

Medical Manual for Judo

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Tournament medical area requirements

Physical area

- *Table and 3 chairs per combat mat area*
- *Treatment area approximating table to be 2 mats long in line of sight proximity to the competition area*
- *Privacy screen*
- *Examination table (2 may be needed for larger competitions)*

Equipment

- *Ice packed in bags in an esky*
- *Access to power.*
- *Writing paper and pens*
- *Garbage bin*
- *Other gear as per medical/paramedical personnel*

Personnel

- *One doctor per competition*
- *One medically trained per mat area (doctor or physiotherapist)*
- *One other person per mat area (first aid certificate at least)*

Guidelines for medical personnel attending Judo tournaments

Punctuality

It is expected that you arrive not less than 30mins prior to the commencement of the competition. If you are the one responsible for medical support then it is important that you liaise with the officials prior to the competition day and if possible be present on the day that the tatamis (mats) are laid out to negotiate an adequate treatment area.

Preparedness

Know the rules of Judo, be prepared with your support gear, be watchful at all times during a competition and when called to attend to an athlete at the competition area, ensure efficiency with professionalism.

Communication

Any significant treatment to an athlete must be explained to the athlete's coach or nominated support person. Written documentation of the treatment undertaken is advisable. Maintain a list of those athletes that you have treated (ideally obtain a complete list of attending athletes prior to the tournament).

Medical personnel other points

Have adequate and appropriate medical insurance (check with your medical insurance company)

Enlist support of tournament managers in cases of conflict/disagreement with coaches or athletes

*Manage integrity issues appropriately - areas of **special** care include the young athlete (under 18 years), confidentiality, conflict of interest, avoiding corridor consultations without making notes, requests to treat family members, avoiding intimidate contact with any athlete.*

The following reference is a good read on these and other integrity issues.

“A Review of Legal, Ethical, and Governance Issues for Team Doctors” <https://pubmed.ncbi.nlm.nih.gov/34759177/>

General Procedures for medical/paramedical personnel

- Keep a record of all medical interventions*
- Do not interfere with a bout unless requested by a referee or an obviously potentially life threatening event has occurred.*
- Blood control is at the direction of the referee.*
- Do not apply tape, ice, or anything else to the athlete unless it is for control of bleeding.*
- Offer the athlete a more thorough assessment after the bout and accompany the athlete from the mat area to the treatment area.*
- Be mindful of an athlete with a continuing injury in subsequent bouts and request a repeat examination prior to the next bout.*
- Keep a watchful eye on the competition at all times.*
- Ensure that each mat area has at least one medical observer in constant attendance.*

Procedure for medical recording at competitions

All significant medical related contact needs to be recorded at competitions.

On-mat blood contact can be itemised as a simple blood entry without the need for athlete detail.

On-mat injury related contact requires a medical record initiated at the point of contact. Please use the 'Off/On-Mat Tournament Injury Record' form.

The injured athlete will need to be handed over to the 'Off-mat' medical team who will initiate a detailed record (Patient Notes) as part of their medical management process.

Off-mat note recording procedure

- 1. Immediately prior to or during initial assessment ask the athlete or the athlete's coach/carer to write demographic details on the **Patient Notes***
- 2. Complete the patient notes details after the management is completed*
- 3. **Provide a copy** of the notes to the athlete and coach/carer*
- 4. Make a short notation summary on the **'Off/On Tournament Injury Record'**.*

Blood decontamination

Personnel should wear gloves during treatments and change gloves between blood contacts. Clean hands between contacts. Judogis that have been stained with blood need to have that stain soaked with a fresh solution of 1% bleach (sodium hypochlorite) for 10 minutes then washed. The judogi should not be worn until the stain has been bleached out and dried. Fresh blood stains should necessitate changing the judogi until the above procedure has been undertaken.

Tatami stains should be cleaned with a neutral low sudsing detergent and wiped dry.

Bleeding control

- A bleeding athlete will be brought to the edge of the competition area accompanied by a referee for your treatment.*
- Be efficient when attending to the athlete.*
- Do not use bandaids or taping that is likely to fall off.*
- Circumferential taping is preferred but one must be careful to avoid restricting joint movement or blood supply. Wear gloves when handling blood, clean hands and dry afterwards. Change gloves after use.*
- Dental rolls or rolled gauze strips are useful for bleeding noses. These can be secured by taping around the head.*
- Be careful not to restrict breathing orifices unduly with the thing that you apply.*

Guideline for the management of the seriously injured person

General

Serious injuries include - joint dislocation and fractures, any period of loss of consciousness, uncontrolled blood loss, ocular injuries, fractures including ribs and suspected major spine trauma.

- When an injury is potentially serious request that the athlete withdraw from the competition. In the case of minors, be extra cautious and conservative*
- Should you decide that the athlete, because of an injury, is to be disqualified then stay with the athlete and escort the athlete off the mat area and inform tournament control.*
- If the above has applied and the athlete competes again that day, inform the competition manager and request that the athlete be cleared by you prior to the next bout*
- Involve the athlete's manager, coach or nominated support person in all cases that a minor (under 18 years) is treated and in all cases that a 'serious' injury has occurred or where medications are given*

- *Beware - the athlete not fully co-operative may have had undiagnosed concussion. Quick tests of cognition will help differentiate. Request that the athlete be disqualified if concussed at any time during the competition.*
- *In the case of a significant cervical spine injury, do not move the athlete off the competition area unless adequately equipped and trained. Immobilise the neck prior to any assessment procedures being undertaken and proceed to cervical collar as soon as possible.*

Specific

Strangulation and associated unconsciousness management

Forward:

Strangulation (**Shime-Waza**) in Judo is a recognised method of achieving a submission during training and competition.

