cases in which the use of Pepper Spray (OC) may exacerbate a patient's asthma condition. Typically, the patient will let the EMS provider know that they have Asthma. The patient should be decontaminated to the point that the EMT can provide treatment without being overcome themselves. EMS providers should act quickly to determine if it is truly an Asthma Attack. An Asthma Attack that is not correctly or aggressively treated can have a very poor or negative outcome.

## Asthma Signs/Symptoms

- History of Asthma
  - ✓ Pt has inhaler
  - ✓ Has pt ever been intubated?
- Evaluating the Lungs
  - ✓ Rate
    - Too Fast –
  - ✓ Rhythm
    - Wheezes ?
    - Inspiratory/Expiratory/Both
  - ✓ Quality
    - Getting enough air to maintain homeostasis?
    - Speaking in full sentences?
- Pulse Oximetry
  - ✓ Does it match the radial pulses?
  - ✓ Pt color
    - Blue is Bad!

## Asthma/Treatment Possibilities

- If not ALS – call for ALS
- Start pt on oxygen – patients need for oxygen may range from a simple nasal cannula to a non-rebreather. Look for the pt to “pink up”, pulse oximetry should show a gradual increase in oxygen saturation and a decrease in pulse rate if treatment is having a positive effect.
- Patients that have their own inhaler with them may want to treat themselves with it. If they need assistance to use the inhaler check your local protocol to determine what assistance you can give. In most cases the EMS provider should verify:
  - ✓ It is the patient’s inhaler
  - ✓ It has not expired
  - ✓ The patient has not exceeded the maximum dosage for their inhaler

## Sickle Cell Trait

- Sickle cell disease affects more than 72,000 Americans, primarily those of African heritage, but also those of Arabian, Asian, Caribbean, Indian, Mediterranean, and South and Central American descent. (DPH of Illinois)
- **Sickle cell trait is a condition in which there is one gene for the formation of sickle hemoglobin and one for the formation of normal hemoglobin. Sickle cell trait occurs in one out of every 10 African Americans. Usually, people with sickle cell trait do not have any medical problems and they can lead normal lives. They do not develop sickle cell disease. (DPH of Illinois)**
- The sickling of red blood cells may occur under physically stressful conditions causing a decrease in oxygenation of the cells in the body.
  - ✓ Study from Atlanta found that 4 out of 14 deaths of African Americans in the custody of police had sickle cell trait and were restrained with upper body holds.



## History (Hx) Taking

- **Medical history**
  - ✓ Medications
  - ✓ Diabetes
  - ✓ Cardiac problems
- **Mental health history**
  - ✓ Committed to a facility
    - Voluntary/involuntary
  - ✓ Duration of stay
- **Are they taking any other recreational drugs?**
  - ✓ Muscle relaxants
  - ✓ Cannabis
  - ✓ Amphetamines

## Drug & Alcohol Intoxication

- Major risk factor for in-custody deaths
- Respiratory drive is reduced
- Subject may not realize they are suffocating.

**Quaaludes**  
Benzodiazepine family



**Marijuana**



**Alcohol**



## Acute Alcohol Withdrawal

### Signs and Symptoms

- **Sweating**
- **HR >100bpm**
- **Insomnia**
- **Nausea and/or Vomiting**
- **Hallucinations**
  - ✓ Visual
  - ✓ Tactile
  - ✓ Auditory
- **Anxiety**
- **Seizures**

## History (Hx) Taking

- **How much does the patient usually consume?**
  - ✓ 2 750ml of vodka
  - ✓ 30 Pack of beer
- **How long have they been drinking?**
  - ✓ 1 year
  - ✓ 10 years
- **When was their last drink?**
  - ✓ 12 hours
  - ✓ 24 hours
- **Previous withdrawals**
  - ✓ Inpatient/Outpatient
  - ✓ Problems
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## Cocaine /Amphetamine Intoxication

- Patient may have Cocaine/Amphetamine in their system
  - ✓ **Nasal**
  - ✓ **Venous**
  - ✓ **Smoked**
- Patient may attempt to hide evidence and swallow the Cocaine/Amphetamine while still in its packaging. The package may subsequently rupture and spill the contents into the patients stomach and then into the blood stream.
  - ✓ **This results in a massive overdose with a high mortality**

## Cocaine Induced Excited Delirium

- An acute mental disorder
- Impaired thinking
- Disorientation
- Visual hallucinations and illusions
- Causes sudden death due to excessive increase in suspect's heart rate and blood pressure.

