



EMERGENCY PROCEDURES



Dr Natalie Sharp: B.Chiro.Sc., M.Chiro. AICE Sports Chiropractor. ICSC

Trish Donoghue: Level 1 World Rugby Instructor; Level 2 Sports Trainer Sports Medicine Australia.

1

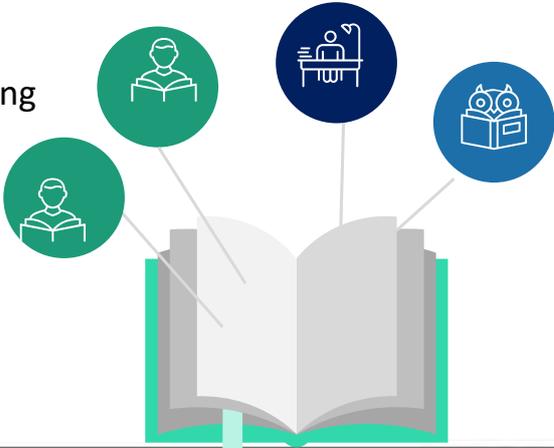
Section 1:

- Definition of first responder
- Planning, communication, taking control
- Initial Injury Management

Section 2: Approach to Fractures and splinting

Section 3: Spinal Injury Management

Section 4: Scenario (Class examples)




WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY

<https://fics.sport>

2

What is a first responder at a sporting event ?

A person whose job entails being the first medical support person to assess the athlete on or off the field.

Primary role to manage the athlete's pain and prevent further injury.



3

Different level competitions will have different expectations and resources.

- Local vs International
- Junior vs Senior



4

Ensure your sport has the necessary policies to support the safety of the player.

These include heat, concussion & spinal policies.

Understand your role in the medical team.



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY



5

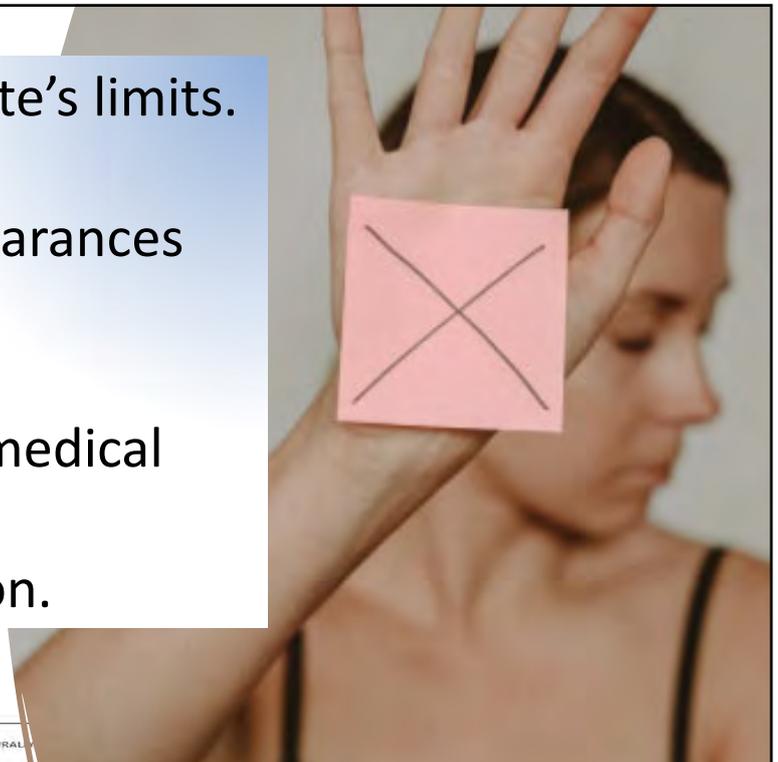
Understand your athlete's limits.

Ensure appropriate clearances for return to play.

Be aware of athletes' medical conditions & any medications they are on.