It involves the application of a force to the carotid artery(ies), the trachea or both.

Athletes are taught to apply these safely as well as to submit **appropriately**.

Occasionally, however, a player may refuse to submit or simply be unable to submit in time and in that situation, the 'uke' may become unconscious and with a prolonged application may convulse. It is exceedingly rare that, in a supervised application, uke will come to harm.

However, any neurological symptoms present after a choke event should be investigated for possible carotid arterial trauma. Symptoms include blurred vision, loss of balance, problems speaking, memory loss or comprehension issues, loss of feeling in the arms or legs, headaches and neck pain.

Management of the 'choked-out' athlete:

Place the athlete in the recovery position.

If the neck, appears to be a risk, then keep the athlete in the position found and support the neck until assistance arrives.

Wait 20-30 seconds for spontaneous resumption of consciousness.

If there is no recovery of consciousness, then commence CPR.

There are traditional techniques that have been used historically in the management of the 'choked-out' athlete, however, CPR is based on modern medical knowledge and is the preferred resuscitation method.

The following **links** provide further insight on this subject:

<https://judoinfo.com/chokes4/>

<https://judoinfo.com/chokes/>

The following **links** relate to the dangers of **chokes**:

<https://bizjitsu.medium.com/arizona-bjj-coaches-learn-risks-of-strokes-in-their-sport-f257a822694c>

<https://synapse.koreamed.org/articles/1089384>

Concussion management procedure

- *Protect the cervical spine if athlete is unconscious or if you are concerned*
- *Do not physically move the athlete unless it is deemed safe or you are medically qualified*
- *IMMEDIATELY REMOVE FROM FURTHER COMPETITION*
- *Inform the referees' commission regarding the above.*
- *Refer to the nearest hospital if persistent symptoms - generally advised after 30 minutes.*
- *Engage the assistance of a responsible adult for constant supervision for a minimum of 24 hours.*
- *Advise a review by a medical professional prior to return to play.*
- *Provide a copy/or electronic link advice to the SCAT evaluation form to a responsible adult for completion at the next medical assessment and explain the "Athlete information", "Concussion injury advice" and "Return to play".*

Urgent referral to hospital will be required at any stage in the following: A GCS less than 15, deteriorating mental state, potential spinal injury, progressive mental state deterioration or new neurological symptoms or signs.

Referral to hospital is required if there is ongoing concern at any stage.

Medical referral will be required if there is no resolution of symptoms within 10 days.

Acute injury evaluation of suspected cervical spine injury

The following is a guide and the medical examiner is advised to use their own clinical judgement

1: Manually immobilise the neck

2: Perform an assessment on the mat prior to mobilising the athlete (NEXUS Criteria for C-Spine Imaging)

Clear patients from cervical spine fracture clinically, unless any one of the following is present:

Focal neurologic deficit (symptoms or signs)

Midline spinal tenderness present

Altered level of consciousness present

Distracting injury present

3: If step 2 is passed, remove the athlete from the competition area and further assess in the triage area.

4: If step 2 is failed or there remain concerns based on your clinical judgement, then immobilise the Cervical spine

5: Review the video capture of the incident

Peri-orbital injuries

*Mat side acute assessment of blunt eye injuries
(Allowed for children under Judo rules)*

Suspect a significant eye injury if any of the following applies.

Symptoms:

Unable to visualise the globe

Pain on eye movement

Diplopia

Blurring of vision

Signs:

Look for

Hyphema

Conjunctival haemorrhage

Asymmetry in pupillary reaction to light

Asymmetry in ocular movement

Feel for

Peri-orbital bony ridge tenderness

Ocular globe tenderness (gently palpate with eyelids shut)

Presence of periorbital subcutaneous emphysema

Use your clinical judgement and the above as a guide and consider removing the athlete from further competition pending further assessment in competition triage area or in a hospital setting.

The anterior shoulder dislocation

Assessment/Management

- *Consider acute pain relief*

- *Carefully examine the patient for neurovascular compromise.*

(Axillary nerve injury is most common. The axillary nerve innervates deltoid and teres minor and provides sensation to lateral shoulder. Axillary nerve compromise presents in over 40% of dislocations, but usually, resolves with reduction).

- *Exclude a fracture*

(Clinically important fractures occur in about 25% of dislocations. Fractures of humeral neck can lead to avascular necrosis)

- *Trained personnel may consider acute 'on-field' reduction if confident that this is an uncomplicated anterior dislocation.*

• *Obtain informed consent*

• *Avoid multiple attempts at reduction*

- *Immobilise the shoulder*

- *Refer for further investigation and management*

Further reading:

<https://www.ncbi.nlm.nih.gov/books/NBK459125/>

The elbow dislocation

Assessment/Management

- *Consider acute pain relief*
- *Carefully examine the patient*
 - *Vascular assessment of hand (pulses, capillary refill)*
 - *Neurological assessment of hand: radial, median and ulnar nerves (power and sensation)*
- *Exclude a fracture (contraindication to reduction prior to imaging)*
- *Trained personnel may consider acute 'on-field' reduction if confident that this is an uncomplicated elbow dislocation*
 - *Obtain informed consent*
 - *Avoid multiple attempts at reduction*
- *Immobilise the elbow joint*
- *Refer for further investigation and management*

Further reading:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5721315/>

<https://aci.health.nsw.gov.au/networks/eci/clinical/procedures/procedures/576017>

Medically required gear for competition management

IJF rules advise the following: “The LOC (local organising committee) shall provide sufficient medical treatment during the competition, including on site treatment and hospital treatment if needed. They should also provide qualified Medical personnel and arrange sufficient medical materials and equipment.

