

ICSC04 – Emergency Procedures

Section 2

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Video Lesson: 1:06:04

This is module 2 of 3 modules for emergency procedures for the sports chiropractor. A quick review of what we did in module one, we talked about PPE, uncertain situations on the field, scene safety mechanism of injury, and the golden hour. We spend most of our time dealing with the initial assessment, developing general impression, assessing the athlete's mental status, airway, breathing, using an oxygen container, the oxygen delivery system and assessing circulation.

In this module, what will spend time on the patient assessment, dealing with the unresponsive athlete, signs of stroke, the scene, spinal immobilisation using a backboard and using cervical collars. We are going to talk about doing focus and detailed exams, as well as a rapid trauma assessment on the injured athlete whilst on the field. We will cover transporting the athlete, and reassessing vitals. Ongoing assessments, discuss helmet removal and the equipment we should be having in our sideline kit bag.

Dealing with an unresponsive athlete. Ensure the scene is safe before approaching, turn around and establish unresponsiveness in the athlete. Tap them on both shoulders and tried to elicit a response. Are you all, right? Are you okay? If we get no response, then turn around and point to somebody and tell them to go get help, and an AED. These days with phone cameras on the sidelines, someone can be taking out a phone and you are thinking they are calling 911 or medical control but they are just filming the incident that is going on. That is why you need to point to an individual and say to them, you in the red shirt, go get help come back to me and tell me what they say.

This way after a period of time if nobody is coming back you point to somebody else and send them for help. Check for breathing and pulse, remember no shorter than 5 Seconds, no more than 10 seconds. Remember, if we cannot find a pulse within 10 seconds, they probably do not have a pulse and if you are dealing with a smaller population, children and infants, look for their stomachs to rise and fall to give us an indication if they are breathing and remember in a child or an infant, check for pulse at the brachial artery in the arm.

Unresponsive athlete who is breathing. Do a physical exam and continually monitor breathing. They are unresponsive to you but may be breathing, so you might have to assist breathing if needed. We talked about ventilations so remember one to five seconds for an adult, four seconds for a child. Once every 3 seconds for an infant, we want to be able to supply oxygen using a non-rebreather using a BVMS. Remember what we said to container at for a non-rebreather mask? It's 10 to 15 liters per minute and the BVM, the bag valve mask is an oxygen-powered device.

In an un-responsible athlete treat any obvious injuries and transport them. If the individual is alert and responsive, start out with the ABCs (airway breathing circulation). If our athlete is unresponsive who will start CPR? Deal with compressions, airway, and breathing, why do we want to do compressions? There's 21% oxygen in the air when we breathe in, when we exhale, we are exhaling 15% oxygen. That means we are only using 6% of the oxygen in the air because the blood in the body is saturated with oxygen and by doing the compressions early on, we are circulating that oxygenated blood throughout the system. Between four to six minutes without oxygenated blood getting to the brain, that is when we are going to get the possibility of brain damage. It's CAB, start with compressions, airway and then breathing. An adult is someone who shows signs of puberty and older. In the male, it's underarm hair, in the female, it is the start of breast developments. Whether it is one or two-persons giving CPR to

an adult, we want to give 30 compressions because it is usually cardiac-related. If you are dealing with a child, it's 30 compressions with one rescuer and with two rescuers, it's 15 compressions. The same thing for an infant under the age of 10. It is only 15 compressions in the younger people, because in a child is usually respiratory-related. That is why we want to give, less compressions before we are giving a breath.

For the airway, use the head toe chin lift maneuver or if we suspect there to be a spinal cord injury, use the jaw thrust maneuver. Compressions, 30 in an adult, child or infant, however if there's two rescuers, it's 15 compressions for child and infant before you open the airway and deliver a breath.

Give two breaths and observe the chest rising and falling. If the breaths do not go in, re-tilt the head, chin lift maneuver and attempt a second breath. If the second breath does not go in, do not attempt a third breath, just go right back to doing the compressions. It is compressions, opening up the airway, breathing, going back to compressions if the breathing does not go in. We will continue this until the next higher level of medical personnel get there to take over for you.