## LSD & Meth. Excited Delirium

### Signs & Symptoms

- **Hyperactive Behavior**
  - ✓ Cannot stand still
- **Large Pupils**
- **Increased Respirations**
- **Flushed Skin**
  - ✓ Especially the face
- **Increased Heart Rate**
  - ✓ May exceed 200bpm
- **Hypertension**

### Treatment

- **Approach calmly and cautiously**
- **Benzodiazepine's for sedation (If ALS)**
  - ✓ Valium 5-10 mg IV
  - ✓ Ativan 1-2 mg IV, IM, PO
  - ✓ Versed 2.5 mg IV, IM
- **IV Fluids**
  - ✓ Normal Saline
- **Active cooling measures if febrile**
  - ✓ Ice Pack to:
    - Armpits
    - Groin
    - Neck
- **Temperature taken and reevaluated**
- **Respiratory system evaluated**
  - ✓ Rate
  - ✓ Rhythm
  - ✓ Quality
  - ✓ SPO2
- **Cardiac function evaluated**
  - ✓ 12 lead

### PCP & LSD Intoxication

- **Dissociatives and Hallucinogens**
  - They have anticholinergic effects causing dry flushed skin and miosis (dilated pupils).
  - They stimulate release of dopamine and norepinephrine causing agitation, tachycardia, rigidity, delusional thoughts, and excitement, similar to stimulant intoxication.
  - Dissociatives also cause a “psychic indifference to pain”. In other words, the patient can tell something hurts, it just doesn't bother them. This is why subjects on PCP can suffer a large amount of trauma without slowing down or stopping what they are doing.

- Dissociatives can also be sedating.

## Signs & Symptoms

- Hallmarks of dissociative intoxication are the above-mentioned clinical signs, plus rotatory nystagmus. In other words, the eyes are moving in a circular or side-to-side motion.
- Dissociatives tend **not** to cause respiratory depression.
- If there are signs of respiratory depression, consider a multi-drug overdose or other problem such as trauma, or medical disorder.

## Treatment

- Treatment of dissociative intoxication is mainly aimed at controlling aggressive or agitated symptoms.
- Treatment is similar to stimulant intoxication.
- BLS Keep patient calm. Try to keep the environment quiet, avoid lights and sirens, shouting when possible.
- Benzodiazepines such as Valium or Ativan, and a phenothiazine such as Haldol are usually effective in calming the patient down until the drug wears off.
- It is important to titrate to effect. Severely agitated patients may require large doses of sedatives.
- It is important to monitor airway and breathing whenever sedating these patients, as the stimulant may wear off, leaving unopposed sedative on board.

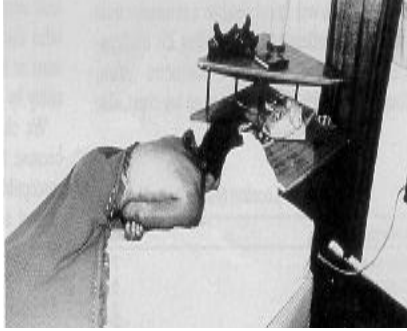
## Definition

**Asphyxia:** is a condition of lack of oxygen supplied to the body. In the absence of remedial action it will very rapidly lead to unconsciousness and death. Asphyxia is the same as suffocation and anoxia.

**Asphyxiation:** is the act of causing asphyxia, usually by suffocation.

**Positional asphyxia**, also known as **postural asphyxia**, is a form of asphyxia which occurs when someone's position prevents them from breathing adequately. A small but significant number of people die suddenly and without apparent reason during restraint by police, prison (corrections) officers and health care staff. Positional asphyxia may be a factor in many of these deaths.

