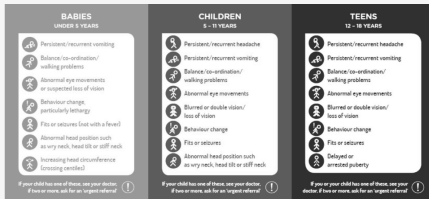


Brain Tumours	Mangement																						
<table border="1"> <tr> <th>Triad</th> <th>Other S&S</th> </tr> <tr> <td>Headache</td> <td>Nausea</td> </tr> <tr> <td>Vomiting</td> <td>Worse first thing in the morning</td> </tr> <tr> <td>Convulsions</td> <td>Valsalva movements make it worse</td> </tr> <tr> <td></td> <td>new onset/change in HA</td> </tr> <tr> <td></td> <td>Seizures</td> </tr> <tr> <td></td> <td>Confusion</td> </tr> <tr> <td></td> <td>Dysphagia</td> </tr> <tr> <td></td> <td>Motor Weakness</td> </tr> <tr> <td></td> <td>Personality Changes</td> </tr> <tr> <td></td> <td>Memory Loss</td> </tr> </table>	Triad	Other S&S	Headache	Nausea	Vomiting	Worse first thing in the morning	Convulsions	Valsalva movements make it worse		new onset/change in HA		Seizures		Confusion		Dysphagia		Motor Weakness		Personality Changes		Memory Loss	<p>Urgent referral (same day) to GP - risk of blindness</p>
Triad	Other S&S																						
Headache	Nausea																						
Vomiting	Worse first thing in the morning																						
Convulsions	Valsalva movements make it worse																						
	new onset/change in HA																						
	Seizures																						
	Confusion																						
	Dysphagia																						
	Motor Weakness																						
	Personality Changes																						
	Memory Loss																						
	Mild Traumatic Brain Injury																						
	<p>Common in teens and young adults</p> <p>Athletes more at risk - football, boxing, hockey, soccer, MMA, military personnel, victims accidents</p>																						
	Concussion																						
	<p>- One type of brain injury</p> <p>- Subconcussive injury = traumatic impact to the head that does not result in immediate c</p> <p>- Simple concussion = progressively resolves after 7-10 days without complications</p> <p>- Complex concussion = persistent symptoms and Hx of loss of consciousness > 1 minute exertion, prolonged impairment of cognitive function, seizure</p> <p>Mechanical insult - complex cascade of biochemical dysfunction - mitochondrial dysfunc homeostasis</p>																						
Triad in children	Presentation																						
Dizziness	- Headache																						
Headache	- Confusion, light-headedness/dizziness, visual disturbances, tinnitus, lethargy, insomnia changes, cognitive difficulties																						
Vomiting	- Impaired memory & leaning, reduced planning, inability to switch mental tasks, attention processing, slowed reaction times																						
	- Symptoms worse with physical exertion/stress																						
HEADSMART	<p>On field assessment of injured athlete = ruling out emergent situations</p> <p>Palpation of head, neck, face , nose and TMJ for f##/injuries</p> <p>Move fingers and toes - upper and lower sensation, strength and function</p>																						
	Temporal Arteritis																						
	S&S																						
	<p>Persistent unilateral throbbing over temporal region + scalp tenderness</p> <p>Associated with PMR - look for bilateral inflammatory signs over shoulder/hip area</p> <p>>50y</p> <p>Severe burning - worse in morning & constant</p> <p>Malaise, vague aches, pains, weight loss</p> <p>ESR/CRP elevated</p>																						



Red flags

- GCS <15
- Deteriorating mental status
- Potential spinal injury
- Progressive neurological signs/symptoms
- Persistent vomiting
- Suspected skull f#
- Seizures
- Coagulopathy
- Prior neurosurgery
- Multiple injuries

What to do next

- Once concussed patient is out of the game, an attendant should stay with them for 24 hours
- Attendant should observe patient every 4 hours
- Should be alert for: worsening ha, irritability, persistent nausea/vomiting, difficulting speech, light headiness, numbness, confusion, memory loss, clear CSF discharge from nose/ear, disturbances, seizures, LOC, easily aroused
- Drink only clear fluids for 8-12 hours
- No alcohol
- Diet should begin light and progress to normal over 24 hours
- Sedatives, sleeping pills, aspirin and ibuprofen should be avoided
- Avoid physical and mental activity for first 24 hours - school, work, texting, video games, tools or heavy equipment
- Should sleep with head elevated for 24 hours
- Follow up assessment - did you hit your head? Lose consciousness? experience amnesia on/confusion? Dizziness or unsteadiness? Memory problems/forgetfulness? Concentration

Glasgow Coma Scale (GCS)

Glasgow coma scale		
Eye opening	spontaneously	4
	to speech	3
	to pain	2
	none	1
Verbal response	orientated	5
	confused	4
	inappropriate	3
	incomprehensible	2
Motor response	obeys commands	6
	localises to pain	5
	withdraws from pain	4
	flexion to pain	3
	extension to pain	2
	none	1
Maximum score		15

- 15 point scale

Imaging

- May be used to rule out Cx injury
- Canadian CT head rule - witnessed loss of consciousness, amnesia/disorientation
- MRI for: GCS <15 at 2 hours post injury
- >2 episodes of vomiting
- >65 or older
- Suspected skull f# (haemotympanum, raccoon eyes, CSF otorrhoea/rhinorrhoea, battles)
- Pre injury amnesia >30 mins
- Dangerous mechanism of injury - struck by motor vehicle, MVA ejection, fall from >3 feet

Questions (Maddocks)

What ground/field/rink are we playing at?

What team are we playing today?

What half/quarter/period is it?

How far into the game is it?

Which side scored last?

What team did we play last game?

Did we win last game?

- Sideline for evaluation if suspected concussion (motor, sensory, reflex tests, CN evaluation, coordination and balance assessment)
- Difficulty with these questions = out and not allowed to play
- SCAT3
- Ask about concussion S&S



Management

- Recovery period = 100 days
- Some patients have post concussion syndrome within 1-2 weeks up to 3 months
- Delayed recovery factors = >4 symptoms
- HA >60 hours
- Pre-injury HA
- Self reported fatigue/fogginess
- prior mTBI
- Hx of PTSD, ADHD, learning disability
- advancing age
- no and proximity of concussions
- Duration of concussion (> 10 days)
- prolonged loss of consciousness (>1 minute)
- amnesia
- convulsions
- co-morbidities
- Medication
- Allowed to play when:
 - Complete clearing of symptoms at rest - no pain meds
 - No symptoms after provocative testing - cycling, running, cardio exercises
 - Full return of cognitive ability, memory and concentration
- Can do light aerobic activity after symptoms resolve if it does not exacerbate symptoms then progressive more demanding activity should be considered (70%)
- Multiple concussed patients increased risk of Alzheimers, ALS , Suicide, Parkinsons and Dementia
- Assess Paraspinals - suboccipitals
- Patients who worsen/do not show improvement after 3-5 days should be referred to a specialist
- EPA/DHA/Magnesium

Thunderclap HA

S&S	Causes	Management
Sudden, abrupt Headache - Reaches peak @ 1 hour	SAH	REFER IMMEDIATELY TO HOSPITAL
"Worse Headache of their life"	Intracranial haematoma	DON'T LET THEM DRIVE
"Feels as though they are being hit on the back of the head"	Cerebral venous sinus thrombosis	
Very Different type of Headache	Cervical Artery dissection	