A minimum of one ambulance must be at the competition venue a minimum of 15 minutes before the start of a competition day. In the absence of the ambulance the competition cannot be started.”

The following is a suggested list of items that should be readily available at major competitions. It is important to liaise with the venue organisers and negotiate with this list in mind and knowing local conditions.

Note - this list is not exhaustive

1: Venue managed items

Band-aids (small packet)
Plastic Buckets (2)
Spray bottles (2)
Bottled water (small size 12)
Disposable cups (12)
Chux super-wipes (large roll)
Cotton pads
Bandages (12)
Slings (12)
Plastic bags for the ice (50)
Packet of Gauze
Box of Gloves large size (2)
Paper towels (3)
Hydrogen peroxide (1)
Moist towelettes (3 small packets)
Ice and esky
Antibacterial hand gel or solution (3 small bottles)
Paper tissues
Small garbage bags (12)
Tapes - assorted - for strapping (12xwide)
Emergency telephone numbers
Examination table
Wheelchair
Scoop stretcher and/or ordinary stretcher
Automated defibrillator
Oxygen

2: Doctor managed items

Medical equipment:
Auroscope
Ophthalmoscope
Torch
Pulse oximeter
Sphygmomanometer
Tongue depressors
Glucometer
Thermometer
Volumatic spacer
Resuscitation mask
Sharps container
Cervical collars
Script pad
Writing paper and pen
Suture set and sterile gloves
Drugs:
Oral rehydration powder
Panadol tablets
Nurofen tablets
Imodium
Mylanta tablets
Throat lozenges
Paracetamol
Methoxyflurane
Ventolin inhaler
Parenteral and oral
Metoclopramide
Parenteral and oral
Buscopan
Parenteral and oral
antibiotics
Parenteral and oral
antihistamine –
Promethazine
Fexofenadine (Telfast or similar non-sedating antihistamine)
Friars Balsam
Dencorub
Vomit bag

3: Mat-side medical table

Tape - assorted
Hypafix/Mefix
Nose plugs
Gloves
Small garbage bag
Gauze
Disposable towel
Pouch
Hand wash/antibacterial
Pen
Scissors
Data record sheets

4: Mat cleaning

Bucket
Spray bottle with water
Cleaning towelettes
Chux/paper wipes
Gloves
Plastic bags
Low sudsing cleaning solution

Medically relevant and judo specific general information

Introduction

Judo is a vigorous body contact sport. It involves obtaining submission by means of throwing, pinning on the ground, arm bars and strangulations. There is no protective equipment used, but it is highly regulated and there are no weapons used. At competition level there are significant risks of blood contamination through lacerations. Injuries sustained are usually minor, however they can include fractures, dislocations and periods of unconsciousness. It is not uncommon at national competitions (where there are more than 300 competitors) to have 3 or 4 fractures, 2 or 3 dislocations and 2 or 3 athletes with unconsciousness due to concussion or strangulations. Judo players compete in age, weight and gender based divisions. 'Making weight' is a requirement that, in many cases, encourages dehydration. It is possible to participate in the sport of Judo in a non-combative way. This would involve Kata (a choreographed form of judo).

The following advice has been developed with the above in mind and in the interest of safety.

Medical clearance

All athletes should have a medical clearance prior to competition especially if undertaking travel overseas.

Physical competition fitness preparation

Poor preparation prior to competition will raise the risk of illness and injury.

Good preparation is the best way to succeed.

Obtain from your coach a periodised pre competition training program.

DVT(deep venous thrombosis) and Travel

Deep venous thrombosis can lead to death from lung clots. The risk is low and has been calculated at one in two million passengers. In high-risk passengers it is one in one hundred thousand passengers. High risk situations include travelling with a limb that has been immobilised (e.g. in plaster), smoking, prior DVT(s) and being on the oral contraceptive pill. Aspirin has not been shown to be protective. Compression stockings do prevent against DVT(s) but need to be fitted by a professional.

To minimise the risk of deep venous thrombosis, common sense suggestions include the following

-

- *Drink plenty of fluids*
- *Regularly mobilise ankles and massage calves*
- *Avoid combining sedatives and alcohol*
- *Avoid diuretics such as tea and coffee*
- *Wear non-restrictive clothing and avoid tight bandages*
- *Exercise by walking before and after travel and during stopovers*
- *Do not dehydrate*

Blood contact and infectious diseases

General: The risk of infectious disease transmission is low but real. Due to the not infrequent contact with blood, athletes known to have high viral load HIV, active Hepatitis B and Hepatitis C should consider not participating in Judo at competition level. Athletes competing should understand that blood spill management minimises transmission of these diseases but does not completely prevent it. However, the main methods of transmission of blood borne infections in athletes are not through sports activity, but are similar to those for the general population—for example, unsafe sexual activity and sharing needles. Therefore efforts to prevent these infections among athletes should also be focused on the prevention of these “non- sporting” methods.

Research papers from Japan, report HBV transmission in sport.

Kashiwagi et al reported an outbreak of hepatitis B infection in a high school sumo wrestling club. Five of 10 members of the club developed hepatitis B during one year. The authors identified an asymptomatic HBV antigen-e positive carrier as the source of infection. They suggested that HBV was transmitted from the carrier to the others through skin cuts and abrasions caused by wrestling. Wrestlers in that club were known to continue to wrestle even when they were injured and bleeding from skin wounds.

