

## Unit 4 SPORTS INJURIES



More than 10 million sports injuries<sup>1</sup> occur each year. Most sports injuries are due to either traumatic injury or *overuse*<sup>2</sup> of muscles or joints. Many sports injuries can be prevented with proper conditioning and training, wearing appropriate protective gear<sup>3</sup>, and using the correct equipment.

### 1. Wounds

A **wound**<sup>4</sup> is any break in the skin or body surface. **Cuts** can be caused by sharp edges such as jewellery or stones. When the skin is cut, the blood vessels<sup>5</sup> at the wound edges are cut straight across, so blood loss is very likely<sup>6</sup>. **Grazes**<sup>7</sup> are wounds in which the top layers of skin are scraped off. Grazes are commonly caused by a sliding fall (trip<sup>8</sup> on a running track) or friction burn<sup>9</sup> (hands sliding along a rope).

#### *Treatment*

##### **Cuts**

Apply pressure over the cut with your hand or fingers, preferably over a pad<sup>10</sup> or dressing. Raise and support the cut limb<sup>11</sup> above the level of the head.

##### **Grazes**

Clean the graze under running water. Cover the graze with a piece of gauze. Elevate<sup>12</sup> the wound above the level of the heart and support the limb with one hand.

### 2. Bone injuries

A **fracture** is a break or crack in the bone. Bones can break when a *direct impact* is received (hockey stick striking the shin) or *indirect force* is produced by a twist or a wrench<sup>13</sup> (a trip or stumble).

#### *Treatment*

- To deal with a major fracture you should keep the casualty<sup>14</sup> still and call for professional medical help. All fractures should be seen by a doctor.
- Never move the casualty (unless in danger) and never let the casualty eat or drink.

### 3. Joint/Muscle Injuries

A joint is formed where two or more bones meet.

#### 1. **Sprain**<sup>15</sup>

Injury to a ligament<sup>16</sup> at, or near, a joint. It is often the result of a sudden or unexpected wrenching movement at the joint that pulls the bones within the joint too far apart<sup>17</sup> and tears the tissues surrounding the joint.

Muscle damage can occur in three ways:

#### 2. **Strain**<sup>18</sup>

Overstretching of the muscle, which may result in a partial tearing<sup>19</sup>.

#### 3. **Deep bruising**<sup>20</sup> (soft tissue injury<sup>21</sup>)

These injuries are usually accompanied by bleeding into the damaged area, which can lead to pain and swelling.

#### 4. **Rupture**<sup>22</sup>

Complete tearing of the muscle, which may occur in the fleshy part or in the tendon<sup>23</sup>.

##### *Treatment*

<b>R</b>	Rest the injured part.
<b>I</b>	Apply Ice to reduce the swelling <sup>24</sup> for 10 minutes (max).
<b>C</b>	Compress the injury, possibly using a bandage.
<b>E</b>	Elevate the part to decrease the blood supply.

#### **4. Heat Exhaustion**

Heat exhaustion<sup>25</sup>, an advanced condition of *hyperthermia*, is very common in marathon runners; especially in hot, humid conditions. The body temperature rises, which makes blood rush<sup>26</sup> to the skin to cool it down. This makes less blood available to the working muscles and so extreme tiredness, breathlessness<sup>27</sup> and dizziness<sup>28</sup> occurs.

##### *Treatment*

The casualty should be taken to a cool place and wrapped<sup>29</sup> in cold, wet sheets<sup>30</sup>. Cool water (nothing caffeinated or alcoholic) may be given slowly to the casualty.

#### **5. Unconsciousness**

Unconsciousness<sup>31</sup> occurs from an interruption of the brain's activity.

##### *Treatment*

When dealing with a collapsed casualty you should follow the DR ABC procedure:

<b>D</b>	Check for <b>d</b> anger to both you and casualty.
<b>R</b>	Check for a <b>r</b> esponse <sup>32</sup> in the casualty.
<b>A</b>	Check the <b>a</b> irway <sup>33</sup> . Is it open and unobstructed <sup>34</sup> ?
<b>B</b>	Listen, look and feel to determine if the casualty is <b>b</b> reathing.
<b>C</b>	Check circulation by feeling the pulse. Is the person <b>b</b> leeding?

Never move the casualty, unless<sup>35</sup> in danger.

#### **6. Shock**

The circulatory system distributes blood round the body, so that oxygen and nutrients<sup>36</sup> can be fed into the tissues. When the system fails, circulatory shock will develop. If not treated immediately, vital organs<sup>37</sup> such as the brain may fail. A typical cause of shock is a blow to the chest (winding<sup>38</sup>).

**Symptoms** include: cold and pale<sup>39</sup> skin, shaking or chills<sup>40</sup>, chest pain, a weak but rapid pulse, shallow<sup>41</sup> breathing, dizziness or general weakness, vomiting<sup>42</sup>, unconsciousness.

