Sports Medicine Basics In The Judo Athlete
(Part 1)

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Judo Sports Medicine Seminar

- This course is meant to be an educational & informative seminar about sports medicine issues in the judo athlete.

- Officials, coaches, athletes, parents, and judo enthusiasts in general are all welcome.
Contents

• Purpose
• Important Symptoms
• Head Injuries & Concussions
• Emergency Mat-side Care
• Spine Injuries
• Chokes & Arm-locks
• Blood & Bodily Fluids
Goals & Roles

• Become familiar with the basics
• Promote and facilitate a healthy athletic lifestyle through safe judo participation
• Understand your limitations as a health provider or caregiver
• Priorities: Safety & health of the athlete is the top priority
Don’ts

• Do NO Harm!
• Do NOT Diagnose or Treat!
• Do NOT Manipulate
• Do NOT Move: Especially an unconscious athlete or one with potential significant spinal injury and/or complaints
Judo Is A Contact-Collision Sport!

- Full spectrum of injuries & problems
- Probable similar injury profile and incidence as wrestling
- The Sports Medicine Subcommittee is currently conducting research to further understand the true incidence of judo injuries & problems, as well as potential effective treatments and ways to improve physical performance
- Potential long term damage & disability
Important Symptoms

• **Pain and Swelling:**
  ◊ Severity & persistence

• **Numbness, Tingling, Weakness:**
  ◊ Possible nerve or spinal cord injury

• **Range of Motion and/or Dysfunction:**
  ◊ Possibly broken, torn, pinched, or dislocated
Head Injuries

- Head Contusion (Bruise)
- Concussion
- Structural Brain Injuries
  - Brain Contusion or Swelling
  - Intra-Cranial Hemorrhage (bleeding in or around the brain)
  - Skull Fracture
Concussions

• Common & Significant
• Enigmatic
• Controversial
• Wide variations in seriousness, long term damage, and disability
• Return to play (RTP) decisions potentially very difficult
• Medico-legal issues
Sports Related Concussions

• 2-5% of all athletic injuries
• Contact-collision sports
• Football: >100,000 cases per year
• 20% high school football players per year
• Statistics in judo players unknown but incidence probably high & proportionate to other contact-collision sports
Goals of Concussion Management

- Accurate diagnosis
- Damage control
- Screen for associated injuries (i.e. neck)
- Allow safe return to play
Concussions: A Diagnostic Dilemma

- Vague symptoms
  - Confusion, dizziness, clouded thinking
  - Altered consciousness & amnesia
- Difficult to identify those at risk for complications or permanent damage
- Currently, there is not much scientific evidence and knowledge to support any one return to play guideline
- Limited time for evaluation on mat
Definition of Concussion

“A complex pathophysiological process affecting the brain, induced by traumatic biomechanical forces”

Summary & Agreement Statement of the First International Conference on Concussion in Sport, Vienna 2001
Classic Concussion Characteristics

- Altered Consciousness
- Memory Problems & Amnesia
- Confusion & Disorientation
- Poor Concentration & Thinking
- Dizziness & Balance Disturbances
- Delayed Reflexes & Reaction Times
Potential Bad Outcomes After Concussion

• **Death**
  - Severe brain swelling after multiple concussions
  - Wrong diagnosis (i.e. severe intra-cranial hemorrhage)

• **Cumulative Brain Damage**
  - “Punchiness”

• **Paralysis**
  - Missed concomitant severe spinal injury
Chronic Traumatic Brain Injury

- Possible Risk Factors
  - Duration of exposure
  - Numerous injuries

- Permanent, variable brain damage that occurs in certain individuals after head injury(s)
  - Genetic Predisposition
Emergency Mat-Side Care

- Always follow your Basic Life Support/CPR ABC’s in an unconscious or unresponsive athlete
  - Airway
  - Breathing
  - Circulation
Emergency Mat-Side Care

- **NEVER MOVE AN UNCONSCIOUS ATHLETE!**

  - He/she can’t tell you if their neck was seriously injured and are in pain if they’re not awake.

  - *Care of the spine takes precedence over head injury evaluation in the unconscious athlete.*

  - This athlete should only be moved if breathing is significantly compromised or if other medical professionals experienced in spinal injury care are available to assist.
Log Roll

Figure 12.4: Rollover technique using spine board
Hospital Transport For Head Trauma

- Significant headache
- Significant loss of consciousness
- Persistent or worsening concussion symptoms
- Post head injury convulsions, twitching, or seizure
- Persistent visual disturbance
- Suspected significant spine or nerve injury
Concussion: 
The Return To Play Dilemma

- Lack of consensus: not well understood or agreed upon
- Not much medical or scientific research available on concussions to aid in concussion management and validate our current methods
- Difficult to practically predict which athletes are at risk for significant long term complications or damage
Lack of Consensus

- When presented with a certain head injury scenario, sports medicine doctors differed significantly on their return to play recommendations.

