

Heads Up - Concussion in Youth Sports

Lesson 1

Narrator

Each day in our nation, hundreds of thousands of young athletes head out to the fields, ice and gymnasiums to practice and compete in a wide variety of sports. There's no doubt that these sports are a great way for kids and teens to stay healthy, as well as learn important leadership and team-building skills. But medical researchers have discovered young athletes, especially kids and teens, often don't recognize their own limitations; especially when they have a concussion.

Youth concussion can have long term impacts on young athletes such as their health, memory, learning and even their survival. This has led to a new effort to improve prevention, recognition and response to sports-related concussion. That's where you come in. It's your responsibility, as a coach, to help recognize and make the call to pull an athlete off the field, ice, or court if you think that player might have a concussion. The purpose of this training module is to help you better understand the impact of concussion, as well as how to recognize it in your players. Let's start with a few basic facts concerning concussion: All concussions are serious. Concussions can happen in any sport or recreational activity. Recognizing and responding properly to concussions when they first occur can help prevent further injury or even death. The clip-board navigator at the left of the screen will help you monitor your progress in the course and will allow you to revisit any lessons you've completed. At any time during the course, you may select the "Resource Center" to view important documents, lists, websites and additional video content. When you are finished with the resource center, simply close it and the course will resume where you left off. Let's get started.

Dr. Robert Cantu

It's absolutely essential that we have education for coaches so that if they recognize any of these symptoms, they can immediately remove the youth from competition.

Narrator

A concussion is a type of traumatic brain injury--or TBI--caused by a bump, blow, or jolt to the head or by a hit to the body that causes your head and brain to move rapidly back and forth. This sudden movement can literally cause the brain to bounce around or twist in the skull, stretching and damaging the brain cells and creating chemical changes in the brain. What you might not know is that these chemical changes make the brain more sensitive to any increased stress or injury until it fully recovers. Unlike a broken arm, or other injuries that you can feel with your hands or see on an x-ray, you can't see a concussion. It is a disruption of how the brain works. It is not a bruise to the brain. That is why brain CAT scans and MRIs are normal with most concussions. There are many potential causes of concussions, including: A knock to the head from a fall. A jolt to the torso from a collision. A hit to the head from a stick or ball. A concussion can occur from any type of contact such as colliding with a player, a goalpost, the ground, or another obstacle. Concussions can also occur

outside of sports, ranging from bumping your head on a door to being in a car crash. Don't be fooled!

Dr. Robert Cantu

Everything above the neck, uh, essentially above the clavicles, the neck and the head, if there are injury symptoms referable to the cervical spine, referable to the brain, it is absolutely not safe to continue the athletic contest.

Narrator

Concussions affect people differently. While most athletes with a concussion recover quickly and fully, some will have symptoms that last for days, or even weeks. A more serious concussion can last for months or longer. Not giving the brain enough recovery time can be dangerous. A repeat concussion during recovery-usually within hours, days, or weeks- can slow recovery or increase the chances for long-term problems. In rare cases, repeat concussions can result in brain swelling or permanent brain damage. It can even be fatal. While rare, permanent brain damage and death are two potential consequences of not identifying and responding to a concussion in a proper or timely manner.

Bill Curry

You can lose a child by being inattentive, by not getting a rapid attention to the disorder.

Narrator

That's why it is incredibly important for you to pull an athlete you suspect has a concussion from play. Did You Know? Most concussions occur without loss of consciousness. Athletes who have, at any point in their lives, had a concussion have an increased risk for another concussion. Young children and teens are more likely to get a concussion and take longer to recover than adults.

Lesson 2

Narrator

As a coach you're the first defense, ready to jump in to help if something seems off - even when an athlete doesn't know it or want to admit it. Remember, you can't see a concussion, like you can see a broken arm, and there is no one single indicator for concussion. Instead, recognizing a concussion requires watching for different types of signs or symptoms.