How do we determine on the sideline if there is a stroke. A stroke is defined as an acute impairment of the neurological function that results from an interruption of cerebral blood flow to a specific area of the brain. The acronym for this is F.A.S.T.

- Facial drooping
- Arm weakness
- Speech difficulty
- Time to call for emergency help

We will cover the major parts of the patient assessment. On the field after we have completed the initial assessment of the airway, breathing, and the circulation the next thing is to provide spinal immobilisation. If we think there is some form of spinal injury, we deal with mechanism of injury. That is why you should keep an eye on what is happening on the field. If the soccer player plants his foot and turns and goes down, I am thinking the knee injury. But if two of the players go up to head the ball and collide, I am now thinking the possibility of the cervical spine injury and I want to make sure that I immobilise the cervical spine.

Then after that, identify and treat all life-threatening injuries. Undertake a focused and physical exam and make the determination if transport of the athlete is required so we can do a detailed physical exam. Reassess vital signs and undertake an ongoing assessment. Those are all part of the patient assessment, which fall under the initial assessment. Determine responsiveness using the AVPU scale. An alert and orientated patient does not need CPR, but if you suspect there being a cervical spine injury, you want to protect the cervical spine.

A rapid trauma assessment is a quick once-over to pick up any major obvious injuries. Maintain spine immobilisation, keeping the airway intact, assess the head and neck. Apply a cervical or immobilisation collar if this is part of your training in your country. Once we put the collar on, we are going to obstruct part of the neck so we are not going to be able to determine if there is an airway or a tracheal deviation or whether they have any distended jugular vein. If the patient is wearing a necklace around their neck, warning of some form of medical condition they have, ensure you have assessed the head and the neck before we put on a cervical collar.

Then we want to assess their chest, their abdomen, their pelvis, and all four extremities. Roll the patient with spinal precautions and then assess baseline vital signs. Baseline vital signs are key signs used to evaluate the patient's condition and we repeat the vital signs further later on so we can

compare them to the baseline. This is going to tell us whether or not the patient is improving, whether they are getting worse or whether the interventions that we have done are helping or not helping.

Vital signs are basically respiration, pulse, and blood pressure. These are things you should be doing in your office every time on all patients come in, whether it is your initial exam or it is your comparative exams. However when you are on the sidelines if you are familiar in taking these vital signs, they should be second nature for you in an emergency situation.

Other key factors when dealing with baselines are skin temperature in adults capillary refill in children. AVPU scale that level of consciousness or direct looking into the pupils. Remember the pupils on the eye is the direct line or the shortest line from outside the body to get into what is affecting the brain. When you are dealing with pupils, one of the things you have to remember is, does the person have an artificial eye? Because if they have an artificial eye, it is not going to respond to light or to the different other responses and this will determine if it is truly a problem or you are getting no response because there is an artificial eye. Stabilising the cervical spine hold the head firmly with both hands, and support the lower jaw. Move the eyes to the forward position and maintain this position until we secure the injured athlete to a backboard.

There is always exceptions, so don't force the head into a neutral inline position as it may increase muscle spasm, increase pain if the athlete develops numbness, tingling, or weakness in their extremity which is a result of a compromise to the airway or breathing by moving the cervical spine inline neutral position. If any of these things arise, then stabilise the head in the position we found the athlete. Do this rapid trauma assessment, feel the head and neck for any deformity, any tenderness, any crepitation. Both individuals have gloves in this slide. We can see how the first person is securing the cervical spine, which is why being familiar with these types of pre-emergency procedures, may take more than one individual.

A lot of times there are multiple steps, so if the sports chiropractor is familiar with the procedures and, the different steps that need to be done, they become an asset out on the field. After we check for deformities, check for any bleeding. Ask the patient if there are any tenderness in pain when you are checking the head, neck, and cervical spine. Move down to the chest and as you notice, whoever is supporting the cervical spine keep that support until the athlete is on the backboard. We are now looking at rise and fall of the chest with breathing. Looking for any degrading of the bones as the patient breathes, making sure the chest is rising or falling together, not one side is rising as the other side is falling. That is referred to as paradoxical breathing. That usually indicates that there could be the possibility of a flail chest, which is defined as two or more ribs broken or the sternum broken. Listen to breath sounds, and you should be practicing this in the office when you are working on your regular patients. This way, when you get into that emergency situation on the field, you might not know what the abnormal condition is, but you do know that something is abnormal. As you move down to the abdomen, look for obvious injury, obvious bruising, and bleeding. Evaluate tenderness or any other kind of internal bleeding, the lighter the touch, the better. You do not want to palpate too hard. Look at the pelvis for any signs of obvious injury, bleeding or deformity.

