

The Unconscious Boxer



The approach to the unconscious boxer is the most dire emergency the ringside physician faces. The rare though real specter of intracranial hemorrhage and permanent neurologic damage is always in the back of the ring physician's mind.

There are two possibilities when the physician enters the ring for a "Down Boxer". Either the boxer is still unconscious or the boxer is recovering consciousness.

- **The Boxer is Unconscious**

The physician enters the ring quickly, smoothly, calmly. He approaches the boxer and acts in this order:

1. **Make sure the boxer is breathing**--- if not resuscitation begins
2. **If the boxer needs to be turned onto his back, this is done using "cervical precautions", "log rolling", etc.**
3. **He removes the boxers mouthpiece**
4. **Cervical Collar** put in place

5. **Headgear**** is carefully removed
6. **Oxygen** is started
7. The boxer moved to a **stretcher** (cervical precautions)
8. The boxer is **transported with “full lights and siren”** to the nearest emergency room equipped to handle head trauma (neurosurgical facility).

**** Some would prefer to leave the headgear until the boxer arrives in the trauma center. I prefer to remove it in the ring as administration of oxygen, and cervical collar placement seem better without it. When the headgear is removed in the ring, care must be taken not to aggravate any spinal injury.**



- **The Boxer is Regaining Consciousness**

The physician varies his routine based on the circumstances of the boxer. If the boxer is conscious but has remained motionless, the boxer is asked to move his hands and feet. If he has motion, the cervical vertebrae are palpated for tenderness. Once the Boxer is clinically recovered enough to do so, if the boxer's responses are rational, he has full motor control and no cervical tenderness, the athlete is allowed to move with assistance to a nearby stool. The boxer will be observed for pupil size, reaction, balance, coherence, and short term memory. All boxers who have lost consciousness receive a neurological evaluation by the ringside physician. The examination is repeated every few minutes until it is normal.

If the boxer was unconscious for less than one minute the decision to send the boxer to the hospital for complete neurologic work up, MRI/CAT scan, etc. will be up to the evaluating physician. Boxers unconscious for more than one minute should be referred for further evaluation.

In international tournaments as much as possible with language differences, the medical team in charge of post bout examinations should advise coaches and boxers who have suffered a concussion to go immediately to an emergency room should the athlete develop **projectile vomiting**, **unequal pupils**, or **decrease in state of consciousness**. In national tournaments, where language is homogeneous, it is our practice to have prepared “head sheets” for all boxers who have lost consciousness. We ask coaches of the concussed boxers to sign these well as the concussed boxer may not remember instructions.

When a formal “head sheet” is available (in addition to stressing the big three: Pupils, vomiting, and consciousness) it can contain more detailed advice in describing the symptoms of intracranial bleeding.

❖ **If you observe any of the following changes in the boxer, take the boxer to an emergency room immediately.**

- **Vision changes**
 - Any change in vision
 - Decreased vision, loss of all or part of vision
 - **Pupils different size (#1)**
 - Uncontrollable eye movements
 - Eyelid drooping
- **Nausea, vomiting (#2)**
- **Change in level of consciousness (#3)**
 - Apathetic, withdrawn
 - Sleepy, lethargic, somnolent, stuporous
 - Unconscious, comatose
- **Other Neurologic Changes such as**
 - Weakness,
 - Inability to move a body part
 - Confusion
 - Seizure
 - Loss of fine motor skills
 - Hand tremor
 - Decreased sensation
 - Numbness or tingling
 - Abnormal sensations
 - Facial paralysis
 - Difficulty speaking
 - Difficulty understanding speech

- **Loss of coordination**
- **Loss of balance**
- **Abnormal sense of taste**
- **Difficulty swallowing**
- **Difficulty writing or reading**
- **A Sudden Headache**
 - **The headache may occur when lying flat**
 - **The headache may awaken patient from sleep**
 - **The headache may increase with change in position**
 - **The headache may increase with bending, straining, and coughing**
- ❖ **Do not give the athlete any narcotic or sedative medicine for 48 hours as this may mask symptoms.**
- ❖ **Do not give the athlete any aspirin containing drugs as this may increase the probability of bleeding.**

Post Concussion Syndrome

Athletes may suffer a concussion without any adverse after effects. All too often concussions are complicated by other temporary mental/neurologic changes.

The eight most common problems after a concussion are:

- (1) Headache
- (2) Dizziness
- (3) Fatigue
- (4) Irritability
- (5) Insomnia
- (6) Concentration
- (7) Memory difficulty
- (8) Intolerance of stress, emotion, or alcohol

The new onset of any three of these symptoms in an athlete who has had a blow to the head are diagnostic an otherwise missed concussion. They are considered complications of a concussion and may be referred to as the “post concussion syndrome.”

Many other complications of concussion are recognized in areas of cognition, emotion, and behavior. The ringside need not “learn” them but should recognize them when they occur. Many of these are listed in the appendix following this article.

To summarize the above, if a physician wants to work in any contact sport this is the most important and first information to be learned. Every ringside physician should know exactly the steps for management of the unconscious athlete and how to manage the athlete regaining consciousness. Physicians without much experience or who serve only occasionally might want to write the steps on an index card for their pocket to review before the start of the day’s competition or for needed reference.

Appendix to the Unconscious Boxer

More Detailed List of Findings in Post Concussion Patients

Physical

- Headache (Same Type They Experienced Before Injury)
- Dizziness
- Sensitivity To Light Or Noise
- Decreased Sense Of Taste
- Decreased Sense Of Smell
- Blurred Vision
- Double Vision
- Tinnitus.
- Loss Of Hearing Occurs In 20% Of Cases.
- Sleep Disorders
 - Insomnia
 - Fatigue
 - Sleepiness
 - Other Problems
- Nausea/ Vomiting
- Stress/Alcohol----Decreased Tolerance

Psychological

- Emotional:
 - Irritability
 - Anxiety
 - Depression
 - Aggression
 - Mood Swings
- Apathy
- Emotional Lability
- Anger
- Personality Changes
- Restlessness
- Decreased Libido
- Loss Of Social Judgment
- Impulsiveness

Higher Mental Functions

- **Confusion or Impaired Cognition**
- **Attention Problems**
- **Impaired Judgment**
- **Memory Problems**
 - **Amnesia**
 - **Short-Term Memory**
- **Slowed Information Processing**
- **Slowed Reactions To Stimuli**
- **Difficulty With**
 - **Abstract Thinking**
 - **Problem Solving**
 - **Work Performance**
 - **Social Interaction**
- **Neuropsychological Impairments in Speed of Information Processing.**