HBV is resistant to drying, ambient temperatures, simple detergents, and alcohol and can be stable on environmental surfaces for at least seven days.

Hence transmission of HBV can occur via inanimate objects—for example, environmental surfaces.

Therefore the risk of HBV transmission in sport is probably greater than that of other blood borne infections.

It has also been suggested that blood borne infections may be transmitted through sharing a water container, because bleeding around the mouth is common in contact sport. Therefore it is recommended that water containers should be available individually for each player in contact sports. Athletes should use squeeze water bottles which they do not put in their mouth.

COVID-19

*Respect and follow state **and federal** guidelines regarding COVID risk management*

Respect and follow local competition managers' COVID advice

Manage your personal risk actively

*Do not attend competitions/**training** if unwell*

*Do not attend competitions/training venues if you are a 'hot-spot' **or a personal** contact*

Get a COVID test if you are a contact or feeling unwell

Covid return to play advice is found in the attachments at the end of this document.

Intravenous drug use

Blood borne infections can be transmitted through blood doping. There is also a risk from sharing needles which may be associated with drug abuse in sport. Injectable drugs used in sports include steroids, hormones, and vitamins.

Sexual activity and transmission of infections

Blood borne infections can be transmitted through sexual activity. Having homosexual sex with men and having multiple partners are the most significant risk factors for these infections. However, the most common method of transmission of HBV during adulthood is heterosexual contact with an infected individual (because this exposure occurs most commonly), followed by injected drug abuse, and then homosexual contact. There is no firm evidence that transmission of blood borne infections among athletes through sexual activity is more common than for the general population.

Preventative management

Athletes, their families, healthcare providers, coaches, officials, and others involved in sports should be educated.

Vaccination for blood borne disorders is possible against Hepatitis B and A infections.

Condoms are helpful in preventing transmission of Hepatitis and HIV infections.

COVID vaccination reduces illness severity and infectivity.

On the spot blood management

- *All wounds and injuries should be promptly detected and reported by athletes and coaches*
- *Use proper equipment—for example, gloves*
- *Promptly and appropriately treat bleeding sports injuries*
- *Clean the blood from wounds with soap and water or an antiseptic*
- *Remove athletes with bleeding injury, (not minor cuts or abrasions), from the dojo as soon as possible*
- *Promptly change significantly blood soaked uniforms*
- *The item must be cleaned and dried appropriately (using disposable cloths and a fresh solution of one part household bleach to ten parts water and then allowed to fully dry)*
- *Any contaminated equipment that cannot be adequately cleaned should be removed from the sports activity area*
- *Any skin injuries acute or chronic—for example, abrasions, cuts, or oozing wounds—should be covered during sports activities with an occlusive dressing until complete healing has taken place.*

It is recommended that the healthcare provider follow the guidelines provided by WHO on universal precautions.

Other transmissible infections - general discussion and management

General

Be considerate to your fellow judokas.

*Infections can be transmitted.
Transmission can be prevented.*

Wound infections (staphylococcus, herpetic mouth ulcers)

- *Cover up open wounds*
- *Consider a medical review*

Gastroenteritis prevention

- *Wash or disinfect hands regularly*
- *Do not share water bottles*
- *Notify your manager for isolation and treatment*
- *Hydrate*
- *Seek medical advice if unwell*
- *Get COVID tested*

Upper airway infections (common cold, flus etc)

- *Do not attend competitions/training*
- *Wear a mask*
- *Cough into your elbow*
- *Wash/disinfect hands regularly*
- *Get COVID tested*

Mosquito borne diseases and other travel infections

*These include Zika virus, Malaria, Cholera, Typhoid, Rabies etc and are region specific.
Please check with your trusted medical practitioner for relevant advice regarding your travel destination*

Travel Vaccinations

*All judo athletes should have up to date vaccinations against Covid-19, Hepatitis B and Tetanus.
It is also recommended that other vaccinations be up to date relevant to the travel destination.
Please check with your usual doctor and through destination websites.*

Injury prevention

Attending competition with the following can lead to an increased risk of serious injuries:

- *An anaesthetised joint*
- *A spinal injury*
- *A major joint injury (knee, shoulder and elbows)*
- *A febrile illness*
- *Being nauseated*

- *Being under the influence of drugs or alcohol*
- *A suspected rib fracture*
- *Being more than mildly dehydrated (more than 2% bodyweight)*

Please note that this is not an exhaustive list.

The female athlete

Breast tissue care

Correctly fitting sports bras can prevent breast tissue injury

Then following advice has been copied from [the Sports Medicine Australia](#) website. For further information follow the links:

<https://www.bra.edu.au>

<https://sma.org.au/resources-advice/injury-fact-sheets/exercise-and-breast-support/>

“Any supportive bras must fit correctly. If it doesn’t fit, it won’t provide adequate support. Ill-fitting bras contribute to neck, back and arm pain, especially in females with larger breasts, so make sure your bra fits you well.

Three easy steps...to correct bra fit

- 1. Fit the band correctly first, ensuring all of your breast, especially under your armpit is in the cup.*
- 2. Adjust the straps, then check for any wrinkles/gaps or bulging of the cups and go up or down a cup size accordingly.*
- 3. Check the underwire fits your breast shape correctly. If not, start these three steps again with a different bra.”*

Pregnancy

Regular activity is recommended in pregnancy. However Judo is a high-risk sport as it carries with it a risk of trauma. It is advised that pregnant women do not compete in Judo at competition level. Those who wish to continue to train whilst pregnant should seek the advice of their obstetrician.

