CONCUSSION FACTS

- A concussion is a brain injury.
- All concussions are serious.
- Concussions can occur without loss of consciousness.
- All athletes with any symptoms following a head injury must be removed from playing or training and must not return to activity until all symptoms have cleared.
- Specifically, return to play on the day of any suspected concussion is forbidden.
- Recognise and remove to help prevent further injury or even death.
- Concussion can be fatal.
- Most concussions recover with physical and mental rest.

What is concussion?

Concussion is a traumatic brain injury resulting in a disturbance of brain function. There are many symptoms of concussion, common ones being headache, dizziness, memory disturbance or balance problems.

Loss of consciousness, being knocked out, occurs in less than 10% of concussions. Loss of consciousness is not a requirement for diagnosing concussion. Typically standard brain scans are normal.

What causes concussion?

Concussion can be caused by a direct blow to the head, but can also occur when blows to other parts of the body result in rapid movement of the head, e.g. whiplash type injuries.

Prevention of Concussions:

Concussions can happen in any sport, contact or non contact. The best prevention is to learn sport specific techniques to avoid head injury. Tackling, Heading, Taking a Charge, Diving, and Sliding techniques should be reviewed with coaches or athletic trainers to avoid these injuries.

Solano College Reporting:

Coaches and Athletes are responsible to report any possible concussion to Solano Sports Medicine further evaluation and treatment immediately. Concussions will be evaluated on a daily basis, until return to play protocols are implemented. Concussions will be referred to physician only when serious symptoms persist. Concussion baseline testing will be compiled and used as a comparison.
Who is at risk?

Concussions can happen at any age. However, children and adolescent athletes:

- are more susceptible to concussion
- take longer to recover
- have more significant memory and mental processing issues.
- are more susceptible to rare and dangerous neurological complications, including death caused by a single or second impact

Athletes with a history of two or more concussions within the past year are at greater risk of further brain injury and slower recovery and should seek medical attention from practitioners experienced in concussion management before return to play.

Onset of symptoms

It should be noted that the symptoms of concussion can present at any time but typically become evident in the first 24-48 hours following a head injury.

How to recognize a concussion

If any of the following signs or symptoms are present following an injury the player should be suspected of having a concussion and immediately removed from play or training.

Visible clues of concussion - what you see

Any one or more of the following visual clues can indicate a concussion:

- Dazed, blank or vacant look
- Lying motionless on ground/slow to get up
- Unsteady on feet/balance problems or falling over/incoordination
- Loss of consciousness or responsiveness
- Confused/not aware of plays or events
- Grabbing/clutching of head
- Seizure(fits)
- More emotional/Irritable than normal for that person
Symptoms of concussion - what you are told

Presence of any one or more of the following signs and symptoms may suggest a concussion:

- Headache
- Dizziness
- Mental clouding, confusion, or feeling slowed down
- Visual problems
- Nausea or vomiting
- Fatigue
- Drowsiness/feeling like “in a fog”/difficulty concentrating
- “Pressure in head”
- Sensitivity to light or noise

Questions to ask - what questions to ask

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

- “What venue are we at today?”
- “Which half is it now?”
- “Who scored last in this game?”
- “What team did you play last week/game?”
- “Did your team win the last game?”

Recognize and remove and if in doubt, sit them out.

On field management of a suspected concussion at training or during a contest

Any athlete with a suspected concussion should be IMMEDIATELY REMOVED FROM PLAY, using appropriate emergency management procedures.

Once safely removed from play, the injured player must not be returned to activity that day and until they are assessed medically, by Solano College Sports Medicine.

If a neck injury is suspected, the player should only be removed by emergency Solano Sports Medicine staff, who will implement EMS if necessary.

Team mates, athletic trainers, coaches, match officials, team managers, administrators or parents who suspect a player may have concussion MUST do their best to ensure that the player is removed from the field of play and notify Solano Sports Medicine staff.
Side line management of a suspected concussion

Athletes with a suspected concussion:

- should not be left alone in the first 24 hours
- should not consume alcohol in the first 24 hours and thereafter should avoid alcohol until provided with medical or healthcare professional clearance or, if no medical or healthcare professional advice is available, the injured player should avoid alcohol until symptom free
- should not drive a motor vehicle and should not return to driving until provided with medical or healthcare professional clearance or, if no medical or healthcare professional advice is available, should not drive until symptom free

If ANY of the following are reported, then the player should be transported for urgent medical assessment at the nearest hospital:

- Athlete complains of severe neck pain
- Deteriorating consciousness (more drowsy)
- Increasing confusion or irritability
- Severe or increasing headache
- Repeated vomiting
- Unusual behavior change
- Seizure (fit)
- Double vision
- Weakness or tingling/burning in arms or legs

In all cases of suspected concussion, Solano College Sports Medicine athletic trainers will decide if a physician referral or healthcare professional for diagnosis and guidance, even if the symptoms resolve.

Managing a concussion or suspected concussion - REST THE BODY, REST THE BRAIN

Rest is the cornerstone of concussion treatment. This involves resting the body - ‘physical rest’ - and resting the brain - ‘cognitive rest’. This means avoidance of:

- Physical activities such as running, cycling, swimming, etc
- Cognitive activities, such as school work, homework, reading, television, video games, etc

This complete rest should be for a minimum of 24 hours.