Any body position that obstructs the airway, *or* that interferes with the muscular or mechanical means of getting air into and out of the body (the body's "Bellows" function) will result in a positional asphyxia death if the person cannot get out of it.



**This 30-year old intoxicated alcoholic was found dead with his face buried in the pillow.**



**This 40-year old was discovered dead sitting next to her bed with her head flexed. She had a nontoxic goiter and a postmortem ethanol concentration of 0.29%.**



**This 29-year old alcoholic fell asleep with his head and neck hyperflexed in the back seat of this automobile. His postmortem blood ethanol concentration was 0.39%.**



**This 77-year old alcoholic was found lying over his bathtub, thus severely restricting both diaphragm and chest wall movement. His postmortem ethanol concentration was 0.21%.**

### **Positional or Restraint Asphyxia**

- Positional or restraint asphyxia occurs when the body position of the individual interferes with the normal breathing and results in death from suffocation. It is an impairment of the respiratory system in which oxygen is decreased and carbon dioxide is increased.

## The Position & The Struggle

- **Suspect restrained face down (prone position)**
- **Weight is applied to subjects back for control.**
  - ✓ The more weight, the more severe the degree of compression.
  - ✓ The the natural reaction to oxygen deficiency occurs, the subject struggles more violently.
  - ✓ The Officer applies more weight / compression to control the subject.

## Things that make a subject more at risk for Positional Asphyxia

- Obesity
- Alcohol & drug use
- An enlarged heart (this renders a suspect more susceptible to cardiac arrhythmia under conditions of low blood oxygen and stress)



## **Nathaniel Jones - Cincinatti arrest**

- There are two videos of Nathaniel Jones incident- 1 is in the white castle when he is acting strange and the other is the struggle with the police officers

Videos for Nathaniel Jones arrest:

<http://www.foxnews.com/story/0,2933,104467,00.html>

<http://www.local6.com/news/2672416/detail.html>

<http://www.cnn.com/2003/US/Midwest/12/04/died.in.custody/>

## **Positional or Restraint Asphyxia**

- In a result of 30 patients, signs of mechanical asphyxia were found in 93% of victims including 43% of victims found in a position producing hyperflexion of the head and neck. This is the position in which the head is bent forward with the chin touching the chest, restricting the flow of oxygen to the lungs.

## **Positional Asphyxia**

- **Metabolic Acidosis**
- **Rhabdomyolysis**
  - ✓ Muscle breakdown
- **Catecholamine**
  - ✓ Rise in normal levels of epinephrine and norepinephrine
- **Lactic Acid**
- **Cocaine Associated Rhabdomyolysis (CAR)**

## Violent struggle & restraint

- Officers use some type of restraint
- Violent resistance by subject makes them more vulnerable to respiratory muscle failure.

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- Unresponsiveness of subject may indicate cardiopulmonary arrest.
- Subject needs immediate medical attention.

### Hog tie

- Person is in the prone position (face down) with their arms and legs bounds together.
- To impede or disrupt movement or action.

### How to minimize the risk of sudden in-custody death

- As soon as subject is handcuffed, get them off their stomach and on their side.
- Many law enforcement and health personnel are now taught to avoid restraining people face down or to do so only for a very short period of time.
- Ask if subject is under influence.
- Ask subject if any cardiac or respiratory disease or asthma, bronchitis, or emphysema.
- Monitor subject carefully.
- Be trained in recognizing breathing difficulties & loss of consciousness (Medical Emergencies)

### Alternative to Restrain Individuals



**INCREASE OFFICER SAFETY  
REDUCE SUBJECT INJURY  
ALLOW MEDICAL TREATMENT WHILE RESTRAINED  
LIMIT AGENCY LIABILITY**

**The WRAP**

SAFE RESTRAINTS, INC. - THE WRAP is the ultimate immobilization system. THE WRAP can greatly reduce injuries, positional asphyxia, and in-custody death, while attempting to control a violent subject, allowing medical treatment while restrained.