It is not recommended that Judo as a form of exercise be commenced for the first time in pregnancy.

Pelvic floor

More than 25% of female athletes report leaking urine during training or competition. A physiotherapist or health professional with specific training in pelvic floor disorders can provide advice and exercises specific for you and ensure you are using the correct technique. Education and strategies to optimise bladder habits can help to relieve pelvic floor symptoms.

Physiotherapists can also advise on specific products to help manage and absorb leakage i.e. pads or absorbent underwear while training pelvic floor muscles to improve strength and function.

Symptoms of a pelvic organ prolapse might require extra assistance. Gynaecologists or physiotherapists with additional training may recommend intra-vaginal devices such as a pessary that can be inserted in to the vagina to support the pelvic organs.

Resources:

<https://www.continence.org.au/>

<https://www.pelvicfloorfirst.org.au/>

Mouth guards

Whilst mouth guards can prevent dental injuries, they do not necessarily prevent concussion and they carry a risk of upper airway obstruction in the unconscious person. In Judo this is especially relevant as the sport does involve the use of strangulation techniques which not too infrequently do lead to loss of consciousness.

*Judo Australia, allows **mouth-guards** under strict conditions. Check the sporting code for detail.*

Drugs in sport

Taking supplements may put you at risk of serious sanctions as doping can occur inadvertently. It is your responsibility to know your restrictions about the use of drugs in Judo. Ignorance is no excuse.

***Prior** approval in all situations of banned substances is needed unless medically deemed for the management of an emergency. In that situation notification at the earliest convenience is required.*

Athletes who require the legitimate use of the banned or restricted substances need to apply to JFA for a TUE.

On-line resources:

- 'WADA'
- 'GlobalDro'

Concussion General Information

Concussion is a traumatic injury to the brain.

Loss of consciousness is not a universal feature of concussion.

Trauma can be indirect and may not necessarily involve obvious direct head contact.

Mild concussion is where consciousness is preserved. There is a transient confusion and disorientation unaccompanied by any amnesia or headache, dizziness or lack of coordination.

Moderate concussion has associated loss of consciousness and reverses completely within several seconds. There may be transient neurological signs. There may be temporary confusion after recovery with some degree of pre and post amnesia. Post-traumatic amnesia level is a guide to the severity of the concussion. There may be personality changes. Persistence of symptoms past 30 minutes is a recommendation of formal assessment in a hospital environment.

Severe concussion is associated with longer periods of loss of consciousness (more than 1 minute), with more headache, dizziness, and amnesia. Persistence of symptoms past 24 hours is significant and will require further investigation.

Concussion should be suspected if one or more of the following visible clues, signs, symptoms or errors in memory questions are present.

1. Visible clues of suspected concussion

- Loss of consciousness or responsiveness*
- Lying motionless on ground / Slow to get up*
- Unsteady on feet / Balance problems or falling over / Incoordination Grabbing / Clutching of head*
- Dazed, blank or vacant look*
- Confused / Not aware of plays or events*

2. Symptoms of suspected concussion

<i>• Loss of consciousness</i>	<i>Irritability</i>	<i>• Balance problems</i>
<i>• Dizziness</i>	<i>• Amnesia</i>	<i>• Feeling slowed down</i>
<i>• Nausea or vomiting</i>	<i>• Nervous or anxious</i>	<i>• More emotional</i>
<i>• “Pressure in head”</i>	<i>• Sensitivity to noise</i>	<i>• Sensitivity to light</i>
<i>• Difficulty concentrating</i>	<i>Headache</i>	<i>• “Don’t feel right”</i>
<i>• Feeling like “in a fog“</i>	<i>Sadness</i>	<i>Blurred vision</i>
<i>• Drowsiness</i>	<i>• Confusion</i>	<i>• Seizure or convulsion</i>
<i>• Fatigue or low energy</i>	<i>• Neck Pain</i>	<i>• Difficulty remembering</i>

3. Memory function

Failure to answer any of these questions correctly may suggest a concussion:

<ul style="list-style-type: none">• “What venue are we at today?”	<ul style="list-style-type: none">• “Who did you compete against last ?”
<ul style="list-style-type: none">• “What day is it today?”	<ul style="list-style-type: none">• “Who is your coach?”
<ul style="list-style-type: none">• “What weight division are you competing in?”	

Judo specific concussion stepwise return to play recommendations

The following recommendations for the management of concussion is a minimum standard and should not preclude specialist recommendations

Mandatory rest period

Medical officer assessment (ideally with a SCAT 5 completed)

- 18 years and over - 2 days after self-reported symptom free
- Under 18 years. - 7 days after self-reported symptom free

No medical officer review or SCAT 5 completed

- 28 days after self-reported symptom free

Advice to coaches and Athletes

After self reported improvement and the athlete has completed the necessary rest period of 2- 7 days depending on age, then do a medically assessment (ideally with a SCAT5) prior to commencing graduated returned to play.

If there is no prior medical assessment and 28 days has elapsed, then athlete/coach perform the ‘symptom evaluation’ prior to play.

