2. Sports medicine, types of injuries and their treatment, first aid, wounds, fractures, joint/muscle injuries

More than 10 million sports injuries[i] occur each year. Most sports injuries are due to either traumatic injury or overuse [ii]of muscles or joints. Many sports injuries can be prevented with proper conditioning and training, wearing appropriate protective gear[iii], and using the correct equipment.

1. Wounds

A wound[iv] 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[v] at the wound edges are cut straight across, so blood loss is very likely[vi]. Grazes [vii]are wounds in which the top layers of skin are scraped off. Grazes are commonly caused by a sliding fall (trip[viii] on a running track) or friction burn[ix] (hands sliding along a rope).

Treatment

Cuts
Apply pressure over the cut with your hand or fingers, preferably over a pad[x] or dressing.
Raise and support the cut limb[xi] above the level of
the head.

Grazes

Clean the graze under running water.
Cover the graze with a piece of gauze.
Elevate[xii] 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[xiii] (a trip or stumble).

Treatment

- To deal with a major fracture you should keep the casualty[xiv] 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[xv]

Injury to a ligament[xvi] 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[xvii] and tears the tissues surrounding the joint.

Muscle damage can occur in three ways:

2. Strain[xviii]
   Overstretching of the muscle, which may result in a partial tearing[xix].

3. Deep bruising[xx] (soft tissue injury[xxi])
   These injuries are usually accompanied by bleeding into the damaged area, which can lead to pain and swelling.

4. Rupture[xxii]
   Complete tearing of the muscle, which may occur in the fleshy part or in the tendon[xxiii].

Treatment

R	Rest the injured part.
I	Apply Ice to reduce the swelling[xxiv] for 10 minutes (max).
C	Compress the injury, possibly using a bandage.
E	Elevate the part to decrease the blood supply.

4. Heat Exhaustion

Heat exhaustion[xxv], an advanced condition of hyperthermia, is very common in marathon runners; especially in hot, humid conditions. The body temperature rises, which makes blood rush[xxvi] to the skin to cool it down. This makes less blood available to the working muscles and so extreme tiredness, breathlessness[xxvii] and dizziness[xxviii] occurs.

Treatment

The casualty should be taken to a cool place and wrapped[xxix] in cold, wet sheets[xxx]. Cool water (nothing caffeinated or alcoholic) may be given slowly to the casualty.

5. Unconsciousness

Unconsciousness[xxxi] occurs from an interruption of the brain's activity.

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

D	Check for danger to both you and casualty.
R	Check for a response[xxxii] in the casualty.
A	Check the airway[xxxiii]. Is it open and unobstructed[xxxiv]?
B	Listen, look and feel to determine if the casualty is

	breathing.
C	Check circulation by feeling the pulse. Is the person bleeding?

Never move the casualty, unless[xxxv] in danger.

6. Shock

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

Symptoms include: cold and pale[xxxix] skin, shaking or chills[xl], chest pain, a weak but rapid pulse, shallow[xli] breathing, dizziness or general weakness, vomiting[xlii], unconsciousness.

Treatment

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i injury – zranění, poranění, úraz
ii overuse - nadměrné/příliš časté používání
iii gear – vybavení, náčiní
iv wound – zranění, rána, poranění
v blood vessel - céva
vi likely - pravděpodobný
vii grazes - odřenina
viii trip – zakopnutí
ix friction burn - frikční spálenina
x pad – podložka, poduška
xi limb - končetina
xii elevate (raise) - pozvednout, zvýšit
xiii wrench - vytrhnutí , vyškubnutí
xiv casualty – zraněný, oběť
xv sprain – vyvrtnutí, výron
xvi ligament – vaz, vazivo
xvii far apart – daleko od sebe
xviii strain – natažení, namožení svalu
xix partial tearing – částečné natržení
xx bruising - modřina
xxi soft tissue injury - poranění měkkých tkání
xxii rupture - trhlina
xxiii tendon - šlacha
xxiv swelling – oteklina, otok, zduřenina
xxv heat exhaustion - vyčerpanost z úžehu
xxvi rush - hrnout se
xxvii breathlessness – zadýchanost, dušnost
xxviii dizziness - závrať
xxix wrapped – obalený
xxx sheets - prostěradlo
xxxi unconsciousness – bezvědomí
xxxii response - odpověď
xxxiii airways - dýchací cesty

[xxxiv] unobstructed - průchodný
[xxxv] unless - ledaželeby
[xxxvi] nutrients - živiny
[xxxvii] vital organs - životní orgány
[xxxviii] winding - vyrazit dech
[xxxix] pale - bledý
[xl] chills - třes
[xli] shallow - plytký
[xlii] vomiting - zvracení

1. Lay the casualty down on the back
2. Raise the legs
3. Loosen[xliii] tight clothing
4. Keep the casualty warm

[xliii] loosen - povolit

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[xliv] the victim's chin. This will completely open the windpipe[xlv] in preparation for breathing.
4. Keep the airway open, look, listen and feel on your cheek for normal breathing (an occasional gasp[xlvi], slow or noisy breathing is NOT normal).
5. Use your index finger[xlvii] 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[xlviii] where the ribs meet the breastbone. It will feel like a hard, little bump[xlix]. 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[l] 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.

Sources:http://www.ehow.com/how_2240741_give-cpr.html, http://www.health.uab.edu/14015/

[xliv] tilt – naklonit
[xlv] windpipe - průdušnice
[xlvi] gasp - těžké dýchání, zalapání po dechu
[xlvii] index finger - ukazováček
[xlviii] spot - místo
[xlix] bump - vypuklina
[l] palm - dlaň