Electric Shock

1. Danger

If you suspect someone has received an electric shock you must ensure all power sources are isolated before you can treat the casualty.

High voltage

Overhead power cables are an example of a power source generating high voltage electricity. High voltage electricity has the ability to 'jump' or 'arc' up to distances of 18 metres or over. If faced with a casualty resulting from high voltage electricity:

Do not approach. Stay at least 25 metres away from the casualty until the power has been switched off by an official agency i.e. Electricity Board.

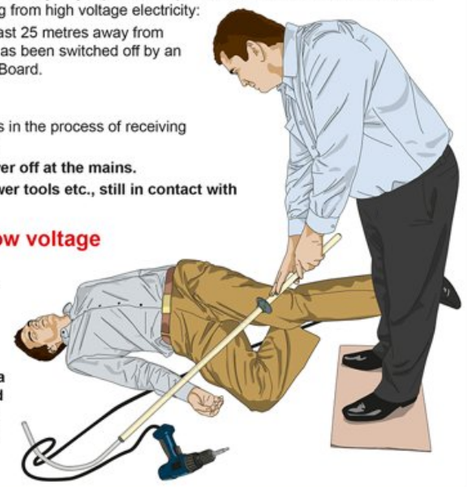
Low voltage

If faced with a casualty who is in the process of receiving an electric shock you should:

+ **Attempt to turn the power off at the mains.**
+ **Remove any cables/power tools etc., still in contact with the casualty.**

Action to take for low voltage

+ **Insulate yourself from the ground with books, newspapers or rubber matting.**
+ **Use an electric shock rescue hook or object of low conductivity i.e. a wooden broom or rolled up newspaper, to push away the power source from the casualty.**



2. Response

To give the casualty the optimum chances of survival you must quickly assess the levels of response. A rapid assessment will allow effective treatment to be administered and will also allow for accurate information to be passed on to the ambulance service.

Check whether the casualty is responsive

01. **Ask "Open your eyes if you can hear me" and call their name if known.**
02. **Ask in both the casualty's ears to open their eyes.**
03. **Offer a mild stimulus by shaking casualty's shoulders.**
04. **Do not move the casualty unless the environment or situation is dangerous.**



6. Defibrillation

Use an AED (Automated External Defibrillator) if available and follow prompts.



3. Airway & Breathing

For an unresponsive casualty

Open the airway

01. **Look in the mouth to ensure there are no obvious obstructions.**
02. **Open the airway by lifting the chin and tilting the head back. This will free the tongue from the back of the throat.**
03. **If neck/spinal injury is suspected, put one hand on the stomach to feel if it rises and falls. This indicates normal breathing.**



Assess for breathing

01. **Look for the rise and fall of the chest and beyond.**
02. **Listen for sounds of breathing near to the face.**
03. **Feel for breath on your cheek near to the face.**
04. **Carry this out for up to 10 seconds.**

Breathing normally

+ **If normal breathing is present go straight to the Unresponsive - Breathing section.** *(See box 7)*

Not breathing normally

+ **If the casualty is not breathing normally, call for the Emergency Medical Services (EMS) or ask for people nearby to call, when calling ask for a defibrillator if it is available - commence full Cardio Pulmonary Resuscitation (CPR).**



4. Getting Help

Call for help

If alone, use a mobile phone to call the Emergency Medical Services (EMS) by dialling 999 / 112.

If a bystander is present ask them to call the EMS once the casualty's airway and breathing has been checked.

Calling the Emergency Medical Services

01. **Dial 999 / 112.**
02. **The operator will ask you which service you require. Once you have stated 'ambulance' you will be connected to ambulance control. The operator will ask you a set of questions.**

Do not hang up at any stage of the conversation. The operator will terminate the call when appropriate.

Isolate or cordon off the exposed, damaged or faulty electrical source

As soon as possible after the casualty has been taken to hospital report the incident to the local supervisor. Give all information you can as an IRF needs to be completed for all accidents and incidents.



Leave details about yourself so that you can be contacted should the need arise. Report defective equipment that caused the shock (if applicable) so that repairs can be made.

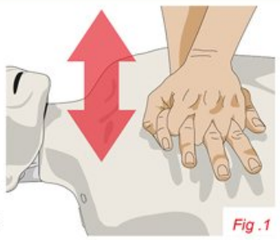
RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013).