If positive symptoms on ‘symptom evaluation’ refer again for a repeat medical assessment (ideally with a SCAT5) or wait another 28 days. (See” Symptom Evaluation Sheet - for athletes and coaches” as attached)

The athlete must be symptom free prior to starting training - i.e. score 0

First concussive episode

Stage1: Perform and document a symptom evaluation (if 0, progress)

Aerobic exercise for 48 hrs (judo specific drills including uchi komi but no randori, no strength training and should avoid being thrown)

*Stage 2: Perform and document a symptom evaluation (if 0, progress)
Graduate to light randori for 48hrs*

*Stage 3: Perform and document a symptom evaluation (if 0, progress)
Club based competition preparation for 48 hrs*

*Stage 4: Perform and document a symptom evaluation (if 0, progress)
Competition can proceed after medical clearance - recommend that the 'office/off-field'
part of the SCAT assessment be completed.*

*If at any stage there is a return of symptoms then return to previous rehab stage.
If unable to progress past first stage then seek medical advice.
If persisting symptoms despite rest then seek medical advice.*

Second episode of concussion within 12 months

*Obtain medical review prior to commencement of the graduated exercise program.
Recommend that the 'office/off-field' part of the SCAT assessment be completed at that review.
Do not progress if the score is not close to baseline (last medical clearance).
Progress rehab as per first concussive episode with 4 week intervals after the date of this episode*

Third and subsequent episode of concussion

*Seek specialist advice and clearance prior to starting training.
Recommend that the 'office/off-field' part of the SCAT assessment be completed at that review.
Not for competition for 12 months.
Return to play only after medical clearance by a specialist*

Making weight

All coaches who manage athletes with significant weight loss requirements pre-competition are urged to adhere to safe practices.

Rapid weight loss and its associated dehydration (in a period of less than 3 days), especially when more than 2% bodyweight is lost, has been linked to serious illness and is to be avoided. Headache, irritability, poor concentration, tiredness and unsteadiness can be symptoms of severe dehydration and can precede death from heat stress in the context of overexertion.

Guidelines:

Pre-season: Make a determination as to a minimum weight that athletes are allowed to reach. Judo does not have mandated recommendations, however as an example, wrestlers in the US have a 'minimum weight set at 5% body fat for men and 12-14% for women.' and 'they are only allowed to lose a maximum of 0.9 kg/wk from the start of the pre-season to the date of their competition. For example, a 78 kg male wrestler is assessed as having a % body fat of 7.8%. Therefore, his fat free weight is - $78 - (78 \times 7.8\%) = 78 - 6.9 = 71.9$ kg Minimum weight = $71.9 / 0.95 = 75.7$ kg. Therefore, this athlete is not allowed to fight in a weight category below 75.7 kg'.

Pre-Competition: Weight loss in this phase should be done slowly and as a general rule be not more than 0.5 kg a week. A dietitian should be consulted in cases requiring greater weight loss and especially if their lean weight is above their competition weight in the 6 weeks pre-competition.

Immediate pre-competition: An athlete should be within 2% (non-dehydrated weight) of his/her competition weight in the 3 days preceding it.

Managers and coaches are advised against encouraging athletes to make weight outside the above recommendations.

Recommendations for urgent medical attention:

Symptomatic athletes (those with headache, irritability, poor concentration, tiredness and/or unsteadiness), especially those who have dehydrated, should be assessed by a medical officer as a matter of urgency.

Be especially vigilant in hot humid environment.

Be aware that thirst is a late symptom of dehydration.

Further reading

Medical integrity

“A Review of Legal, Ethical, and Governance Issues for Team Doctors” <https://pubmed.ncbi.nlm.nih.gov/34759177/>

Injuries incidence

<https://journals.sagepub.com/doi/10.1177/2325967119847470>

Making weight

“http://www.ausport.gov.au/ais/nutrition/factsheets/body_size_and_shape/weight_making_sports”

JA rules relevant to competitions

https://www.ausjudo.com.au/_files/ugd/ea5ddd_bee69f6f6ef6436cba99070986322d89.pdf

IJF Rules relevant to competitions

https://78884ca60822a34fb0e6-082b8fd5551e97bc65e327988b444396.ssl.cf3.rackcdn.com/up/2022/03/IJF_Sport_and_Organisation_Rul-1646858825.pdf

Infectious diseases

- *Br J Sports Med* 2004;38:678-684 doi:10.1136/bjism.2004.011643
- *American Academy of Pediatrics. Human immunodeficiency virus and other blood-borne viral pathogens in the athletic setting. Pediatrics* 1999;104:1400–3.
- *WHO guidelines*: “<http://www.who.int/hiv/topics/precautions/universal/en/>”

SCAT5 online resource documents:

CRT5 (Concussion Recognition Tool)

<https://bjism.bmj.com/content/bjsports/early/2017/04/26/bjsports-2017-097508CRT5.full.pdf>

Child SCAT5 <https://childscat5.cattonline.com/#/athlete>

Adult SCAT5 <https://scat5.cattonline.com>

AntiDoping

“https://wada-main-prod.s3.amazonaws.com/wada-guidelines_tue-v7.0-en.pdf.pdf”

GlobalDRo

Breast care in combat sports:

<https://www.bra.edu.au>

<https://sma.org.au/resources-advice/injury-fact-sheets/exercise-and-breast-support/>

Pelvic floor:

<https://www.continence.org.au/>

<https://www.pelvicfloorfirst.org.au/>

Strangles and chokes:

<https://judoinfo.com/chokes/>

<https://judoinfo.com/chokes4/>

A research article of Judo injuries in Australia

A retrospective analysis of injuries at national competitions in Australia

Introduction

Judo is a contact sport and as in any body contact sport injuries do occur.

Judo simplified is wrestling whilst wearing a suit. A judo player (judoka) will win by throwing a person onto their back, holding them on the ground for 20 seconds or by obtaining a submission either through a strangulation or an elbow joint lock technique.