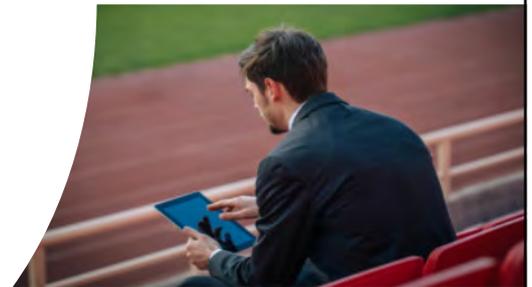
WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY



6

Building Trust & Rapport

- Don't over complicate the planning process.
- Any plan must be easy to follow
- Realise the need to be flexible and don't reinvent the wheel.



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY

<https://fics.sport>

7

A series of questions to help you create an emergency medical plan



What is the critical information needed, if you need to call emergency services?



8

- What will the emergency procedure be for? Serious injury?
- Who will be the designated emergency coordinator, and how will everyone know who this is?
- Are they present at training and game/event days?
- Who will have the responsibility of informing parents, next of kin?
- Who will look after by-stander management and welfare?



9

Support – Post Event

High profile Cycling event: Experienced medical staff personnel assigned to the event with over 30 years' experience under their belt. They were called to the bottom of the mountain where they were presented with a cyclist who had hit the railing and de-gloved his face. The next cyclist coming down the hill came off his cycle and incurred injuries which left him a paraplegic.



<https://fics.sport>

10

Recognize and Remove

Your role is to be watching the players not game.

Seeing the mechanics of the injury is important link in the care.

- Develop good, clear communication skills with non-medical jargon
- Non-verbal communication (body language)
- Verbal communication, should be clear and concise.



11

On field of play Assessment

The S.T.O.P. technique is used to prevent further injury whilst you decide whether an athlete can play on

- **Stop** the athlete from moving
- **Talk** to them and control their breathing
- **Observe**
- **Prevent** further injury



12

Off field assessment

The off-field assessment of an injury is critical to the welfare of the injured player.

“Every injury/illness sustained by a player must be treated as serious until proven otherwise.”



TALK

OBSERVE

TOUCH

ACTIVE

PASSIVE

SKILL

13

Initial Injury Phase



Protection
Elevation
Avoid Anti Inflammatories
Compression
Education

Load
Optimism
Vascularisation
Exercise

14



Fractures and Splinting

Overview
Dislocations and Subluxations
Fractures
Management
Splinting



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY

<https://fics.sport>

15

Dislocation and Subluxation

- Most Common injury in high force Contact Sports such as Rugby and Football.
- Can also be due to instabilities caused by throwing or upper body training.
- All GH Dislocations result in an inferior displacement of the humerus but have distinct patterns due to the Mechanism of Injury (MOI).

- Damage to local tissue
- Bleeding into the joint
- Possible fracture
- Cartilage damage



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY

16

Dislocation and Subluxation

You may have training in how to reduce a dislocation however if you have not **Recognise, Remove, Refer**.

- Prevent movement at the site of dislocation to reduce the risk of further tissue damage.
- Immobilise the injured limb in the position you found it (If no increase in pain)
- Be sure to immobilise the area above and below the injured joint.



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY



17

Dislocations – Prevent further injury

Local Level Gridiron Match: A player for the opposite team went down and the media first aider ran out.

- I ran out to observe and offer any assistance.
- When it was apparent the first aider was not coping, I offered to help, which she jumped at.
- On examination the athlete in his late twenties had a full dislocation of his shoulder, we immobilized and referred to hospital.
- The chiropractor for the other team decided to try any relocate the joint on the side-line without success.
- Player sustained multiple fractures and went onto surgery to stability the joint.



18

Fractures

- Pain, tenderness or swelling in the affected area
- Abnormal body shape in the affected area such as a deformity, irregular alignment of a limb, or a visibly protruding broken bone in the case of a severe open fracture
- Reduced mobility or inability to move the injured part

MANAGE
athlete pain
FIRST
injury
SECOND



Note that swelling and deformity are not reliable indicators on their own as they may or may not be present. There may be some, all, or none of the signs and symptoms specified present.