So to help recognize a concussion, you should watch for and ask others to report the following two things among your athletes: One, a forceful bump, blow, or jolt to the head or body that results in rapid movement of the head and Two, Any concussion signs or symptoms, such as a change in the

athlete's behavior, thinking, or physical functioning. Keep the following list of signs and symptoms on hand. Athletes who exhibit or report one or more of the signs and symptoms listed below, or simply say they just don't feel right after a bump, blow, or jolt to the head or body, may have a concussion. When you're ready to proceed, click NEXT to continue with the course. Signs and symptoms of concussion generally show up after the injury. But the full effect of the injury may not be noticeable at first and some symptoms may not show up for hours or days. For example, in the first few minutes the athlete might be slightly confused or appear a little bit dazed, but an hour later they can't recall coming to the game. So assess the player: then assess the player again. Make sure that the athlete is supervised for at least one or two hours after you suspect the concussion. Also, talk to the athlete's parents about watching for symptoms at home and when the athlete returns to school.

Gerard Gioia

The issue of concussions in youth sports is, uh, important because you're talking about a potential threat to the development of that youngster's brain. And certainly their brain is what is going to drive their, uh, their development, their livelihood, their, uh, learning, their social interaction and all those things are critically important. Anything that potentially, uh, affects that in a negative way, um, has to be fully, uh, reckoned with and dealt with.

Narrator

The key is to keep a list of concussion signs and symptoms on your clipboard. Repeatedly use it to check on athletes you suspect might have a concussion. In the Resources Section of this training site, you can download CDC's Heads Up materials with concussion signs and symptoms to place on your clipboard for all practices and games, as well as post in the locker rooms. At any time during this course, you can click on the Resource Center in the navigation clipboard to view these and other resources. If the signs or symptoms get worse, you need to consider it a medical emergency. In rare concussion cases, a dangerous blood clot may form on the brain and squeeze the brain against the skull. Call 9-1-1 or take the athlete to the emergency department right away if after a bump, blow, or jolt to the head or body, the athlete exhibits one or more of the following danger signs: One pupil larger than the other. Drowsiness or inability to wake up. A headache that gets worse and does not go away. Weakness, numbness, or decreased coordination. Repeated vomiting or nausea. Slurred speech. Convulsions or seizures. Inability to recognize people or places. Increasing confusion, restlessness, or agitation. Unusual behavior, or Loss of consciousness (even a brief loss of consciousness should be taken seriously).

Lesson 3

Narrator

Pulling someone out of the middle of a practice, game, or event is never an easy thing, especially if an

athlete tells you that nothing is wrong. But we know that your top priority is keeping your athletes safe and preparing them for the future--both on and off the field.

Bill Curry

First responsibility of any coach is the physical and emotional well-being of the student athletes. Today, you've gotta learn to get yourself outta the game, and then as a coach, you've gotta be able to see when you're putting a player at risk, and you gotta get that person out.

Dr. Robert Cantu

And equally important for parents to be aware of these symptoms as well. Both from the standpoint of understanding why somebody needs to come out of the contest, but also because the parents are with the athletes more than the athletic trainers, especially nights and weekends.

Narrator

That's why we encourage you to follow these steps, which are part of CDC's Heads Up four-step action plan: Step one: Remove the athlete from play. If your athlete has experienced a bump or blow to the head or body, look for the signs and symptoms of a concussion. When in doubt, sit them out. Step Two: Ensure that the athlete is evaluated by a health care professional experienced in evaluating for concussion. Do not try to judge the severity of the injury yourself. Health care professionals have a number of methods that they can use to assess the severity of concussions. As a coach, recording the following information can aid health care professionals: Cause of the injury and force of the hit or blow to the head or body. Any loss of consciousness (either passed out/knocked out) and if so, for how long. Any memory loss immediately following the injury. Any seizures immediately following the injury. The number of previous concussions, if any. Step three: Inform the athlete's parents or guardians about the possible concussion. Give them the CDC fact sheet on concussion for parents. At any time during this course, you can click on the Resource Center in the navigation clipboard to download or print this fact sheet. Step four: Keep the athlete out of play the day of the injury and until a health care professional, experienced in evaluating for concussion, says it's okay for the athlete to return. In the case of suspected concussion, the decision about when to return to practice or play is a medical decision. Sometimes people believe that it shows strength and courage to play when you're injured. Not only is that belief wrong, it can put a young athlete at risk. Don't let others- fans, parents, or teammates- pressure you or the injured athlete to continue playing. As you've probably experienced, some athletes may try telling you that he or she is just fine or that he or she can tough it out. Don't be fooled. Tell them that taking a time out is not a sign of weakness, and that playing with a concussion is dangerous. Don't shy away from sharing this information with parents and other team supporters, either.