Judo specific referees enforce rules that protect the judo player from significant injury.

These competitions are usually held over a weekend with judokas separated into different age, gender and weight categories.

The following statistics have been collated from figures collected over 21 competitions held from the period of 1996 to 2011. There has been no attempt to separate the statistics into the various categories mentioned and whilst this is a deficiency one can still get an idea of the risks inherent in the sport.

Results

Blood contact risk is calculated at around 3% per bout.

The fracture risk is calculated at 0.38% per bout and dislocations at 0.15% per bout.

Table: Fracture number and type

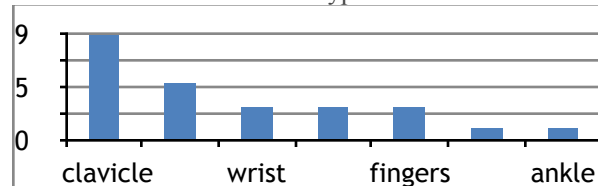
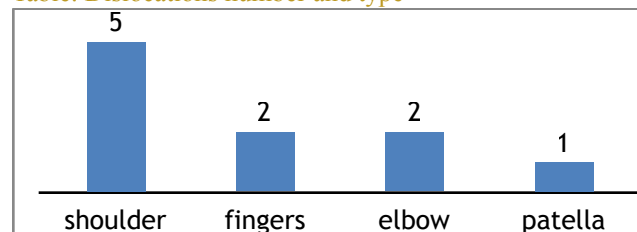


Table: Dislocations number and type



Injuries have been grouped together in the following table. As a whole the incidence is at a rate of 5.8% per bout.

Table: Injuries total number and type

Injury type	Percentage
Shoulder	12%

Knee	10%
Elbow joint all	8%
Concussion	8%
Spine - Cervical not fracture	8%
Spine - Lumbar incl. pelvis (not fracture)	7%
Chest wall - ribs	5%
Hand incl. nail	5%
Ankle joint	4%
Spine - Thoracic not fracture	4%
Wrist	3%
Chest wall - incl. clavicle	3%
Eye	3%
AC joint	2%
Soft tissue - other	2%
Chest wall - incl. sternum	2%
Foot	2%
Lower limb - not joint	1%
Strangulation - with unconsciousness	1%
Ears	1%
Hyperventilation	1%
Nose - complex	1%
Strangulation with a convulsion	1%
Abdomen - blunt trauma	1%
Upper limb - not joint	1%
Asthma	1%
Vasovagal	1%

Hips	<1%
Scrotum	<1%
TMJ	<1%
Vomit - at contest	<1%

Discussion

The single most common contact injury that medical support personnel will have to deal at a judo competition is blood control. Lip, nose and finger nail bleeding predominate. As there is no duty of disclosure by the athlete with regards their immunity or infectivity of the blood born Hepatitis B, C or HIV viruses, the skill of the medic is to control the bleeding in a safe and secure way that will allow the competitor to complete the particular bout in a low contaminant environment. In general lacerations are secured with circumferential taping and modified dental cotton rolls are inserted intra-nasally in the case of epistaxis.

The fractures that occur are generally upper body and ankle. These reflect the nature of the sport where an opponent is being thrown from body height and occasionally landing together with the additional weight of their competitor. The ankle injuries that occur reflect the use of foot sweeping techniques amongst others.

The dislocations that occur also reflect the type of techniques used in the sport. Of special mention is the elbow dislocation which is perhaps the most preventable of all injuries. They usually occur as a result of the judoka throwing their arm out reflexively in order to prevent a fall. They are spectacular in their presentations and extremely painful. They invariably do not occur when an elbow lock is applied.

The soft tissue injuries noted show a similar distribution including shoulder, knee followed by soft tissue spine injuries. An observation of mine is that a significant proportion of the injuries seen are pre-existing although no data has been collected to corroborate this statement. No spine fractures have been confirmed but remain a risk and a challenge for acute management. The majority of non-dislocation elbow injuries are a result of elbow locks. Some athletes prefer to risk an elbow injury and not submit in the hope that a referee will temporarily stop a match, however, the majority of injuries occur as part of the normal course of an elbow lock being applied.

Concussion occurs at an incidence of 8% of all injuries. Whilst there have been no deaths, nor significant intracranial events in Australia at these Judo tournaments and we have no way of documenting minimal brain injury.

It is also a common held belief that strangulation to unconsciousness even when followed by a convulsion is a benign condition and should not preclude a return to play on the same day.

Conclusion

Judo is a contact sport where strong forces are generated at close range with a not insignificant possibility of serious injury. At major Judo tournaments in Australia, where more than five hundred athletes of different ages compete, medical personnel should expect to have to manage approximately thirty athletes with various soft tissue injuries as well as the occasional fracture and dislocation. It is essential that those personnel have good systems in place to manage these injuries.

Attachments/Handouts

- A. *Judo competition Injury/Illness worksheet*
- B. *Off/on mat tournament injury record worksheet*
- C. *Medical release form - injury*
- D. *Agreement to continue in the competition after strangulation*
- E. *Concussion advice handout*
- F. *Concussion return to play advice*
- G. *Concussion symptom evaluation form*
- H. *Ice treatment advice sheets*

Judo competition Injury/Illness worksheet

Date: _____ Event and Venue: _____

Name: _____ Sex: **M/F** (circle) Age: _____ D.O.B: _____

Phone: _____ Email: _____

Country/State of origin: _____ Preferred language: _____ Weight category: _____

Carer/Coach/Manager (circle) Name: _____ Phone: _____

Injury type: **New/Old** (circle) Time of injury: _____

History: _____

Examination: _____

Provisional diagnosis: _____

Treatment: _____

Observations: _____

time: _____

time: _____

Medical carer signature: _____

Name and contact details: _____

| Tournament injury record

Medical release form - injury

This form is only to be used for non-life threatening injuries, including joints, where the athlete chooses to continue in the competition against medical advice.

