KING WILLIAM'S COLLEGE

King William's College & the Buchan School

Head & Spinal Injury Policy & Protocol

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1. AIM

1.1. Any member of the school community who sustains an injury to their head, neck or spine/back will receive first aid treatment and, if required, transfer to an appropriate Primary (General Practitioner; Minor Injuries Unit) or Secondary Care facility (Hospital Emergency Department).

2. SCOPE

2.1. This policy will apply to all members of the school community. It will apply to head/neck/spinal injuries that occur on the King William's College and the Buchan School (hereafter "the School") site and to those that occur on School activities/events that take place off-site.

2.2. This policy should be read in conjunction with the School's First Aid and Health and Safety policies.

2.3. For those who teach sport/physical education or who are involved in sport in the school must read this policy in conjunction with the '*World Rugby Concussion Management*' protocols which can be accessed at http://playerwelfare.worldrugby.org/concussion

3. DEFINITIONS

3.1. **Head Injury**

"Head injuries are common. They are potentially serious because they can lead to damage to the brain. There may also be injuries to the spine in the neck, scalp wounds and/or a skull fracture. If a casualty has sustained a minor injury such as a bruise or scalp wound, he is likely to be responding normally. If he has suffered a more serious blow to the head, such as in a sporting impact, responsiveness may be temporarily impaired.

3.1.1. *Concussion*

"The brain lies inside the skull, cushioned by fluid and can therefore be shaken by a blow to the head. This is called concussion and it may produce a temporary period of unresponsiveness, but is not usually associated with any lasting damage to the brain. The casualty may be confused, but this lasts only a short time and is followed by a full recovery.

3.1.2. *Compression*

"If a casualty has suffered a severe blow to his head, this may cause bleeding or swelling inside the skull that can press on the brain (compression). This is a serious condition. The pressure can rise immediately after the impact or it may develop a few hours or even days later. The severity of the head injury is related to the mechanism of injury and its impact on the head. A serious head injury is likely after a high speed motor collision or a fall from a height."

3.2. **Spinal Injury**

"Injuries to the spine can involve one or more parts of the back and/or neck: the bones (vertebrae), the disks of tissue that separate the vertebrae, the surrounding muscles, and ligaments, or the spinal cord and the nerves that branch off from it.

The most serious risk associated with spinal injury is damage to the spinal cord. Such damage can cause loss of power and/or sensation below the injured area. The spinal cord or nerve roots can suffer temporary damage if they are pinched by displaced or dislocated disks, or by fragments of broken bone. If the cord is partly or completely severed, damage may be permanent. The most important indicator is the mechanism of the injury."

(Austin et al., 2016)

4. FIRST AID MANAGEMENT

4.1. **Head Injuries**

4.1.1. *Recognition*

There may be:

- Brief period of impaired response or unresponsiveness
- Scalp wound
- Dizziness or nausea
- Loss of memory of events at the time of, or immediately preceding the injury
- Mild generalised headache
- Confusion

For severe head injury there may also be:

- History of a severe blow to the head
- Deteriorating level of response
- Loss of responsiveness
- Leakage of blood or blood-stained watery fluid from the ear or nose
- Unequal pupil size

4.1.2. *First aid protocol*

1. Sit the casualty down
2. Apply a cold compress / wrapped ice pack to the injury
3. Assess the casualty's level of response using the AVPU scale or the Glasgow Coma Scale (if trained to use) (Appendix 1)
4. Treat any wounds (do not be distracted by a wound; always assess for a more serious head injury)
5. Regularly monitor vital signs (pulse, respiratory rate and level of response)
6. When recovered ask a responsible person to look after him for 24 hours after the injury
7. If the injury is a result of a sports incident the person should not be allowed to return to the sport until assessed by a medical practitioner.[1]

Seek medical advice if any of the following apply:

- They have had previous brain surgery
- They are taking anticoagulant or antiplatelet ("blood thinning") medication
- The head injury is accompanied by drug or alcohol intoxication
- There is no responsible person to look after them
- They are over 65 years of age

Seek urgent medical advice if you notice signs of worsening head injury such as:

- Increasing drowsiness
- Persistent headache
- Confusion, dizziness, loss of balance and/or loss of memory
- Difficulty speaking
- Difficulty walking
- Vomiting episodes after the injury
- Double vision
- Seizure

[1] Medical Practitioner is a physician, surgeon or medical officer (as defined in the Medical Act 1983 (as amended))

4.2. **Spinal Injuries (injuries to the back and/or neck)**

4.2.1. *Recognition*

Suspect spinal injury if abnormal forces have been exerted on the back or neck and particularly if a casualty complains of any changes in sensation or difficulties with movement. If the incident involved violent forward or backward bending, or twisting of the spine, you must assume that the casualty has a spinal injury. You must take particular care to avoid unnecessary movement of the head, neck, and spine at all times.