**Call: 1-800-WRAP 911 (972-7911) • Fax: 1-435-649-5669  
www.saferestrains.com • email: sales@saferestrains.com  
SAFE RESTRAINTS, INC. P.O. Box 680512 • Park City, UT 84068**

### Acute Behavioral Disturbances Potential Cause

- Brain tumors, infection, delirium from increased body temperature, heat exhaustion, thyroid disease as well as high an low blood sugar.
- Illegal drugs (cocaine, meth., pcp and other stimulants)
- Medications.

- ✓ Psychiatric medications used to treat schizophrenia, bipolar, depression, anxiety and ADHD, some are stimulants.
  - ✓ Examples Resperdal, Prozac, Zoloft, Adderal, Concerta, and Ritalin.
- Brain tumors, infection, delirium from increased body temperature, heat exhaustion, thyroid disease as well as high and low blood sugar.
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    - ✓ Examples Resperdal, Prozac, Zoloft, Adderal, Concerta, and Ritalin.

### **Delirium**

- Is derived from the Latin word Delaire which means to become crazy or rave
- These patients can present as:
  - ✓ Agitated
  - ✓ Hypervigilant
- These patients may also present with hallucinations:
  - ✓ Visual
  - ✓ Auditory
  - ✓ Tactile

### **Four types of delirium**

- Medical
- Chemical
- Surgical
- Neurological

### **Metabolic causes for Delirium**

- Hypothyroidism
- Hyperthyroidism
- Hypoglycemia
- Hypoxia

### **Infections that can cause Deliriums**

- UTI (Urinary Tract Infection)
- Pneumonia
- Fever from viral infections
- Meningitis
- Encephalitis

### **Important Notes**

- Two of the most frequent causes of delirium in the elderly is medication reaction & UTI



### **Medications that can cause a high fever (Malignant hyperthermia)**

- Tricyclic antidepressants
  - ✓ Elavil/Amitriptyline
- Antipsychotics
  - ✓ Mellaril/Thioridazine
- SSRI antidepressants
  - ✓ Prozac, Celexa, Zoloft, Paxil
- Stimulants
  - ✓ Ritalin
  - ✓ Adderal

### **Drugs that can potentially cause delirium**

- Anticonvulsants / Psychiatric Medications
  - ✓ Depakote
  - ✓ Tegretol
  - ✓ Lamictal
  - ✓ Trileptal
- Antihypertensives
- Cardiac Glycosides
- Cimetidine
  - ✓ Tagament

### **Additional drugs that can potentially cause delirium**

- Insulin
- Opiates
- PCP
- Salicylates (aspirin)
- Steroids

### **Excited Delirium**

- Studies estimate that excited delirium may be a factor in 50 to 125 in custody deaths per year in the U.S. alone.
- Part of the problem seems to be that the officers tend to see the bizarre and alarming behavior or a subject experiencing this condition as strictly out of control and an arrest situation rather than a serious medical emergency that can be fatal.
- (This is similar to a law enforcement official distinguishing the difference between a combative drunk person and a person in a diabetic crisis. Even though they may share some common behaviors, one may need to go to jail and the other to the hospital.)

### **Excited delirium episodes are most common-**

- ✓ Thursday through Sunday
- ✓ May through September
- ✓ Mostly in males- females are extremely rare
- ✓ Under the influence of cocaine

- ✓ 1/3 of the time the subject will have a mental illness- schizophrenia most likely.

## **Excited Delirium (ED)**

### Agitated Delirium Syndrome

#### Objectives

- Define the following
  - ✓ Delirium
  - ✓ Excited/Agitated Delirium
  - ✓ Hyperpyrexia
  - ✓ Autonomic Hyperreflexia
  - ✓ Hypersomnia
  - ✓ Wernicke's Encephalopathy

#### **Autonomic Hyperreflexia**

- A reaction of the autonomic (involuntary) nervous system to over stimulation

#### **Hyperpyrexia**

- An abnormally high fever

#### **Excited Delirium**

- Delirium is a true medical emergency.
- A severe disturbance in the level of unconsciousness and a change in mental status over a relatively short period of time.
- Predominately males (97%), average weight of 220, and average body temperature is 104 degrees.