19

Fractures

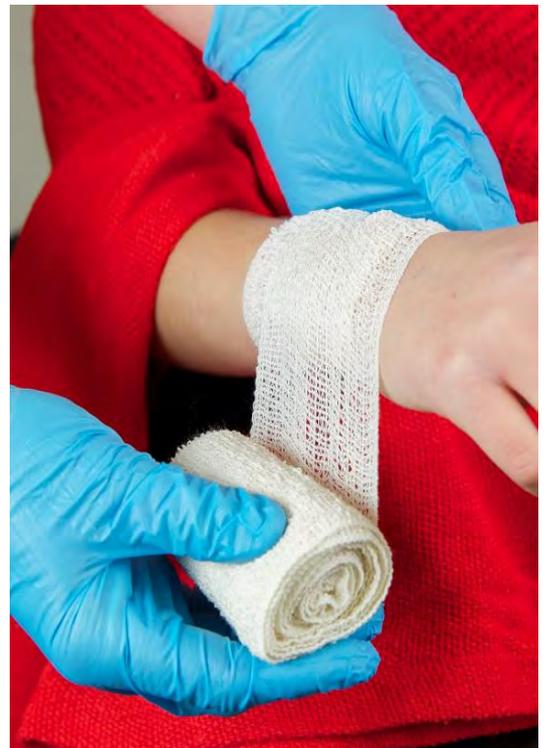
Closed Fracture

Where the bone is broken or cracked and there is no cut or wound at the fracture site.

Associated Factors:

Bleeding remains concealed beneath the skin.

DO NOT try to straighten broken bones or move the casualty unless they are in danger.



20

Open Fracture

Where the ends of broken bone are exposed to the air (bone through skin, or a wound leads down to the bone).

Associated Factors:

Increased risk due to bleeding and chance of infection entering the bone.



Complicated Fracture

Where other body organs or local issue are damaged by the fracture. For example, when a bone pierces a leg artery, or a fractured rib punctures a lung.

Associated Factors:

Damage to nearby organs.



21

Stress & Overuse Fractures

Technique and management of the athletes become very important

Abnormal load on normal bone.

Normal load on abnormal bone.



Reflection: How would you talk to a coach/parent about an athlete who has a stress fracture.

22

Wrist Fractures

- Scaphoid fractures – 70% of all carpal injuries.
- Colles Fractures. Distal radial fracture usually from fall onto outstretched hand.



Traumatic injury usually with wrist in extension - often fall or collision. Swelling or pain should be investigated. The worse the swelling the worse the injury.

23



Immobilise in a comfortable position and immediate medical referral

24

Rib Fractures

Can result from:

- direct contact with an opponent (in sport)
- an implement
- indirect force such as muscular contractions

Presentation:

- a history of trauma
- pain on inspiration
- local bony tenderness

**If you suspect a fractured rib, cease any activity.
Refer for immediate medical assessment**



25

Flail Chest

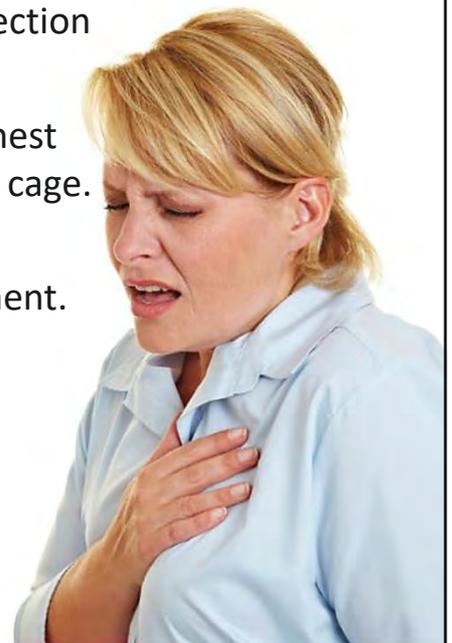
Numerous broken ribs in the same area. The injured section is called the flail, or loose segment.

The flail segment does not move with the rest of the chest & moves in the opposite direction to the rest of the rib cage.

Known as paradoxical breathing. In severe cases, the sternum can break free becoming part of the flail segment.



**Flail chest is a
life-threatening
injury.**



26

Pelvic Injury

Usually, the result of a vehicular accident, crush injury, or a fall from a height. Pain in hips or groin.

- Place soft padding between the casualty's knees, legs, and ankles.
- Apply a narrow, figure of eight bandage around the casualty's ankles and feet.
- Apply a broad bandage around the casualty's knees.
- Support the pelvis on either side with rolled blankets, or equivalent items (such as sandbags).