We want a gently, inward, and downward pressure on the pelvic bones. That is going to give us an indication of the possibility of there being any kind of pelvic fracture, so again, inward and downward pressure on the pelvic bones. Next, look for any obvious injuries to the extremities and palpate both upper and lower extremities and then assess for pulse, motor and sensory function. This is commonly referred to as neurovascular function. We are going to do an examination of a limb to determine whether or not there is any compromise to the artery, the vein, or the nerves below the site of the injury. That's what this neurovascular function is for. Check the pulse, the upper or lower extremity.

Check for the motor and function, the motor and sensory function. Ask the Athlete questions? Do you feel me touching your hand? Do you feel me touching your foot or your toe? Can you open and close your hand? Can you wiggle your feet? We are checking the sensory and motor function below the site of the injury. It is indicating any artery or vein or nerve function interruption which is the importance of neurovascular function. Now do a detailed physical exam, which is a more in-depth exam, which is done if time allows. Visualise palpate and record things using the DCAP-BTLs system. Remember, when you are on the field, we are in the medical realm, so use their terminology.

By understanding what the DCAP-BTLs system means, when you are providing a handover to the next higher level of medical care, if you use the medical terminology it will be a more precise handover.

- D there is a deformity
- C stands for a contusion
- A stand for abrasion
- P is the pain level
- B stands for burns
- T stands for tenderness
- L stands for laceration
- S stands for swelling

Let us now perform a detailed physical exam. Look at the face, looking at the area around the eye and the eyelids. Examine the eye, pull back the ears and look for any bruising behind the ear. That is called battle sign. That is a prime indicator of there being some sort of basal skull fracture. We are looking around the ear, at the pupil to see if there is any deformities.

We want to use a penlight and look for drainage or blood in the ears. We are looking for bruising lacerations around the head. When you see drainage or blood in the ears or the nose, look for cerebral spinal fluid which will indicate there has been some sort of skull fracture. Palpate the zygomatic, the maxillae and the mandible looking for crepitus, deformity, or tenderness. We want to assess for any obstruction in the mouth and see whether or not there's any cyanosis gluing around the lips, an indication that oxygenated blood is not getting to the area. Check for unusual odors. Remember if we are getting that fruity-type smell in there, that is an indication of a diabetic condition. Make sure if you are doing something at a recreational type of event, non-professional, are we smelling alcohol on the athlete's breath?

Are they playing in a beer game while they are playing softball at some tournament, which is why we want to check. We are looking for missing teeth, any other kind of foreign body in the mouth, pulling out their mouthpiece, to see if a piece of it is missing on the side. There is a good chance they bit down on the mouthguard and broke a piece off that could get lodged in the throat. Looking at the neck for that tracheal deviation, look for distended jugular veins. Palpate in the front and the back of the neck for any type of deformity and look at the chest. Gently palpate over the ribs, and listen for breath sounds. Listen to both at the base and the apex of the breath of the lungs for these breath sounds.

Look at any kind of abnormality in the abdomen or in the pelvis, noticing general signs of distension of the abdomen, which indicates internal bleeding. We were at a rodeo several years ago and an athlete gets thrown from the bull and gets stepped on by the bull. After we made sure the scene was safe, we entered into the arena. We did the rapid trim assessment and noted a distended abdomen. That was a big red flag that indicates the possibility of internal bleeding. We gently palpated the abdomen, compressed the pelvis, pressed on the iliac crest which indicated the possibility of there being some form of pelvic fracture. Assess the back for any tenderness or deformities.