It is not to be used for concussion, cervical spine injuries or where the sporting code specifies cessation of competition.

Date:

I, _____ understand that I have sustained the following injury:

I understand that there is a high chance that I will re-injure myself should I choose to continue in this competition and that I may worsen the injury to an unspecified degree.

I have decided to continue to compete.

Name:

Signature:

Witness name:

(team coach, team manager, or other consenting adult)

Witness signature:

Agreement to continue in the competition after strangulation

Current advice is that unconsciousness, when caused by shime-waza that is applied in the controlled environment of judo at competitions, is associated with full and rapid recovery even if a convulsion has occurred. Also it appears, based on current evidence, that there are no long term consequences. However it is important to note that there have been no validated studies on the possible long term issues. If you understand this statement and wish to continue to compete in this competition please sign below. Be aware that you will not be allowed to continue further if unconsciousness due to shime-waza occurs more than once at this competition.

Athlete name:

Carer/Coach name (if relevant):

Athlete or Carer/Coach signature:

Witness name:

Witness signature:

Date:

Concussion advice handout

To be given to the person monitoring the concussed athlete

Patient's name: _____

Date / time of injury: _____

Date / time of medical review: _____

Treating physician: _____

This person has received an injury to the head. A careful medical examination has been carried out and no sign of any serious complications has been found. Recovery time is variable across individuals and the patient will need monitoring for a further period by a responsible adult. Your treating physician will provide guidance as to this timeframe.

If you notice any change in behaviour, vomiting, dizziness, worsening head-ache, double vision or excessive drowsiness, please contact your doctor or the nearest hospital emergency department immediately.

Other important points:

- Rest (physically and mentally), including training or playing sports until symptoms resolve and you are medically cleared
- no alcohol
- no prescription or non-prescription drugs without medical supervision.

Specifically:

- No sleeping tablets
- Do not use aspirin, anti-inflammatory medication or sedating pain killers
- Do not drive until medically cleared
- Do not train or play sport until medically cleared

My phone number: _____

Concussion return to play advice and resources

No further play for the duration of the competition days (irrespective of age and weight divisions)

When returning athletes to play, they should be medically cleared and then follow a stepwise supervised program, with stages of progression as outlined in the “Judo specific concussion stepwise return to play recommendations” advice section of the Judo Australia Medical Manual.

If the athlete is symptomatic for more than 10 days, then consultation by a medical practitioner who is expert in the management of concussion, is recommended.

Medical clearance should be given before return to play.

SCAT5 online resource documents:

CRT5 (Concussion Recognition Tool)

<https://bjism.bmj.com/content/bjsports/early/2017/04/26/bjsports-2017-097508CRT5.full.pdf>

Child SCAT5

<https://childscat5.cattonline.com/#/assessment/athlete>

Adult SCAT5

<https://scat5.cattonline.com>

Post-concussion symptom evaluation for athletes and coaches

DATE:

The athlete should be given the symptom form below and asked to complete the symptom scale.

Coaches can also administer this on behalf of the athlete

This is advised to be performed prior to each phase of the graduated return to play

Please tick the symptoms, if any, that you may have post your recent concussion episode.

- Headache
- Nausea or vomiting
- Dizziness
- Blurred vision
- Sensitivity to light
- Sensitivity to noise
- “Don’t feel right”
- Difficulty concentrating
- Fatigue or low energy
- Nervous or Anxious or sad

If 100% is feeling perfectly normal, what percent of normal do you feel?

Do your symptoms get worse with physical activity? Yes/No

Do your symptoms get worse with mental activity? Yes/No

ATHLETE NAME AND SIGNATURE:

COACH NAME AND SIGNATURE:

Covid and graded return to play advice
(As recommended by the Australian Institute of Sport)

GRADED RETURN TO SPORT

STAGE 1: REST UNTIL
Fully recovered with no symptoms
Not needing analgesics or cold and flu tablets

STAGE 2: LIGHT AEROBIC
15 minutes light aerobic activity
2 sessions needed

STAGE 3: MOVEMENT DRILLS
Increasing duration and intensity of movements

STAGE 4: HIGHER INTENSITY
Heavier workload and longer duration
All training activities

STAGE 5: FULL TRAINING
Completing full training sessions

Logos: AIS, ACTAS ACT ACADEMY OF SPORT, NSWIS NEW INSTITUTE OF SPORT, NTIS, Queensland Government, SASI South Australian Sports Institute, TASMANIAN INSTITUTE OF SPORT, VICTORIAN INSTITUTE OF SPORT, wais

ASIS08023

Ice treatment

- Apply for 15 minute intervals every 1 hour
- Use a large amount of crushed ice.
- A wet cloth should be applied between the skin and the ice to prevent ice burns.
- Do not apply to an area where there is local circulation impairment or over nerves.
- Once the part is cool, then commence gentle, non-weight bearing movement until warmed up again.
- For an ankle injury, place the foot in a bucket of water which has a floating layer of ice. When the foot is cold, begin ankle movement (toes up and down) exercises until warmed up. Repeat at hourly intervals for 3 hours.
- Always elevate the injured limb and don't forget to bandage firmly after the above exercises.