Bill Curry

Well, what we have to learn now is how to distinguish between pain and injury, and we gotta teach that to the players. But more importantly, I think, uh, because they are tough, because they will continue to go when they're in pain, we've gotta learn to see all of the symptoms, especially when it comes to something as serious as head trauma, to get them off the field with much greater frequency. And I think it may interrupt the games, and I think that'd be a good thing.

Narrator

These five video scenarios show coaches responding to potential concussion injuries. After viewing each scenario, you'll be asked to evaluate how the coach responded to the injury, based on the four-step action plan and the material you've learned in lessons 1 and 2.

Scenario 1 - Soccer

Coach

You okay?

Player

Yeah, I'm okay.

Coach

Well, you look a little shaken up. Why don't you sit down and relax for a while?

Player

Coach, I'm fine! Just let me get back in there.

Coach

Fine, huh? How's your head?

Player

It's fine.

Coach

No headache or dizziness?

Player

Well...I have a little headache.

Coach

Well, that's what worries me. When you suddenly crash into another player like you just did, it can make your brain bang or twist around inside of your skull. If that did happen, and you start to play hard

again, it could make things much worse. It's not worth the risk, have a seat.

Player

Coach, there's only a couple minutes left!

Coach

Look, I know you want to play, but trying to tough it out to win one game is not worth the risk. So have a seat.

Assistant Coach

Are you pulling her out?

Coach

Yes, I am.

Assistant Coach

It's all tied up, we could really use her out there.

Coach

You saw how hard they ran into each other out there. It's not worth the risk; she may have a concussion. She stays out.

Assistant Coach

Do you really think it's that serious?

Coach

I don't know. But at her age, even if we lose this game, she'll still have years to win. If we miss a concussion, and it gets worse, she'll have years of who knows what. She stays out.

Assistant Coach

What about them?

Coach

The parents? They'll get over it. And hopefully, because she sat out, and didn't have a chance to make her injuries worse, so will she.

Scenario 2 - Basketball

Player

Here, here.

Coach John

Box out, Wanda. Hustle up, Wanda. Move the ball. Come on, blue! Hustle up.

Parent

Hey coach, I hate to interrupt, but I think Wanda needs to come out. I think there's something wrong. I think she hit her head when she fell.

Coach John

Who did? I didn't see anything.

Parent

Look, John, that girl really doesn't look good. I think she really needs to come out.

Coach John

What she needs is to power through, learn to keep playing. If not, she'll never become a better basketball player.

Parent

I know all that stuff, but I've been reading about sports-related concussions, and that girl is showing signs.

Coach John

What do you mean? Concussion? She wasn't even knocked out. Besides, her parents aren't here. I couldn't take her out for an injury like that, even if I wanted to. Run!

Parent

Look John, she's acting funny. She needs to come out.

Coach John

Time out. Wanda, come on out. Good job out there. Jane, you go in for Wanda. Hustle up.

Wanda

Coach, what are you doing? I'm fine.

Coach John

Let's just be sure, okay? Just relax over on the bench, we'll see how you feel after the game.

Wanda

Aw, man.

Parent

Thanks John. It was the right thing to do.

Scenario 3 - Lacrosse

Coach

Come on, ladies. We have a game tomorrow.

Kate

I'm so excited for this. Can't wait.

Coach

Run!

Kate

Bye.

Coach

Kate, what are you doing?

Kate

I'm getting ready for practice. Why?

Coach

Kate, you took quite a hit in Monday's practice. Did you talk to the athletic trainer like I asked?

Kate

Yes.

Coach

And what did she say?

Kate

She said I'm fine to play.

Coach

Really? I heard you left school early yesterday. You had a headache, felt sick to your stomach.