#### **Excited Delirium Characteristics**

- Reduced clarity to awareness of their environment.
- Their ability to focus, sustain or shift attention is impaired.
- Perceptual disturbances are common and the person may hallucinate. A delirious person is most likely to manifest as acute behavior disturbance.
- These people can appear normal until they are questioned.
- When confronted or frightened these individuals can become oppositional, defiant, angry, paranoid and aggressive.
- Further confrontation, threats of use of force, will most likely result in further aggression and violence.
- As many as 5- 8 people may be required to attempt to restrain and control these individuals due to unusual strength, pain insensitivity and instinctive resistance.

#### **Signs/Symptoms of ED**

- Hallucinations
  - ✓ Visual
  - ✓ Auditory
  - ✓ Tactile
- Disoriented to person, place & time
- Not rational
  - ✓ Paranoid Delusions

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- Agitated
- Hypervigilant
- Rapid onset
- Fever
- Super Human Strength

### **Possible causes for ED**

- Chemical Imbalances
- Fever
- Change in medications
- Toxins

### **Dealing with Patients of Excited Delirium**

- As soon as you first think that you are dealing with subjects of excited delirium call for backup and ALS.
- Scene safety
- Focus on containing the subject unless there is an immediate public safety threat.
- Keep in mind excited delirium often has characteristics of superhuman strength and imperviousness to pain. Control through empty hand techniques may be more difficult to achieve, and pain based techniques maybe relatively ineffective.
- The effectiveness of pepper spray to an individual who is unresponsive to pain will most likely be diminished.

### **Excited Delirium**

- **Lethal excited delirium occurs in 4 sequential phases:**
  1. Elevated body temperature-
    - hard to read with a struggling individual
    - it may be due to brain dopamine receptors
  2. Aggravated delirium
  3. Respiratory arrest
  4. Death

### **Dealing With Patients Of Excited Delirium**

- If possible do not transport the individual to the hospital in a police car. They should be transported by ambulance unless waiting for an ambulance would cause unreasonable delay.
- Individuals should not be placed in the prone position. As soon as it is realistically possible and safe, move the patient out of the prone position and place them supine or head elevated on the stretcher
- No hobble tying or hog tying
- Oxygen
- Monitor vital
- ALS- Cardiac monitor
- Any individual with an altered mental state should have blood sugar and temperature checked.

## Medical Response

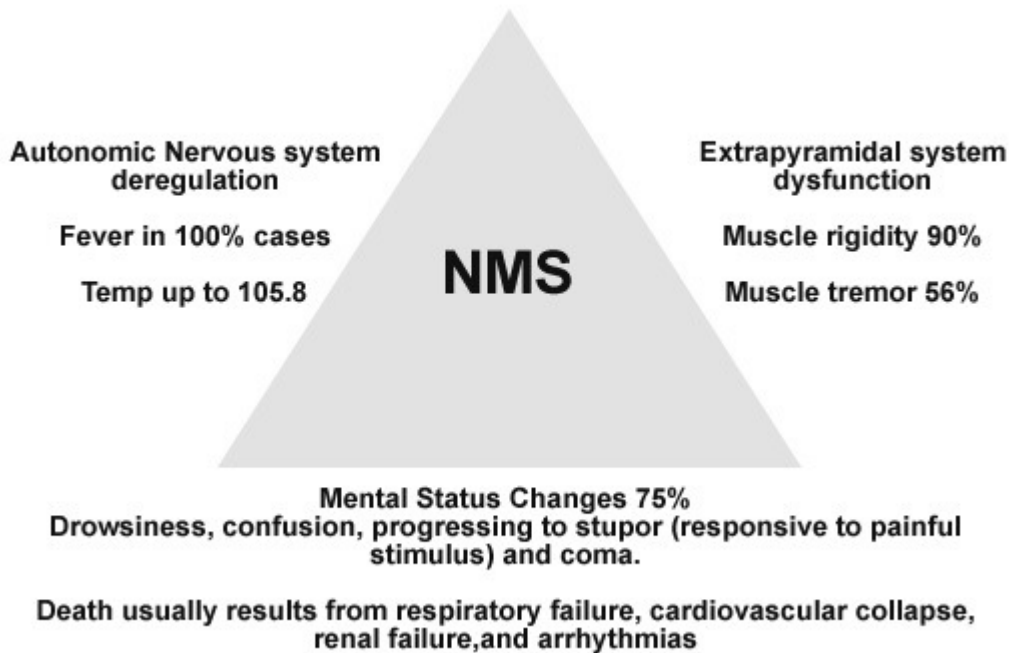
- Approach calmly and cautiously
- Active cooling measures
- Temperature taken and reevaluated
- Respiratory system evaluated
  - ✓ Rate
  - ✓ Rhythm
  - ✓ Quality
  - ✓ SPO2
- ALS
  - ✓ Benzodiazepine's for sedation
  - ✓ IV Fluids
  - ✓ Cardiac function evaluated
    - 12 lead