Although spinal cord injury may occur without any damage to the vertebrae, spinal fracture greatly increases the risk. The areas that are most vulnerable are the bones in the neck and those in the lower back

The following incidents may indicate the possibility of a spinal injury:

- Falling from a height
- Falling awkwardly
- Diving into a shallow pool and hitting the bottom
- Falling from a horse or motorbike
- Collapsed rugby scrum
- Sudden deceleration in a motor vehicle
- A heavy object falling across the back
- Injury to the head or face

When the vertebrae are damaged there may be:

- Pain in the neck or back at the injury site. This may be masked by other, more painful, injuries
- A step, irregularity or twist in the normal curvature of the spine
- Tenderness and/or bruising in the skin over the spine

When the spinal cord is damaged there may be:

- Loss of control over the limbs – movement may be weak or absent
- Loss of sensation, or abnormal sensations such as burning or tingling; they may report stiff; heavy or clumsy limbs
- Loss of bladder and/or bowel control
- Breathing difficulties

4.2.2. *First aid protocol*

Responsive Casualty:

1. Call for an ambulance immediately
2. Do not move the casualty unless it is necessary due to imminent danger
3. Reassure the casualty and advise them not to move (ask them not to nod their head when answering questions)
4. Kneel behind the casualty's head
5. Rest your elbows on the ground or on your knee and grasp both sides of the casualty's head to steady and support their head in a neutral position (where head, neck and spine are in line) (spread your finger so as to not cover their ears)
6. Ask a helper to place rolled up blankets, towels, or items of clothing on either side of the casualty's head and neck, while you keep their head in the neutral position.
7. Continue to support the casualty's head until emergency services take over, no matter how long this may be
8. Get a helper to monitor the casualty's vital signs

Unresponsive Casualty:

1. Kneel behind the casualty's head
2. Rest your elbows on the ground or on your knee and grasp both sides of the casualty's head to steady and support their head in a neutral position (where head, neck and spine are in line)
3. Open the casualty's airway using the 'jaw thrust' technique ('jaw thrust': place fingertips at the angles of the jaw, gently lift the jaw upwards to open the airway, do not tilt the neck)
4. Check to see if the casualty is breathing
    a. If yes:
        1. Continue to steady the casualty's head in a neutral position
        2. Call for an ambulance (ask a helper to do this if available)
        3. Continue to support the casualty's head until emergency services take over, no matter how long this may be
        4. Get a helper to monitor the casualty's vital signs
        5. Maintain the 'jaw thrust'
        6. If the casualty needs to be turned onto their side use a log roll if enough people are available (in this instance the person supporting the head takes the lead)

b. If no:

1. Call for an ambulance (ask a helper to do this if available)
2. Start CPR
3. If the casualty needs to be turned onto their side use a log roll if enough people are available (in this instance the person supporting the head takes the lead)

5. RESPONSIBILITIES

5.1. All measures should be taken to prevent head and/or spinal injuries from occurring. Risk assessments undertaken for all school activities should take account of the potential risk of head and/or spinal injuries.

5.2. Advice and treatment should be sought immediately from an appropriately trained first aider or the School Nurse in the event of a head and/or spinal injury

5.3. A person who has sustained a head and/or spinal injury should never be left alone. A first aider / the School Nurse should be called to the pupil. The pupil should not be sent to the Medical Centre as they may deteriorate en-route.

6. REFERENCES

6.1. Austin, M., Crawford, R. and Klaassen, B. (2016) *First Aid Manual* (Revised 10th edn.), London: Dorling Kindersley

APPENDIX 1

A.V.P.U. TOOL

A.V.P.U. is an acronym that can be used to assess and record a person's level of responsiveness. This assessment should be used when assessing and monitoring a person following a head and/or spinal injury.

The letters stand for:

A	**ALERT**	Eyes are open Can answer questions Can obey commands
V	**VOICE**	Eyes open only when prompted to open them Can answer questions Can obey commands
P	**PAIN**	Eyes only open when you pinch their earlobe
U	**UNRESPONSIVE**	No response to any stimuli

APPENDIX 2

Management of a suspected concussion

A pupil falls to the ground after a blow to the head:

• If he / she gets to their feet unaided immediately and appears fully conscious and orientated, then:

He / she may continue as before the injury

• If he / she is unable to get up for a short period of time - 10 seconds or more - or appears confused or disorientated 2 minutes after the blow. then: -

He / she must stop playing and be checked and cleared to play by an appropriately trained medical professional

• If he / she is unconscious for 60 seconds or more or has retrograde amnesia (cannot remember the blow or the events leading up to it) as assessed by failure to answer all the following questions correctly: - • "Which venue are we at today?" • "Which half is it?" • "Who scored last in the game?" • "What team did you play last week / game?" • "Did your team win the last game?"

and / or vomits on 2 or more occasions

and / or has a GCS (Glasgow Coma Scale) score of less than 15

He / she must be transferred to hospital. Ring 999 for an ambulance and DO NOT DELAY for example by calling for a doctor or nurse

If he / she is unconscious on the field, the game must stop and he / she should not be moved – except by appropriately trained medical personnel using a spinal stretcher.