Then after all of that is done, undertake a focused physical exam. Now investigate the problems that were associated with the chief complaint, doing a detailed exam. The athlete may say "my knee really hurts" so we will start doing a focused exam on the major area of complaint, whilst reassessing the athlete's vital signs. Then make the determination if we have to transport the injured athlete and remember you have to document your findings. If it's not written down, it's not done. You might remember two days after the incident, but your memory might have gaps four or five weeks down the road when someone asks you about your findings during your detailed on field evaluation.

That is why it's important at this point as we discussed in module one about getting that sample history from the athlete documented, then the ongoing assessment that lets us know if the treatment, we provided is improving the patient's condition. Did we do the right thing adequately or did we not? Are there any new conditions that have developed since we did our initial onset, our initial exam?

What are the steps of an ongoing assessment? Repeat our initial assessment, airway, breathing, circulation, reassess and record the vital signs and mark compare them to our baseline vitals. Repeat our focus assessment on the particular injured area the athlete talked about and check the interventions that we have done. Are they doing what they are supposed to be doing? Do we have to change them? Do we have to do additional things? It is important to reassess a stable patient every 15 minutes and reassess an unstable patient every five minutes based on vitals, checking all our interventions.

Dealing with spinal injuries is one of the reasons why other medical professions are reluctant to having chiropractors on the sidelines because they felt we didn't know how to deal with spinal injuries. We touched more spines in a day than most other healthcare providers touch in a year, so these procedures should come natural to us. We are used to having our hands on people's spines. What are some of the signs and symptoms of a possible spinal injury? Well of course pain or tenderness when we palpate the spine, do we feel for any deformity in the spine? Is there any tingling in the extremities? Is there loss of sensation or paralysis in the extremities? Those last two things, there is that neurovascular evaluation. Is the patient incontinent? Are there any head injuries? All indications, the possibility of there being some form of cervical spinal injury.

Hold the head firmly with both hands and support the lower jaw; move the eye to the forward position and we want to maintain this position until the patient is secured on a backboard. Do not force the head into a neutral inline position if there's muscle spasm, pain increases, numbness, tingling or weakness develops in any extremities caused by moving the head to the neutral position as this will compromise the airway or compromises breathing. Assess mental status, using AVPU scale which will be an indication, of the possibility of a cervical spine or spinal cord injury. Assess how well the patient responds to external stimulus using the AVPU scale. Are they alert did they respond to verbal stimulus, painful stimulus, or are they unresponsive? Check their orientation, the patient's memory to place time and event. If the athlete can recall all four, they are considered fully alert and orientated times four. What are some of the questions we want to ask a patient? If we suspect a cervical spine injury, does your neck or back hurt? What happened? Where does it hurt? Can you move your hands and your feet? Can you feel me touching your fingers and your toes? These answers will give us more of an indication of the possibility for a cervical spine injury. Do the pupils test, are they fixed with no reaction to light? Are the pupils dilated with light and constrict without light? Do the pupils react sluggishly? Are they of unequal size? Are they unequal with light or when the light is removed? Remember to find out do they have an artificial eye, if for some reason there is no reaction when you are checking the pupils. Applying a cervical collar, we checked out the head, and the neck.

Now apply a cervical collar and you should be providing continuous manual inline support of the head. We will measure the proper size for the collar, placing the chin support snugly under the chin. Wrap the collar around the neck, to ensure the collar fits correctly. If the collar doesn't fit correctly and it is too small, we will extend the neck. If it is too large, then the a possibly for flexion of the neck, which you want to avoid. To apply the collar, start by kneeling at the patient's head, stabilise the head and neck, maintain that stabilisation whilst you measure for the correct sizing of the cervical collar. Measure from the angle of the jaw to the top of the shoulder. Once we do that, take the cervical collar and adjust it on the side going to the black dot. Note the fingers we can fit from the black dot to the bottom of the plastic part of the collar. That's when determined the appropriate size for the cervical collar. Make sure that chin piece will not lift the patient's chin and hyperextend the neck. Make sure that the collar's not too tight or too small. Put the front part of the collar underneath the chin first and then slide the other part of the collar underneath the neck to attach the velcro, setting the collar in place, making sure it is secured correctly all whilst maintaining that manual in-line stabilisation.