Kate

Yeah, but I'm feeling better now.

Coach

Are you sure?

Kate

Absolutely.

Coach

Well, okay. Go ahead and run some sprints.

Athletic Trainer

Is that Kate running out there?

Coach

Yeah, she seemed fine, and you cleared her for practice today.

Athletic Trainer

I didn't clear her to practice. I haven't spoken to her since Monday.

Coach

Well, she said you did. I specifically told her to talk to you.

Athletic Trainer

She never did. We need to get her off the field.

Athletic Trainer

Do you know where you are?

Kate

Ow, I-

Athletic Trainer

Hold still, don't move. I think she may have had a concussion.

Coach

But she didn't get a second hit.

Athletic Trainer

You don't need a second hit, physical exertion's enough. Did you tell her parents you were worried about her?

Coach

No, I just assumed she talked to them about it.

Athletic Trainer

Do you have your phone? We need to call 911.

Coach

Yeah.

Scenario 4 - Football

Coach

You okay, Steve?

Steve

Yeah, I'm okay. Just a little shaken up, that's all.

Coach

You didn't lose consciousness out there, blackout at all?

Steve

No, not at all. Just saw stars for a few seconds. Wasn't expecting him to be on top of me like that. Went down hard.

Coach

But you're fine? Why don't you go get a drink of water, and get back out there.

Steve

I'm ready now.

Coach

Alright.

Offensive Coordinator

You sending him back into practice?

Coach

Yeah, he's fine.

Offensive Coordinator

You sure? He just doesn't look right to me. Looks dazed and out of it. I think we should have someone take a look at him.

Coach

We have a game tomorrow. We don't have anyone else with hands like his.

Offensive Coordinator

We don't know what happened to his brain out there. He does have good hands, but- but he's got a good head too, and we need to make sure he didn't injure it.

Coach

You really think we should bench him?

Offensive Coordinator

I do. And he should definitely be cleared by a doctor before he plays again, including tomorrow's game.

Steve

I'm okay coach, but I think I could use that water now. Then I'll be ready to go back in.

Coach

Go have a seat Steve. You're sitting out the rest of this practice, and maybe tomorrow's game too.

Steve

But Coach, I'm fine. I'm ready to go.

Coach

Not today, buddy. You need to take it easy. You really got hit hard out there and we'll make sure a doctor looks you over before you're cleared to play again.

Steve

You're always telling us to 'ignore the pain'. Well, I'm ignoring it! I'm ready to play.

Coach

It's not about the pain, Steve. It's about making sure you don't have a concussion. Now go sit down.

Offensive Coordinator

Ah, he'll cool off. You know you did the right thing.

Scenario 5 - Baseball

Coach

Time, Ump.

Umpire

Time!

Coach

Time.

Chad

What's up, coach?

Coach

You okay? That was quite a hit. I think maybe you need to take a break.

Chad

But coach, I'm fine.

Coach

Oh, I understand. But that was quite a collision. I think maybe you should sit the rest of this one out, okay? I'd like the athletic trainer to take a look at you as well, okay?

Chad

Aw, come on coach.

Coach

Hey, better safe than sorry. You're my responsibility out there, it's my call.

Chad
But I'm fine.

Coach
Just go sit down and cheer for your team right now, okay? We'll talk about it after the game?

Chad
Alright.

Coach
How ya feeling?

Chad
I feel fine, I could have played.

Coach
You're probably right, Chad, but I want to make sure you don't have any sign of a concussion after that hit.

Chad
I didn't even pass out. I don't even have a headache.

Coach
That doesn't mean you couldn't have done some damage when you took that hit. Concussions are tricky, and we've got to be sure.

Dad
That was a great game. How ya feeling, Chad?

Chad
I'm fine.

Coach
Thanks for coming over.

Dad
Yeah.

Coach
I want you to know I took him out because of that hit he took out there. But I really think he's fine. But I'd like you to take this with you. It lists the symptoms of a concussion. Because, uh, symptoms can take time to show up. And you may want to keep an eye out for anything unusual over the next couple of days as well.

Dad

Okay, we will.