## Medications for treating ED

- Haloperidol
- Thioridazine
- Risperidine

## Neuroleptic Malignant Syndrome (NMS)

- This is a rare (0.02 – 12.2%), but life threatening reaction to neuroleptic medications and some anti-depressant medications.
- Signs and symptoms: Fever, muscular rigidity, altered mental state, and autonomic dysfunction.
- Medications associated with this Syndrome:
  - ✓ Haloperidol (Haldol) anti-psychotic neuroleptic = 7
  - ✓ Fluphenazine (Prolixin) anti-psychotic neuroleptic = 0
  - ✓ Promethazine (Phenergan) Anti-nausea
    - (same drug class as Thorazine and anti-psychotic) = 0
  - ✓ Clozapine (Clozaril) Anti-psychotic = 1
  - ✓ **Risperidone (Risperdal) Anti-psychotic = 70**
  - ✓ Reglan treats gastroesophageal reflux (heart burn) = 2
  - ✓ Lithium for Bi-polar D/O (Manic Depression) = 23
  - ✓ Prochlorperazine (Compazine) Anti-nausea
    - for Anxiety and Psychotic D/O = 4



## Neuroleptic Malignant Syndrome (NMS)

- **Treatment Pre-hospital Care:**
  - ✓ Assessment of ABCs
  - ✓ Altered Mental Status noted
  - ✓ ALS
    - Should receive thiamine (Vitamin B1)
    - Dextrose (or rapid glucose determination)
    - Naloxone (Narcon) reverses the effects of narcotics.
- **Patient's Safety:**
  - ✓ Restraints may be needed
    - Agitated and hyperthermic patients can increase the risk of morbidity and mortality in various disease states. (NMS, cocaine intoxication, and amphetamine abuse)
    - Chemical restraint (if available) may be preferable.

### In - Review

- Carefully screen and visually monitor people who have recently started a trial of medication and especially medications that may have serious side effects or interactions.
- Learn how to recognize the signs of delirium and the initial symptoms.
- Obtain immediate medical consultation, evaluation and attention for any person who may suffer from a delirium.
- Do not excite, confront or agitate individuals who are delirious.
- Contain behavior rather than restrain behavior when the individual is not dangerous to self or others.
- Avoid the use of force unless there is an immediate danger to the individual or others.

- Use communication tactics that may calm the individual before using tactics that represent confrontations.
- Use the lowest level of force necessary as well as a method of restraint that would not necessarily cause asphyxia.
- Learn how to properly restrain people as well as monitor any person who is restrained.
- Be cautious and aware of potential side effects associated with medication- especially those that include delirium, psychomotor acceleration, impaired mental status, emotional instability and psychotic symptoms.

### **Common terms throughout presentation**

- **Monitor** (as far as medically monitoring)- monitor vital signs such as breathing, color of skin, odd position, etc.
- **Delirium**- a mental disturbance caused by confusion, disordered speech, and hallucinations; frenzied excitement
- **Asphyxia**- a lack of oxygen or excess of carbon dioxide that is usually caused by interruption of breathing and causes unconsciousness
- **Brain Dopamine**- Dopamine is a precursor of norepinephrine that acts as a neurotransmitter at certain synapses of the brain. Disorders at these synapses have been implicated in schizophrenia and Parkinson disease.

### **Responsibility and Liability**

- Any individual who makes a determination to restrain someone may be charged and found responsible for the intended or unintended impact.
- As always, follow Protocols.