Spinal immobilisation as compared to spinal restriction protocols have changed depending upon where you are. Blunt trauma patients do not need full spinal mobilisation. If the following conditions are absent during the initial assessment of the patient, do they complain of neck or midline back pain? If the answer is no, they don't need to be fully immobilised. Is there any abnormal neurological function or motor strength in the extremities? If the answer is no, they are normal. Full spine immobilisation is not required. If there is no paranesthesia, full spinal immobilisation is not required. If there is no change in the mental status, we do not have to cervical immobilise the athlete on a backboard with a collar, but if they complain of the neck pain, if there are abnormal neurological and motor, and sensory functions, if there is paranesthesia, altered mental status, then we need to fully secure the athlete on a backboard with a cervical column. Check your local protocols and note the particular area for your standard operating procedure?

We are now maintaining the inline stabilisation. This requires multiple people and we will have the other team members position the immobilisation devices. Log roll the patient, securing them to the backboard and then reassess the pulse, the motor and sensory function and each extremity. This slide you can see a four-man log roll. If there is only three people available, you can use three people, but it is important for the sideline sports chiropractor to be familiar with how to handle these situations so you can help out. The person at the head is the one who maintains the spinal immobilisation. That is now the person in charge and once you stabilise the cervical spine, you are not going to let go of the cervical spine till after the athlete is secure to the backboard.

The person at the head is going to give the rest of the commands. As we place the spinal board parallel to the patient, overlap hands at the hips and at the knees. We want to stabilise the shoulder and the ankle. We overlap at the hips and the knees, because it provides greater stability of the spine as we roll the athlete, increasing the likelihood that the upper torso is not going to be moved in synchronisation with the lower torso, thus creating a possibility of further cervical spine injury. We want to roll the patient as one, keeping the head in the inline neutral position. Once we position the patient on the board, the person who is securing a cervical spine is going to leave the hands in place. The other members are going to now secure the patient underneath the armpits, waist, and knees and slide the patient up and down the board to get them to the appropriate position so we can secure the straps and the other cervical and mobilisation devices.

Now we will apply a device with straps and tape which clips onto the spinal board. The spinal board has a piece on the top that is Velcro. Place them on either side of the cervical spine and take a piece of tape or a strap and run across the forearm and the other strap across the chin to make sure this immobilisation device is secure on the patient's head and on the backboard. After that, use the straps

to secure the injured athlete to the board. Straps go over each shoulder and attach at the waist. We are then going to attach a strap across the waist and crossing from the waist across the knee on one side and then from the waist across the knee on the other side.

This way the athlete will be fully secured to the backboard and when you pick the athlete up and move them, they will not slide off the board. Reassess the pulse, the motor and sensory function, that neurovascular function, and neuro-value vascular evaluation. Here in this slide is a picture of a board and you can see, there are holes on the board on the sides, which is where the straps will go to secure the athlete to the board and also areas for us to grab onto the board when we are ready to pick the patient up for transport. A short board is used for an individual who is in a seated position, usually from a car accident. The longboard is what we use when we want to provide full bodily immobilisation even if for some reason we are using a shortboard to extricate an athlete from a confined space.

Once they are out of the confined space, transfer them on a longboard. If you are dealing with anybody who is working with NASCAR racing, and is injured in a car accident, you will need to use the shortboard while they are in the car and then transfer them to a longboard once we get them out of the vehicle.

Next, is helmet removal. I like using this study because this is one of the first studies that used a chiropractor, Dr Jay Greenstein, as part of their Executive Board when doing this study. This is a pre-hospital study on the care of the spinal injured athlete. In general, any athlete who has a helmet, will only have the helmet removed on the field, under certain circumstances which include, the face mask cannot be removed to gain access to the airway, like those in a hockey goalie or a race car driver, or mongoose-type helmet where the face mask blocks the airway. Airway is the priority so if we can't access the face and airway, and you can't remove the face mask, the helmet comes off.

You will also remove the helmet if it prevents immobilisation for transport in the appropriate position, to enable you to stabilise the patient's head.

The face mask be removed in two ways, by using a trainer's tool or by cutting the retaining clips that are attached the face mask to the helmet. We can either unscrew the retaining clips or we can cut them. Once the face mask is removed, the helmet can be immobilised against the spinal board and the BVM. The bag valve mask will now be used to assess in ventilations and applied to the airway allowing access if we had to put the oral or nasal airway in to keep the airway open.

