



The Sporting Spine

Kate Beerworth – Australian Matildas and WSC physiotherapist

(Notes from PowerPoint presentation at WSC Education session, 2007)

The Integrated Sporting Spine

A multi-functional unit

4 distinct areas of the spine

Each area has a specialised function reflected by the specific morphology and biomechanics of the region

Cervical spine

Mobility is the specialised function

Each motion is small

Facets angled at 45°

Relatively large range of movements in all directions, especially rotation

Thoracic spine

Primarily concerned with protection of the organs within the thorax

Facet articulations more vertically orientated

The thoracic spine is complicated by rib articulations

Lumbar spine

Function is to provide a weight bearing/shock absorbing pillar connecting the upper body to the lower body

Massive vertebral bodies

Facet joints are biplanar to limit movement considerably

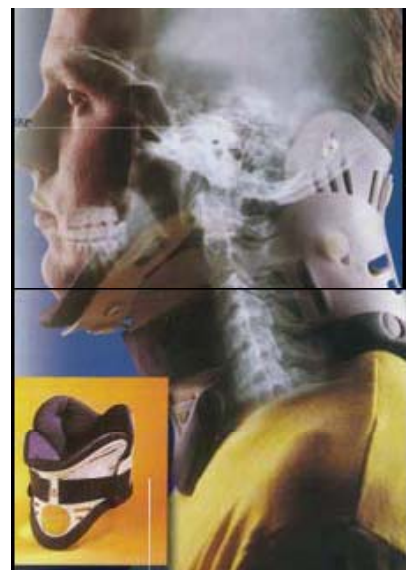
Sacrum

Dense wedge shaped bone

Biplanar articular surface

Consider how it articulates with the innominate to determine function

Coccyx



Cervical injuries in Sport

Acute

In an athletic population acute facet joint injuries are the most common presenting problem

Chronic

Shoulder and arm pain, especially in chronic problems, commonly have a cervical component that needs to be addressed



Whiplash injury

Especially in contact sports or with 'diving' or falling sports

Forced flexion/extension

Bleeding into dura

Pain settles slowly and then plateaus



Stingers and Burners

Stretch injury of the Brachial Plexus

Common in rugby

Feeling of numbness

Off the field and assess

Return when feeling returns

Thoracic Spine Injuries in Sport

Most frequently treated area of the spine....mainly as a 2° factor to the lumbar and cervical spines

Postural problem if 1° problem

Most common acute problem is facet/CV joint 'subluxation'



Lumbar spine injuries in Sport

The most common injured area of the spine in sport

Beware relying heavily on investigative results

Best diagnosis is clinical

Motion segment

Instability v stiffness

Neural structures

Hypertonic/weak muscles

Common cause of LBP is either incorrect technique or overload in the weights room

Contusions of the Lumbar spine

Direct blow common in contact sports

Thoraco-lumbar fascia

of transverse processes

X-ray

Kidney function
2 to 3 weeks off sport

Transverse Abdominus

Specific muscles to stabilise the spine
Various methods to retrain
Ultrasound
Biofeedback
Practice
Progression
Pelvic floor

Transverse Abdominus Rectus Abdominus



Pilates

“Buzz” word
Progression
Floor
Reformer
Swiss ball
Twister



WAKEFIELD
SPORTS CLINIC
EDUCATION PROGRAM

For more information on our education program, visit www.wakefieldsports.com.au