Note that the casualty's clothing must **NOT** be loosened, as this helps to immobilise any fractures in the pelvic area.

27

Head, Neck and Spinal Injuries

A head injury can cause skull fractures, concussion, compression, brain swelling, loss of consciousness and brain damage. If you suspect a conscious athlete has a head injury and no spinal injury, **undertake a concussion assessment.**



A cerebral compression is a severe blow to the head which can cause bleeding or swelling inside the skull which can press on the brain.

This can be life-threatening and immediate medical assistance is required.

28

Head, Neck and Spinal Injuries

A **skull fracture** is a head wound. Any head wound could be a sign of deeper damage within the head, like a crack or break in the skull (skull fracture). Referral to a doctor for assessment is required.

Apply firm pressure to the wound with sterile gauze or a clean cloth. Don't apply direct pressure to the wound if you suspect a skull fracture.

REFERRAL REQUIRED



29

Neck and Spinal Injuries

You must consider the possibility of neck or spinal injury with any traumatic injury.

Signs and Symptoms

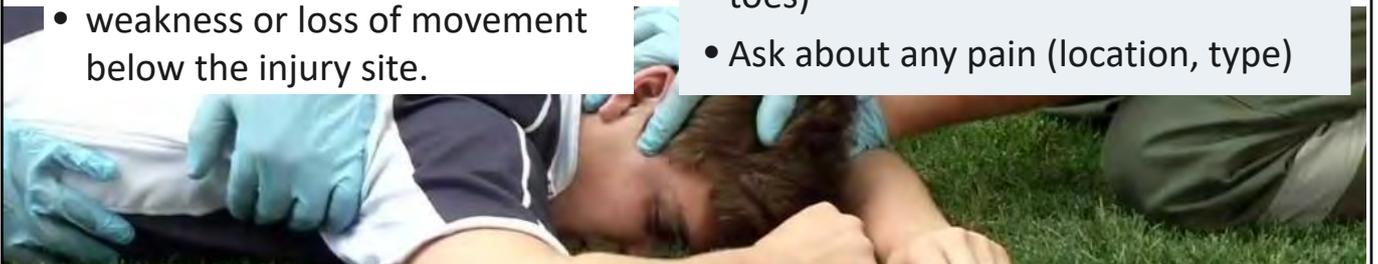
History of a neck or spinal incident

- pain at or below the injury site
- tenderness at the injury site
- numbness or tingling in the hands or feet
- weakness or loss of movement below the injury site.

Assessment:

Ask the athlete if they feel any pain in their neck or back.

- Check sensation distal to proximal.
- Check motor function (fingers & toes)
- Ask about any pain (location, type)



30

Management of potential neck injuries

Stay calm, don't rush and take control

- Approach with Manual in-line immobilisation (**M.I.L.S.**)
- **D.R.S.A.B.C.D.** assessment.
- Ensure ambulance is called
- **Don't move unless absolutely necessary** (e.g. obstructed airway or not breathing).
- Keep warm and wait for help
- **Reassess**



31

Manual in-line stabilisation (M.I.L.S.)



- Kneel or lie behind the head.
- Place one hand on each side of the head.
- Try not to completely cover the ears.
- Continue with **D.R.S.A.B.C.D.** assessment.
- Instruct the player not to move their head.
- Don't ask questions which the athlete may nod or shake their head.
- Unless you and members of the medical staff have been trained in spinal management, suspected spinal injuries should not be moved until an ambulance arrive.

32

Suggested Spinal

Women's Rugby Sevens: A player was brought off the field by medical staff to the tent. I was the person looking after the head whilst the Sports Doctor was managing the scene.

- The athlete starting shivering vigorously.
- Dads in the tent and standing over the athlete starting panicking.
- **Step 1:** Remove Dad in a respectful way from Tent.
- **Step 2:** Calmly control the athlete temperature and potential shock.

Make sure athletes have a barrier between them and the cold sports ground.

- **Step 3:** Keep the athlete calm and control their breathing.
- **Step 4:** When ambulance arrive remain at head until they are ready to take control.