- Is the airway clear and is the patient breathing adequately? Yes. Leave the helmet on.
- Can the airway be maintained and the ventilation assisted with the helmet in place? Yes. Leave the helmet on.
- Does the helmet fit well? Yes. Leave the helmet on.
- Can the patient move within inside the helmet? No. Leave the helmet on. Can the spine be immobilised in a neutral position with the helmet on? Yes. Leave the helmet on.

A helmet that fits well will prevent the head from moving and should be left in place as long there is no impending or airway or breathing problem. It does not interfere with the assessment and treatment of the airway as long as the face mask is removed allowing you to properly immobilise the spine. If you are removing the helmet, we have to prevent movement of the head. Here is an example of where a helmet, even though, we are removing the face mask, does not provide good access to the airway. Support the lower jaw and with a scissor-type movement. Then the other healthcare provider is going to grasp the helmet on the sides, pull the helmet apart and gently remove the helmet from the athlete's head. If you are dealing with a football player, American football, or other individuals who are wearing shoulder pads, we must remove the shoulder pads before we remove the helmet

because if the shoulder pads are left on and the helmet is removed, there's a greater chance of their hyperextension of the head and neck.

If there is any cervical spine fracture, that hyperextension may actually sever part of the spinal cord. That is why we want to keep the head in a stable inline position and remove the shoulder pads before we remove the helmet. As we look at immobilising and transporting the injured athlete, care must be taken to avoid injury. Certain patient conditions call for special techniques, therefore you need to practice using the equipment. Kneel beside the unconscious athlete, so we can straighten the patient's legs and move the nearer arm above the head. In this image the patient's knee is bent, as there is a possibility of a broken leg. The broken leg is not the priority if the patient is unconscious and not breathing, and there is no pulse. The patient is going to die without an active airway.

Therefore our priority is to position the patient in a position that will allow us to evaluate ABC and start compression should it be needed. Straighten the patient's legs, move the arm on the side you are turning the athlete above their head, and turn the patient by pulling the distal hip and shoulder. Control the head and neck so the torso's movement is in one unit. When we looked at moving, using a log roll, we are now preparing to place the athlete on the spinal board, using four individuals. The more people there, the easier it is to control and stabilise the injured athlete's body. That is why being on the sidelines and familiar with these procedures will be an asset to you and the integrated medical staff that may be there.

We will roll, put them on the backboard, and then we can assess their airway and breathing, which is all about positioning an unconscious athlete. As you look at this slide we are maintaining that inline stabilisation. Have other team members position the immobilisation devices and apply the cervical collar. Anticipate and understand every step of the process because everything you are doing, must be coordinated. The person at the head who is securing the movement of the head and gives the instruction to the other team members, overlapping the hands at the waist and at the knees, getting ready to move the patient as one unit. Instructions should be given in two parts and the team members must know what they are, "I will say, one, two, three, roll. Then on roll we will roll together".

Sideline First Aid Equipment. Most of this initial information comes from Bart Green and Hal Rosenberg. Both these doctors have done several research papers and publications of sports-related chiropractic articles. You need to have proper knowledge of wound care, including the supplies to provide the appropriate care on the sidelines. You must be familiar and comfortable using all equipment in your sideline kit bag. If you are not trained on a piece of equipment, do not bring it. This opens up the possibility for legal action and causes negligence if you use equipment which causes further harm. If you have essential equipment in your medical bag that you do not know how to use, I would rather you not bring. Because if you are not familiar and competent in using it and then not use it the right way you could cause harm to athlete. Your sideline sports bag should be big enough for the equipment you need, depending upon the event you are going to cover. I normally have three different bags. One big bag carries everything, and one bag for my emergency equipment, like oral nasal cannulas, blood pressures, stethoscopes, cervical collars. Then I have another smaller bag, which I use for other types of injuries on the field. The bag should be big enough to carry the necessary equipment but not so large that it is difficult to carry around. The bag should have compartments and dividers. You can keep items in different areas and be familiar with where they are as opposed to them being all together in the bag. Your first aid bag should be waterproof and with you on the sidelines as long as the event goes on. If it is raining, you don't want the content getting wet.