Return To Play Recommendations
(Immediate Post Head Injury)

- Any symptomatic athlete must be held from play
- Loss of consciousness or prolonged (>15 min) symptoms usually precludes return to play (RTP) that day
- Have concussed athletes sit & monitored
- Check every 5 minutes for at least 15 min
- Medical evaluation following injury with medical supervision for stepwise RTP
The USA Judo Sports Medicine Subcommittee recommends that all judo athletes with a concussion or significant head injury be evaluated and cleared by an experienced physician prior to return to practice or competition.
Concussion Return To Play Protocol: Stepwise Process

1. No activity, complete rest; (For each stage, once the athlete is asymptomatic, proceed to the next level)
2. Light aerobic exercise
3. Sports specific low impact training
4. Non-contact training drills
5. Full-contact training after medical clearance
6. Game play

Adapted from the Summary & Agreement Statement of the First International Symposium on Concussion in Sport, Vienna 2001
Concussion RTP Judo Specific Protocol: Stepwise Process

1. No activity, complete rest
2. Light aerobic exercise
3. Sports specific low impact training
   1. Light Judo calisthenics
   2. Shadow Uchikomi
4. Non-contact training drills
   1. Newaza Uchikomi
   2. Light Tachiwaza Uchikomi (No Lifting)

5. Full-contact training after medical clearance
6. Game play

Adapted from the Summary & Agreement Statement of the First International Symposium on Concussion in Sport, Vienna 2001
Post Head Injury Precautions

(1st 24 Hrs)

- Seek immediate medical care if:
  - Loss of consciousness recurs
  - Severe or worsening headache
  - Persistent nausea/vomiting
  - Progressive lethargy (drowsiness)
  - Strange or inappropriate behavior

- Observation checks
Spine Injury

NEVER MOVE AN UNCONSCIOUS ATHLETE!

Potential Serious Spinal Injuries
- Fracture
- Unstable Spinal Segments or Dislocation
- Significant Spinal Cord or Nerve Compromise/Damage
- Significant Herniated Disc

Most spinal injuries require further evaluation by a physician

Medico-Legal Issues
Chokes & Strangle Holds

- Generally Safe
- Essentially cuts off blood flow to the brain when applied persistently
- Flailing or seizure like activity may occur but are usually benign in the vast majority of cases
- Crush injuries to neck & throat not commonly seen
Strangle Holds: Dangerous Situations

- Cranking: Forced neck bending or twisting
- Crushing: Potentially harmful with kata-juji-jime with tori on top and with hadaka-jime
- Prolonged strangulation
- Abnormal bodily posturing (back arching) after choked unconscious
- The occurrence of any of the above dictates further evaluation by an experienced medical professional
Prolonged Strangulation
How Long Is Too Long?

• Not much scientific research available on possible complications specifically from judo choking techniques
• Brain cell death occurs after 6 minutes of cerebral anoxia (lack of oxygen)
• Although an exact duration of strangulation or time rendered unconscious deemed unsafe cannot be quoted, most healthy (no medical problems, diseases, syndromes) athletes can tolerate prolonged compromise of blood flow to the brain
Chokes & Strangleholds

- Follow Basic Life Support: A,B,C’s
- “Safe” position is side lying-partial prone position
- Requires immediate professional medical attention if any potentially dangerous situation arises
  - Crushing, neck cranking, prolonged strangulation, abnormal body posturing
Armlocks

- Stress applied to elbow joint may result in injury to ligaments, nerves or cartilage/bones/joint.
- Inability to fully extend (straighten) the elbow joint may indicate significant injury.
- Majority of injuries need further evaluation by a physician.
Blood & Bodily Fluids:
Follow Universal Precautions

• ALWAYS WEAR CLEAN, LATEX GLOVES when handling blood, bodily fluids, or open wounds
• Uniform and mat clean up with proper disinfectants
• Cover affected areas and wounds steriley whenever possible
• Proper disposal into separate infectious waste bags or containers
Bleeding

- Gloves & disinfectants
- Pressure, pressure, pressure!
- Barriers: Attempt to cover wound sterilely after bleeding controlled
- Proper disposal
- Significant or complex wounds should be further evaluated and managed by a medical professional
Nose Bleeds

- Most are benign
- Nose plugs or packing, along with gentle, constant pressure (just distal to the bridge of the nose) usually sufficient
- Brisk or profuse bleeding or significant pain may indicate a facial bone fracture or other serious problem
- Always wear gloves!
• **Bite Wounds**
  - Treat & clean any bleeding accordingly (universal precautions)
  - Considered a “dirty wound”
  - Tetanus prevention & antibiotic treatment may be warranted
  - Requires appropriate & timely professional medical evaluation & treatment
Blood & Bodily Fluids: Follow Universal Precautions

• Possible Blood Borne Exposure
  
  In case of any potential blood exchange between individuals:

  1) Clean & treat any wounds or bleeding accordingly
  2) The involved parties should each be advised to contact their personal physicians ASAP for further evaluation & recommendations
Procedures To Establish Medical Staffing At National Judo Events

- Provide a in state licensed sports medicine experienced physician who shall be responsible for:
  - All medical personnel actions, recommendations, & care
  - Being familiar with & educating all medical staffing with IJF judo medical rules
  - Keeping medical records of the injuries sustained and treated at the venue

- Provide certified athletic trainers

- Have available in case of emergency, an ambulance on standby or an immediately accessible means of communication to initiate the emergency medical system
Recommended Medical Supplies
At Judo Tournaments

- Ice & ice baggies
- Gloves & paper towels
- Disinfectant solution & spray bottles
- Infectious waste disposal bags
- Band-aids, athletic tape, cotton nose plugs/nasal tampons
- Injury documentation forms
- Local hospital directions flyers
Judo Maxims

• Maximum efficiency with minimum effort

• Mutual welfare and benefit for all