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY

33

D

Danger

R

Response

A – Alert

V – Responds to *voice*

P – Responds to *pain*

U – *Unresponsive*



Yes	you get a response from athlete
1.	Manage dangers and make comfortable
2.	Observe A.B.C.
3.	Check for and manage other injuries (S.T.O.P.)

34

Dealing with unconscious casualty

Send for help

Airway

Breathing

Compressions

Defib



Don't ignore the parents.
Get someone to keep them informed.

NO	YOU DON'T GET A RESPONSE:
1.	Clear Airway, Check Breathing
2.	If breathing, monitor and maintain
3.	If NO BREATHING start compressions and Defib

35

Dealing with unconscious casualty

Airway is priority

An unconscious casualty cannot tell you if they have neck pain or weakness and so must be regarded as having a serious spinal injury until proven otherwise.



If a spinal injury is suspected or indicated, Airway, Breathing, Circulation takes priority over any injury, including suspected spinal injuries.

Maintain alignment of the head and spine rolling with care.

Roll the athlete onto their side to open and check airway and breathing.

36

Collars

Collars do not completely immobilise the neck.

Restrict motion and are a kinesthetic reminder to reduce neck movement.

Incorrectly fitted collars can do more harm than good.



Prehospital Use of Cervical Collars in Trauma Patients: A Critical Review:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3949434/>

37

Moving the Injured Athlete

Take the time needed to maintain the Player Welfare and Safety.

Considering the need to move a player or leave them where they are.



Am I causing further harm by moving?

Is the weather getting worse?

Is the athlete in danger?

Do I have the appropriate team and method of transport?



38

Types of Stretchers



- Scoop Stretchers (Adjustable)
- Spine boards
- Orange Stretchers

39

Stretcher Methods of Moving Injured Athletes

Explain procedure to the athlete

Explain procedure to the team

Use very clear language

- Keep the stretcher level
- Athlete must be secure
- Minimal movement of athlete
- Avoid haste (stop to readjust if necessary)
- The team should move smoothly
- Always reassure athlete
- Requires a minimum of **five people**
- Patient's arms folded across their chest.
- **Team leader at head.**



40

Lifting Methods of Moving Injured Athletes

- Tallest holding outer shoulder and elbow.
- Next tallest holding pelvis with one hand and other hand scooped under the outer thigh.
- Smallest with both hands scooped, one under the outer knee and the other hand under the lower leg.
- The roll is in unison controlled by the team leader.

NEVER RUSH - If the casualty is about to vomit or is having difficulty breathing, you'll learn the correct way to roll the casualty in the face-to-face training.



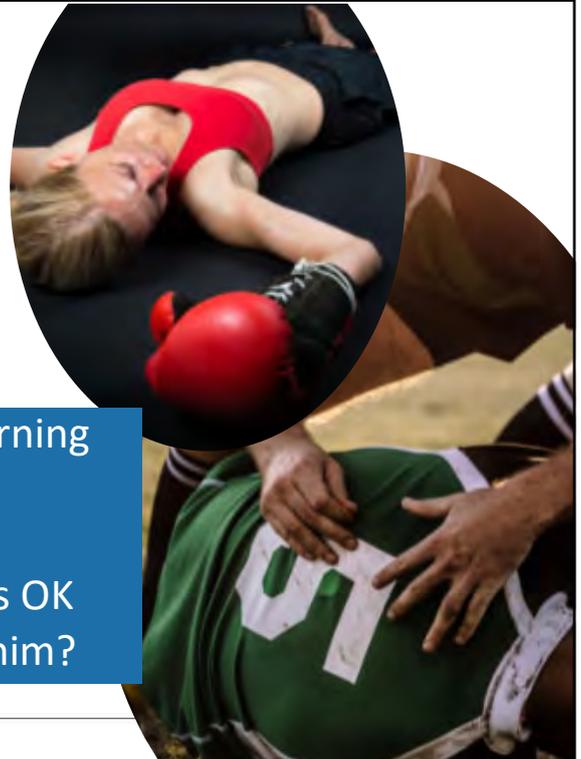
41

Scenario Discussion

When you reach a player she is unconscious. You witnessed the actual mechanism of the knock out and suspect spinal injury.

A conscious player tells he has a “burning sensation” in his neck region.