Before restarting activity, the player must be symptom free at rest. Medical or approved healthcare provider clearance is recommended before restarting activity.
Returning to play after a concussion

- If any symptoms are present or reappear, contact training and playing must be avoided.
- A minimum complete rest period of 24 hours is recommended.
- Rest from playing or contact training will be monitored by Solano Sports Medicine.
- A Graduated Return to Play (GRTP) must be completed:
  - for ALL players diagnosed with a concussion
  - for ALL player even suspected of having concussion during a game or training at which there is no appropriately qualified person present
- A GRTP should only be commenced after the completion of the rest period recommended and only if the player is symptom free and off medication that modifies symptoms of concussion.
- Any player with a second concussion within 12 months, a history of multiple concussions, players with unusual presentations or prolonged recovery must be assessed and managed by health care providers (multi-disciplinary) with experience in sports-related concussions and no further participation in Athletics should take place until the player is cleared by a doctor with experience in concussion management.

Graduated return to play (GRTP) program

A graduated return to play (GRTP) program is a progressive exercise program that introduces an athlete back to sport in a step wise fashion. This should only be started once the athlete is symptom free and off treatments that may mask concussion symptoms, for example drugs for headaches or sleeping tablets.

The GRTP program consists of six distinct stages:

- The first stage is the recommended rest period
- The next four stages are training based restricted activity
- Stage 6 is a return to play

Under the GRTP program, the player can proceed to the next stage only if there are no symptoms of concussion during rest and at the level of exercise achieved in the previous GRTP stage.

If any symptoms occur while going through the GRTP program, the player must return to the previous stage and attempt to progress again after a minimum 24-hour period of rest without symptoms.

Solano College Sports Medicine recommends that a staff certified athletic trainer, or approved healthcare professional confirm that the player can take part in full contact training before entering each stage.
Table 1: GRTP protocol - each stage is a minimum of 24 hours

<table>
<thead>
<tr>
<th>Rehabilitation stage</th>
<th>Exercise allowed</th>
<th>Objective</th>
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<tbody>
<tr>
<td>1. Minimum rest period</td>
<td>Complete body and brain rest without symptoms</td>
<td>Recovery</td>
</tr>
<tr>
<td>2. Light aerobic exercise</td>
<td>Light jogging for 10-15 minutes, swimming or stationary cycling at low to moderate intensity. No resistance training. Symptom free during full 24- hour period</td>
<td>Increase heart rate</td>
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<tr>
<td>3. Sport-specific exercise</td>
<td>Running drills. No head impact activities</td>
<td>Add movement</td>
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<tr>
<td>4. Non-contact training</td>
<td>Progression to more complex training drills, e.g. passing drills. May start progressive resistance training</td>
<td>Exercise, coordination, and cognitive load</td>
</tr>
<tr>
<td>5. Full contact practice</td>
<td>Normal training activities</td>
<td>Restore confidence and assess functional skills by coaching staff</td>
</tr>
<tr>
<td>6. Return to play</td>
<td>Player rehabilitated</td>
<td>Recover</td>
</tr>
</tbody>
</table>

It is recommended that, in all cases of suspected concussion, the player is referred to a medical professional or certified athletic trainer, for diagnosis and guidance as well as return to play decisions, even if the symptoms resolve.

A comprehensive medical concussion evaluation may include:

- An analysis of symptoms
- A general and neurological examination
- Verbal cognitive (memory) tests
- A balance assessment
- Computerized brain function tests

Each of these is useful in contributing to a diagnosis and return to play decision but no one test stands alone in determining return to play.
Home Instructions  
Solano Community College Sports Medicine

__________________________ Was treated for a mild/moderate/severe concussion, by Solano College Sports Medicine Staff today __________________. The signs and symptoms did not show evidence for further medical action. Instructions for home:

1. **Normal** symptoms include:
   a. dizziness,  
   b. nausea,  
   c. headache,  
   d. confusion,  
   e. feeling “dazed”  
   f. ringing in the ears  
   g. double vision  
   h. loss of balance  
   i. “seeing stars”

2. **Do not** allow the athlete to drive, or be alone.
3. **Allow** the athlete to lay down with the head elevated on pillows.
4. **Place** ice on the back of the neck (15 mins each hour), until symptoms resolve.
5. **Use** Tylenol for pain/headache, as directed: ______________________
6. **Allow** the athlete to rest/or sleep, there is no need to wake the athlete.
7. **Do Not** allow alcohol use.
8. Monitor the symptoms in #1, these should slowly subside. However some may last 3-7 days.
9. **IF THE ATHLETES SYMPTOMS WORSEN WITH TIME, TAKE THEM FOR MEDICAL EVALUATION.**

10. **Indications for immediate hospital referral:**
    a. Persistent vomiting  
    b. Confusion lasting more than 30 mins  
    c. Convulsions  
    d. Loss of Consciousness

11. The Athlete must be re-evaluated upon return to campus and prior to any physical activity.

If you have any questions call: Head Athletic trainer Alison Aubert MS, AT,C @ (707) 689-3971…day or night