- Content of first aid kit: We should foremost have a blood pressure cuff, to check vital signs, sizes for adults and children.

- We should also have a stethoscope in there to help with blood pressure.
- To assess breath sounds we need airways, oral and nasal airways.
- We talked about cervical collars. We need to have assorted sizes. There is now something called a universal collar that you can adjust the size or different colors come in different sizes. Whatever you have, whether you have the universal collar or you have the different size collars in your bag, just be familiar with using them.
- Include a pen light so we can look in the ears and the mouth to check for fluid or objects to check the pupils.
- Gauze pads four by fours and five by nines. When you put a gauze pad on a bleeding wound, that's called the dressing.
- When wrapped in roller gauze, that's called the bandage, so we want to have both the four by fours, five by nines and some roller bandage.
- Pocket mask in a case for artificial ventilations and make sure that you are familiar with the proper use of the pocket mask.
- Scissors so we can expose the injured area.
- Different kinds of tape, of assorted sizes. If we have tape you should have a shark, which is used to remove the tape.
- A tooth preservation kit, especially if you are dealing with young children.
- Skin lube in case there's abrasions or irritations. You can put the skin lube on before you apply the tape on the area.
- A digital thermometer.
- Tuning fork which is a very good instrument to use on the field to help determine if there is cracked or broken bones. Remember, the bones resonate at about 125 hertz. The tuning fork is pretty close to that. The periosteum, the outer layer of the bone is very pain sensitive, so if you put that tuning fork on it and there is a break, there is going to be a stinging sensation that the athlete is going to feel.
- A cell phone. You could be out in the middle of nowhere or far away from the medical station. You want to be able to contact the appropriate people to have additional aid brought to where you need it.
- Alcohol pads so you can clean and around an injured area.
- Band-aids (fabric strips) of assorted sizes to protect the exposed area if there is a cut.
- Ice packs to help control bleeding.
- Accident or injury reporting forms. If you didn't write it down, it didn't happen. Take that sample history if you can and log all the information down on a form. This way you can keep it if you have to refer to it at a later time.
- Lots of gloves. We talked about PPE, which is personal protective equipment. Protect yourself from any kind of bloodborne pathogens or from any diseases that are in any bodily fluids.
- Have a watch, preferably with a second hand, so we could check pulses and breath breathing rates. Important to have a watch with a secondhand.
- Pen and clipboard to write things down.
- Antiseptic spray.
- Antifungal spray.
- Reflex hammer.
- Steri strips to help close an open wound.
- Cotton swabs in case we have to apply creams.

- Sting swabs are used to help somebody that has a bee sting. For athletes over 18 or an adult, I will often provide allow some sort of antacids. They are under a lot of stress and anxiety and their stomach might be upset.
- Saline solution in case an athlete loses a contact lens or you need to wash a wound.
- A splint for a broken bone
- Hydrogen peroxide which is good for cleaning blood and an injured wound.
- Safety pins. You don't know how many times we've been at endurance events where athletes are wearing bibs and they lost their safety pin and they can't keep the bib on and you can't participate without the bib.
- Nose plugs. We have looked after a lot of Taekwondo events which are prone to nose bleeds. Nose plugs will help stop nose bleeding.
- Sunblock for outside event to protect against the hot sun.
- Nail clippers. How many times do athletes get a hangnail or something and needs to be clipped.
- Tweezers or splinter remover. Sometimes athletes are getting splinters and using the tweezer can help remove the splinter.

All these little things will make a great sideline kit bag , for every situation that arise. It's always good to have these little things there to help you out.

- I have Bio freeze China gel mineralised, icy hot, or whatever you want to use.
- I have a space blanket to keep the athlete warm if there's any kind of life-threatening condition that's developed and you need to keep the athlete warm.
- I also carry trauma dressings. Trauma dressing is like a big diaper that has straps on it. This way it could absorb the blood.
- We want to have triangle bandages to help for splinting and immobilisation and helps when a person is bleeding.

Make sure all your equipment is up to date and you check expiry dates. We have covered a lot in this module and I look forward to joining you to continue this conversation in the next module.

[END]