- The game has not stopped
 - After 2-3 minutes everything feels OK
- Does he play on or do you remove him?



42

Scenario Discussion

The athlete comes to you with his coach. He reports “pins and needles sensation” down his left arm after a fall. Coach is seeking clearance.

You observe an athlete collapse on the field, they are not moving or breathing.

What is your first priority?



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY



43

SUMMARY: ACTION PLAN

Training: Undertake further training in spinal injury management if you are looking after a team. Stay up-to-date on changes.

Planning: **Do not over complicate the planning process.** Undertake any planning when you start working with a team. Meet with the medical team, coaches and athletes.

Breathing: **Stay calm at all times** which will develop trust between you, the medical team and the athletes.

If you have to think twice about something you are doing or in doubt then **STOP and REVIEW**



44

The role of oxygen in the human body is so large and complex it boggles the mind.

Supporting an athlete with the supply of Oxygen will enrich tissue respiration.

In caring for a patient with a musculoskeletal injury, remember the priority of care is “life over limb.”



Supplemental oxygen can be given through mask or BVM with airway in place if you have this training and the appropriate equipment.

45



To deliver emergency oxygen, you need:

An oxygen cylinder, a regulator with pressure gauge and flow meter.

A delivery device, such as a nasal cannula, resuscitation mask, non-rebreather mask or a Bag Valve Mask (BVM).

46

First Aid Kit - Different Needs / Different Sports

- Pocket mirror – great to show people wounds to manage distress
- Ventolin & paper form cups to use as spacer
- Light blanket and towel
- Nail clippers
- Tape scissors
- Splints
- Tape. Assorted sizes.
- Tooth preservation kit
- Skin lube
- Digital Thermometer
- Dressings (Get a snap lock bag for all your adhesive and non-adhesive sizes)
- Box of gloves
- Freeze bags (Package)



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY

<https://fics.sport>

47

Recommendations First Aid Kit

- Blood Pressure Cuff.
- Stethoscope.
- Airways
- Oral and Nasal.
- Pen Light
- Space blanket
- Bio-freeze
- Saline solution
- Sunscreen
- Jelly beans
- Gauze Pads
- Roller Gauze
- Band-Aids
- Bandages
- Slings
- Pocket Mask
- Tackle Box
 - safety pins
 - hair clips, bandaids (different sizes)
 - splinter remover; loose items



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY

<https://fics.sport>

48

TAKE HOME MESSAGES AND HOMEWORK



49

Communication

Some sporting teams support staff have people like first aiders, doctors, physios, sports chiropractors, however not all teams have this support at all levels of the game. It is vital that support staff and coaches have a good communication line to assist in the welfare of the player. Medical support staff and coaches should have the emergency contact number of the players next of kin in case of an emergency.

Reflection: Think about the teams you look after and what medical information about players can you share with others?



50

Communication

You have 10 seconds on arrival at a scene to take control and gain everyone's confidants. **How are we going to do that??**

Reflection: An athlete is screaming in pain and holding their knee? There is a number of players around them yelling for you to come. A parent jumps the barrier and is running out to the athlete yelling.

What is the first thing you are going to do when you arrive at the athlete?



Ethical considerations of First Responders

What is fair discrimination?

Fair discrimination is based on actual individual differences in capability or suitability. Medical staff must not discriminate between the available players to decide who they will offer assistance to and who they will brush aside.



Ethical considerations of First Responders

What is unlawful discrimination?

Equal opportunity laws require that all people should be treated equally and not discriminated against on the basis of: Race / age / gender / religion / marital status / sexuality / disability / pregnancy.

However, some of these factors including age, gender and whether a person has a disability can have significant effects on sporting ability.



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY



53

FICS Event Ethics Policy

FICS has a number of policies and protocols in place to protect the sports chiropractic when working as part of a FICS delegation.

Creating and Maintaining Clear Sexual Boundaries Between Chiropractors and Patients. These guideline aims to set out the responsibilities of chiropractors in relation to the creation and maintenance of clear sexual boundaries with patients (including but not limited to the patient's parent/guardians/spouses/team mates/friends/anyone in the vicinity of the treatment administration) and what to do if these boundaries are crossed.



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY

<https://fics.sport>

54