##### *Treatment*

1. Lay the casualty down on the back
2. Raise the legs
3. Loosen<sup>43</sup> tight clothing
4. Keep the casualty warm

**Task 1** Test your knowledge of injuries! Mark the following statements **True (T)** or **False (F)**.

1. A first-aid provider would treat<sup>44</sup> a cut by applying pressure with a pad over the wound. **T/F**
2. A wound where the top layers of skin are scraped off<sup>45</sup> is called a rupture. **T/F**
3. If a player fractures a leg on the playing field during a match, (s)he should not be moved off the pitch. **T/F**
4. R.I.C.E. stands for Rest, Ice, Compression and Elimination. **T/F**
5. R.I.C.E. should be used to treat a fracture. **T/F**
6. Hypothermia occurs when the body is exposed<sup>46</sup> to excessive heat. **T/F**
7. The person suffering from heat exhaustion should drink plenty of tea. **T/F**
8. If a player is knocked unconscious, you should tap<sup>47</sup> his/her face gently to wake them up. **T/F**
9. A player who is winded<sup>48</sup> and knocked to the ground could go into shock. **T/F**
10. Shock occurs when blood pressure drops and the organs do not receive enough blood. **T/F**

**Task 2** Complete the sentences with the words below.

*bleed scar<sup>49</sup> concussion minor pain swollen blister<sup>50</sup> bruise scratched<sup>51</sup> wound sprained*

1. My ankle is very.....
2. Do you ..... easily?
3. I've ..... my wrist.
4. This ..... was caused by flying glass.
5. The ..... will disappear in a few days.
6. The operation only left a small .....
7. Look where the cat ..... me.
8. His injuries are all fairly<sup>52</sup> .....
9. Are you in.....? Do you need an Aspirin?
10. I've got a terrible..... on my foot.
11. He lost consciousness as a result of a blow to the head and was taken to hospital with .....

**Task 3 Listening**

(<https://www.youtube.com/watch?v=t4gqeYyYzyI>)

Before you listen, brainstorm and write down the questions you would ask an expert on sports injuries.

Watch an interview with a paediatrician on prevention of sports injuries. Note down the guidelines for parents and young athletes on avoidance and treatment of injuries.

## RESUSCITATION - GIVING INSTRUCTIONS

**Task 4** First, read the text on how to perform CPR (Cardiopulmonary Resuscitation)

1. Ensure personal safety and call for help and/or call 155 (112).
2. Check the victim for a response: gently shake the shoulders and ask loudly: Are you all right? You'll need to begin giving CPR if the victim is not breathing and/or his heart is not beating.
3. Tilt<sup>53</sup> the victim's chin. This will completely open the windpipe<sup>54</sup> in preparation for breathing.
4. Keep the airway open, look, listen and feel on your cheek for normal breathing (an occasional gasp<sup>55</sup>, slow or noisy breathing is NOT normal).
5. Use your index finger<sup>56</sup> and thumb to pinch the nose shut. Breathe two slow breaths into the victim's mouth, keeping your eyes on her chest to make sure it's rising. Check for breathing again.
6. Find the spot<sup>57</sup> where the ribs meet the breastbone. It will feel like a hard, little bump<sup>58</sup>. Put your index finger on this spot so you don't forget where it is when you're getting your hands in place.
7. Put your palm<sup>59</sup> on the breastbone, and put your other hand over that hand. Sit up on your knees with your arms completely.
8. Push your hands down 30 times, taking about 15 to 20 seconds for all 30 compressions. Give two breaths after each set of 15 compressions.
9. Continue until help arrives or the patient shows signs of life.

**! Never perform chest compressions on someone who has a pulse!**

(Adapted from [http://www.ehow.com/how\\_2240741\\_give-cpr.html](http://www.ehow.com/how_2240741_give-cpr.html))

**Task 5** Now, without looking at the complete text, give instructions on how to do artificial respiration using the following linking words.

### Giving Instructions

#### **Sequencing**

First, (you) . . .

Then, (you) . . .

Next, (you) . . .

Lastly, (you) . . .

#### **Starting out**

Before you begin, (you should . . .)

The first thing you do is . . . .

I would start by . . .

The best place to begin is . . .

To begin with,

#### **Continuing**

After that,

The next step is to . . .

The next thing you do is . . .

Once you've done that, then . . .

When you finish that, then . . .

#### **Finishing**

The last step is . . .

The last thing you do is . . .

In the end,

When you've finished,

When you've completed all the steps,

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1	injury – zranění, poranění, úraz
2	overuse - nadměrné/příliš časté používání
3	gear – vybavení, náčiní
4	wound – zranění, rána, poranění
5	blood vessel - céva
6	likely - pravděpodobný
7	grazes - odřenina
8	trip – zakopnutí
9	friction burn - frikční spálenina
10	pad – podložka, poduška
11	limb - končetina
12	elevate (raise) - pozvednout, zvýšit
13	wrench - vytrhnutí , vyškubnutí
14	casualty – zraněný, oběť
15	sprain – vyvrtnutí, výron
16	ligament – vaz, vazivo
17	far apart – daleko od sebe
18	strain – natažení, namožení svalu
19	partial tearing – částečné natržení
20	bruising - modřina
21	soft tissue injury - poranění měkkých tkání
22	rupture - trhlina
23	tendon - šlacha
24	swelling – oteklina, otok, zduřenina
25	heat exhaustion - vyčerpanost z úžehu
26	rush - hrnout se
27	breathlessness – zadýchanost, dušnost
28	dizziness - závrať
29	wrapped – obalený
30	sheets - prostěradlo
31	unconsciousness – bezvědomí
32	response - odpověď
33	airways - dýchací cesty
34	unobstructed - průchodný
35	unless - ledažeba
36	nutrients - živiny
37	vital organs - životní orgány
38	winding - vyrazit dech
39	pale - bledý
40	chills - třes
41	shallow - plytký
42	vomiting - zvracení
43	loosen - povolit
44	treat - ošetřit/ošetřovat
45	scraped off - seškrabaný
46	exposed - vystavený
47	tap - poklepat
48	winded - těžce dýchat
49	scar - jizva
50	blister - puchýř
51	scratch - poškrábat se
52	fairly - celkem
53	tilt – naklonit
54	windpipe - průdušnice
55	gasp - těžké dýchání, zalapání po dechu
56	index finger - ukazováček
57	spot - místo
58	bump - vypuklina
59	palm - dlaň