Information on Concussions
MADISON YOUTH FOOTBALL

DISCLAIMER: The material provided herein is for information purposes only. It is not meant to take the place of formal education or training in concussion prevention or management.

I. Concussion Training & Disclaimer

- There are formal training sessions available, as provided by **CT Concussion Task Force**, and **CT Coaches Education Program**.
- MODULE 15, initial training course: This is only module required by law for secondary / high schools. (The law does not apply to youth football)
- Implications: revoke coaching permit, lawsuits, any job at any school.

II. Key Overview of Coaches Responsibilities for Concussion Injuries

*** REMOVE any athlete that exhibits signs and symptoms of concussion**. MUST be removed immediately, even if no witness of head injury. Any suggestion.

*** NO RETURN until written permission from a health care provider**. Does not matter if feels better 15 minutes later. REMOVE AND NO RETURN….period. ***Liscenced athletic trainer, NP, MD, are only people certified to declare eligible for return to play!***

*** COACHES RESPONSIBILITY:** So, need to **know SIGNS and SYMPTOMS** (or risk liability for league.)

III. Definition of Concussion

- Transient alteration in brain function = BRAIN INJURY – not a “ding”, or “bell rung”, or “seeing stars”. Changes occur to brain cells – not seen on CT scan, MRI.
- A CT or MRI DOES NOT RULE OUT A CONCUSSION. It is NOT a bruise = blood under the skin. In fact, there usually is no evidence of structural injury to brain.
- Neurometabolic cascade, calcium fluxes.
- YOU DO NOT NEED TO GET HIT IN THE HEAD TO GET A CONCUSSION. Big tackle, kid gets rocked, without hitting head = INDIRECT CAUSE OF CONCUSSION – whiplash action causes brain to hit skull.
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IV. Tips to Prevent Concussions

1. LEARN PROPER TACKLING TECHNIQUES. Teach them and correct the kids, over and over.

2. HYDRATION and GLUCOSE. Concussion is an energy crisis.
3. CONDITIONING. Most concussion happen with fatigue!
4. STRENGTHEN NECK MUSCLES.
5. GET ADEQUATE SLEEP.
6. CHANGE THE CULTURE.

Teach coaches, parents, and kids what signs and symptoms are. Take them seriously, they need to feel OK to come to the coach = CHANGE THE CULTURE. This is very difficult in football, because important also for them to be tough to play right, but need some happy medium. Teammates should feel OK to come to coaches.

Rare, but illustrative story. There was a JV player in NJ, for example, who suffered a major concussion and had classic symptoms. All his friends knew, but did not say anything to coaches. Kid died of secondary complications.

V. Complications of Concussions If Not Properly Treated.

Post-Concussion Syndrome (PCS) – May last a few days, months, years, or forever. Symptoms can stay forever. Head-aches, depression or mood swings, nervousness, concentration or attention problems, memory problems, feeling foggy, fatigue, sleep problems.

KEY INTERVENTION…Shut down school work, and all mental and physical activity.

IF IGNORED, CAN RESULT IN…

1. **Second Impact Syndrome (SIS)** – The smallest contact can cause another, more severe, concussion. This can be hardly noticed. Player will be out much longer. Seems bizarre on the field ("How could that little hit have resulted in such a major concussion."
2. **Rapid Brain Swelling.** RARE BUT POSSIBLE = rapid brain swelling, permanent brain damage, and 50+% = DEATH. Boxers are classic, but adolescents at risk.

VI. Principles of How to Treat a Concussion

Simple. …PHYSICAL and COGNITIVE/MENTAL REST. Brain is firing signals all over the place with a concussion.

If increase blood flow and heart rate and brain activity – e.g. carnival rides, video games, running around = DELAYS RECOVERY. Need to SHUT KIDS DOWN.

EVERY CONCUSSION IS DIFFERENT – **no one can not predict how long recovery will take**. Often ask, hy is it taking so long? Every kid is different! Adolescents recover more slowly than adults, and younger kids even longer. DEVELOPING BRAINS TAKE LONGER.

AT LEAST ONE WEEK OUT. 40-60% TWO WEEKS. 80% FOUR WEEKS. That means 20% will take longer than four weeks.

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THE R's OF CONCUSSION MANAGEMENT

*Recognize the concussion has occurred – stunned look, weird gaze, nausea, any loss of memory of the play, game or current situation and day or past, wobbly on feet, mood changes (from baseline, acting weird, sobbing for no apparent reason, out of character); these can be DELAYED and NOT WITNESSED; can happen for no apparent reason in 3rd Q when tackle was in 1st Q, can happen that night. Sometimes no headache! Just the other stuff – just nausea, light sensitivity, noise bothers them, moody, confusion – depends on which part of brain.

*Remove the player from the game. Done. SEND TO PEDIATRICIAN / HOSPITAL / EMERGENCY. If any loss of consciousness, severe headache, abnormal pupils, seizure, weakness of arms or legs = GO IN AMBULANCE. Continued vomiting, increasing headache, OK to go in car with parents then or that night.

IF UNCONCIOUS = ASSUME NECK AND HEAD INJURY. DO NOT MOVE. ACTIVE EMS. 911. PERFORM CPR IF NO PULSE/BREATHING.

*Refer for medical care. Any observed concussion, even if small.

*Rest = treatment (as detailed above)

*Return only after full recovery = signed return note = THE LAW. No symptoms at rest, no symptoms with every day activities, no symptoms in school, no symptoms on 10 minutes stationary bike (and progress), no symptoms with non-contact practice, no symptoms at practice.

* GRADUAL RETURN TO PLAY IS KEY. Concussion kids should not be at practice on sideline if have symptoms, should not be carrying equipment, or tracking plays, etc. Gradual… if symptoms recur, wait a day and then can try again.

* TEACH PROPER TECHNIQUES, START WITH YOUNGEST LEVELS, repeat over and over.

* HELMETS – prevent skull fractures, not concussions. No definitive evidence that expensive mouth guards prevent concussions.

VII. NECK INJURIES – often occur with head injuries. Spinal cord, vertebrae, BUILD NECK MUSCLES OF PLAYERS

Head down axial loading = spinal cord injury. Head down, hit top of head. Crush vertebrae, go off track. NEED TO KEEP HEAD BACK!

Burners or stingers. Down to fingertips. This is a NECK INJURY. Stretch nerve roots coming out of neck or compress on other side. If goes away, ok – if persists, with stinging, pain, weakness – REMOVE FROM GAME. Test the kids to see if have any weakness.

ANY PAIN OR TENDERNESS ON SPINE, LACK OF NECK MOTION = emergency.

Need electric screwdriver to remove mask, for every type of mask that is used in game, or cutting tools to cut clips. **EMT WILL NOT HAVE THIS.**

PREVENTION APPROACH TO NECK INJURIES

- EQUIPMENT: properly wearing equipment, tight and snug helmet fitting, air chambers, chin strip correct, train parents, teach kids
- TECHNIQUE: teach head up, bite the ball.

NEED EMERGENCY ACTION PLAN.

* Basic First Aid Kit – gloves, gauze, mouth guards.
* A.E.D. – splints, medical kit.
* Ambulance
* Cordless screwdriver, cutting tool.
* List of multiple phone numbers for kids' parents, and medical issues (diabetes, asthma, epi-pen if insect sting allergies)