Chad

So, when can I play again?

Coach

Well, the next game is Saturday, and I'd like you to have to the athletic trainer take a look at you at tomorrow's practice. And you may want to have him examined by a doctor, just to be sure.

Dad

Wow, is that really necessary? He seems fine.

Coach

Necessary? No. But it would make me feel better before he goes out and plays again. He took a pretty hard hit, and an even harder fall. And we need to be absolutely sure that putting him back on the field won't do any harm.

Dad

Okay, if you say so. I mean, we want to make sure he's okay too.

Lesson 4

Narrator

Resting after a concussion is critical because it helps the brain recover. Remember those brain cells we talked about earlier that aren't working properly? Well, they need the body's energy to heal. So, if an athlete with a concussion spends that energy exercising, trying to score a goal, or doing other recreational activities, that means there's less energy available to help the brain repair itself. That's why ignoring concussion symptoms and trying to tough it out often makes symptoms worse and can make recovery take longer, sometimes for months. Even activities that involve learning and concentration, such as studying, working on the computer, or playing video games can cause concussion symptoms to reappear or get worse.

Gerard Gioia

We see kids that, uh, just really struggle because they- they're trying to get their work done, they're staying up late to do their homework, um, they're having trouble sleeping as well. And all that snowballs, and results in their-their recovery, uh, not being as, uh, quick as it could be.

Narrator

Both physical and cognitive activities - such as concentration and learning - should be carefully

managed and monitored by a health care professional until they give you and your athlete the green light. At first, be prepared for your player to offer resistance- the player might feel frustrated, sad, or even angry about having to sit out. Talk to the player about it. Be honest about the risks of being put back in to play too soon. Offer your support and encouragement. Tell the player that as the days go by, he or she should start feeling better. An athlete should return to sports practices under the supervision of an appropriate health care professional. When available, be sure to work closely with your team's certified athletic trainer. There are five gradual steps that you and the health care professional should follow. Remember, this is a gradual process. These steps should not be completed in one day, but instead over days, weeks, or months. Step 1: Begin with light aerobic exercise, but only to increase an athlete's heart rate. This translates into 5 to 10 minutes on an exercise bike, walking, or light jogging. There should be no weight lifting, jumping or hard running at this point. Step 2: Add activities that increase an athlete's heart rate, and incorporate limited body or head movement. This includes moderate jogging, brief running, moderate-intensity stationary biking, and moderate-intensity weightlifting (which means reduced time and reduced weight from an athlete's typical routine). Step 3: Bump it up a notch to heavy, non-contact physical activity. This includes sprinting or running, high-intensity stationary biking, the player's regular weightlifting routine, and non-contact sports-specific drills (in 3 planes of movement). Step 4: Reintegrate the athlete in practice sessions, including, if appropriate for the sport, full contact in controlled practices. Step 5: Put him or her back into play. During each step, keep your eyes open for returning symptoms, including fuzzy thinking and concentration. Any symptoms need to be reported to the athlete's health care professional. If an athlete's symptoms come back, or he or she exhibits new symptoms with this increased activity, stop these activities and take it as a sign that the athlete is pushing him or herself too hard. After additional rest, and an okay from their health care professional, the athlete may start over again at Step 1. The athlete should only graduate to the next level of activity if he or she does not experience concussion symptoms. Supporting a student recovering from a concussion requires a collaborative approach among school professionals, health care professionals (including a certified athletic trainer, when available), parents, and students. Not only can they help ease the transition, and make accommodations for a student, they can also keep an eye out for concussion symptoms. Students who return to school after a concussion may need to: Take rest breaks, Spend fewer hours at school, Be given more time to take tests or complete assignments, Receive help with schoolwork, and/or Spend less time on the computer, reading, or writing. As the student's symptoms decrease, the extra help or support can be gradually removed. Remember: Concussions affect people differently. Some will have symptoms that last for days, or even weeks. A more serious concussion can last for months or longer.