5. Unresponsive - Not Breathing

To commence CPR:

For an unresponsive casualty

01. **Ensure the casualty is on a firm, flat surface.**
02. **Place your hands one on top of the other in the centre of the casualty's chest.** *(Fig .1)*
03. **Compress the chest (up to a maximum depth of approximately 5-6cm) 30 times at a rate of 100-120 compressions per minute. The compressions and releases should take an equal amount of time.**



04. **After 30 compressions, open the airway again using head tilt/chin lift.**
05. **Seal the nostrils with your thumb and forefinger.** *(Fig .2)*
06. **Blow steadily into the mouth until you see the chest rise, take about a second to make the chest rise, 2 effective rescue breaths in total (Blow in for 1 second, 2 breaths within 10 seconds).** *(Fig .2)*
07. **Remove your mouth to the side and let chest fall. Inhale some fresh air, when breathing for the casualty.**
08. **Repeat so you have given 2 effective rescue breaths in total within 10 seconds.**
09. **If chest does not rise after the second breath, go back to 30 compressions then try again with 2 breaths.**
10. **Return your hands to the correct position on the chest and give a further 30 chest compressions.**



Continue with CPR until

+ **The casualty shows signs of recovery.**
+ **Emergency services arrive.**
+ **You become exhausted and unable to continue.**
+ **The situation changes and you are now in immediate danger.**

7. Unresponsive - Breathing

If the casualty is breathing normally, turn into the recovery position

01. **Check for any other obvious injuries.**
02. **Remove sharp objects from pockets.**
03. **Turn the casualty into the recovery position.**
04. **Place the nearest arm at a right angle to the body.** *(Fig .1)*
05. **Draw the furthest arm across the chest and place the back of the hand across the cheek.** *(Fig .2)*
06. **Keep this here whilst you raise the furthest leg by grasping the top of the knee.** *(Fig .3)*







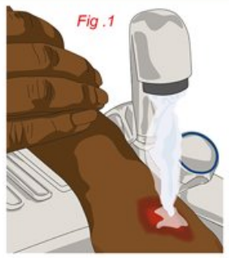
07. **Gently pull on the knee so that the casualty pivots over onto their side facing you.** *(Fig .3)*
08. **The casualty should be fully over and stable.**
09. **Re-check the airway, breathing and circulation. Adjust the hand under the cheek to keep the head tilted and the airway open to allow fluid to drain the mouth.**
10. **Draw up the leg at a 90 degree angle.** *(Fig .4)*
11. **Check for continued breathing.**
12. **Send someone to ring 999 / 112 or if you are alone, leave the casualty and call 999 / 112.**



8. Burns

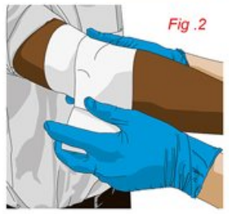
Burns

Exposure to electricity can cause burns to the skin and, in severe cases, internal organs. In such cases the electricity may, for example, enter via a hand and leave via the feet causing 'entry' and 'exit' burns.



Responsive casualties

01. **'a minimum of 20 minutes' – If burn is serve, call 999 and keep burn under cold running water until the ambulance arrives.** *(Fig .1)*
02. **Once cooled, the burn should be covered with a sterile dressing (non-fluffy).** *(Fig .2)*



Unresponsive casualties

Cool the burn with wet dressings after placing them in the recovery position.

Do not:

+ **Burst any blisters.**
+ **Apply adhesive dressings.**
+ **Remove damaged skin.**
+ **Apply ointments or creams.**
+ **Cover with 'fluffy' dressings.**
+ **Affix dressing too tightly.**
+ **Apply butter, fats or margarine.**
+ **Remove damaged clothing.**
+ **Apply ice.**



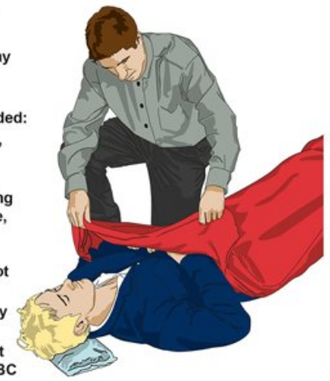
9. Other Injuries

Muscle spasm / seizures

These may be present for some time after the exposure to electricity and indicate a seriously ill casualty.

Action in the event of a major seizure

+ **The casualty will almost definitely collapse during a major seizure. Try to control the fall.**
+ **Ensure the safety of the casualty by removing any objects that may cause injury if they are struck.**
+ **Place padding under the head of the casualty. Improvise if necessary by using clothing.**
+ **Do not place anything in the casualty's mouth.**
+ **Loosen any clothing that may restrict the airway.**
+ **Time the seizure.**
+ **When the seizure has subsided:**
+ **Check the casualty's Airway, Breathing and Circulation (ABC).**
+ **If unresponsive and breathing normally or semi-responsive, place the casualty in the recovery position (see opposite). Perform CPR if not breathing.**
+ **Place a blanket over casualty to preserve modesty.**
+ **Reassure the casualty whilst continuing to monitor the ABC and any other injuries.**



Casualties with no apparent injury

If no injury is present and the casualty appears well, it is still advisable to take the casualty to a hospital or medical facility for a check up, as certain organs/systems within the body may be affected several hours after a shock.

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