Bill Curry

Be sure that everything you do is geared toward keeping, um, that young mind, and that young soul intact, and not smashing it against, uh, another child with a headgear on. That's not the purpose of the game. The purpose of the game is to learn to be a team, to learn to be unselfish, to learn to fight back from adversity and score points and try to engage in, um, unselfish activities. That's the purpose of the game. It is not to see if you can, uh, crush somebody with your head.

Lesson 5

Narrator

By taking this training- and taking concussion seriously- you've shown your dedication to your athletes and their safety. Now, it's time to take what you've learned to your coaching staff, team, parents, school professionals, and community. Generating the support you'll need when it comes to identifying and responding to a concussion now will help later when you need to pull out an athlete because you suspect a concussion. Use the following preparedness checklists to guide you through pre-, mid-, and post-seasons. You can view, download, and print these checklists at any time by clicking on Resource Center on the navigation clipboard.

Pre-season Checklist: Check with your league, school, or district about concussion policies. Concussion policy statements should include the school or league's commitment to safety, a brief description of concussion, and information on when athletes can safely return to play. Parents and athletes should sign the concussion policy statement at the beginning of each sports season. Win the support and involvement of other school or league officials- such as principals, certified athletic trainers, other coaches, school nurses, and parent- teacher associations- to help ensure that school rules and concussion policies are in place before the first practice. To ensure that concussions are identified early and managed correctly, have an action plan in place before the season starts. You can use the Heads Up four step action plan and include it in your league, school, or district's concussion policy. Educate athletes, parents, and other coaches about concussion. Dedicate a team meeting to talk about concussion and before the first practice, talk to athletes, parents, other coaches, league and school officials about the dangers of concussion. You can also talk about potential long-term consequences of concussion; and your concerns as well as your expectations of safe play. Show concussion videos, available on CDC's website or in the Resource Section of this course. Pass out concussion fact sheets for athletes and for parents at the beginning of the season, and again if concussion occurs. Remind athletes to immediately tell the coaching staff if they suspect that they have a concussion or that a teammate has a concussion. Monitor the health of your athletes. Review the signs and symptoms of concussion, and keep the Heads Up four-step action plan with you at games and practices. (Carry the Heads Up clipboard with you and fill out the pocket card or clipboard sticker so that information about signs, symptoms, and emergency contacts is readily available.) Make sure to ask if an athlete has ever had a concussion, and insist that your athletes be medically evaluated and in good condition to participate. Prior to your first practice, determine whether your school or league has or would consider conducting pre-season, baseline testing. Also known as neurocognitive tests, these tests help assess brain function (including learning and memory skills, ability to pay attention or concentrate, and how quickly someone can think and solve problems) and can be used again during the season to identify a concussion. Identify the appropriate health care professional to run this program

Mid-season Checklist: Insist that safety comes first. Teach and remind athletes of safe playing techniques.

Encourage them to follow the rules of play; to practice good sportsmanship at all times; and to consistently wear the right protective equipment (that fits properly, is well-maintained, and worn correctly) for their activity. Teach your athletes that it's not smart to play with a concussion. Remind your athletes and everyone who influences them- teammates, fans, parents, fellow students- that playing with a concussion is dangerous.

Work closely with other league or school officials. Be sure that appropriate staff is available for injury assessment and referrals for further medical care. Enlist certified athletic trainers, school nurses, or appropriate school or league officials to monitor any changes in the athlete's behavior or school work that could indicate that the student has a concussion. Ask them to report concussions that occurred during the season. This will help in monitoring injured athletes who participate in multiple sports throughout the year. Post-season Checklist: Keep a concussion log.

Work with a certified athletic trainer, school nurses, and other school or league staff to review injuries that occurred during the season. Discuss with other staff any needs for better concussion prevention or response preparation. Review your concussion policy and action plan. Discuss any need for improvements to your concussion policy or action plan with appropriate health care professionals and league or school staff, especially in light of what your log reveals. We hope, through this module, that you've come to better understand the impact sports-related concussion can have on youth athletes. If we, as coaches and parents, come to better understand this impact, become more focused on its recognition, and more resolved to pull athletes from the game when there is a possibility of concussion, we will have come a long way towards reducing the impact of this all too common injury. And always remember, when in doubt, sit them out.