



## First Aid Instructors Conference 2006

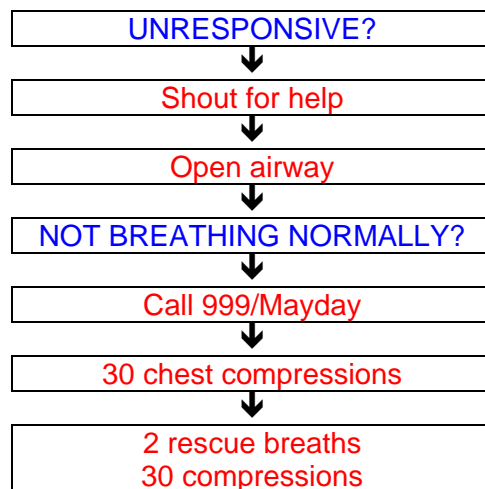
About 120 First Aid Instructors attended the conference on board HQS Wellington, alongside the Embankment, London.

The first presentation was by Niall Pearcey, Resuscitation Officer from the Norfolk and Norwich University Hospital, on the new guidelines from the Resuscitation Council on CPR. He explained the new protocols, the background research behind the changes and answered questions.

All first aid instructors are highly recommended to read the full text on the RC's website on [www.resus.org.uk](http://www.resus.org.uk), where the full details are published, together with the background research and general aims. For those without access to the web the Resuscitation Guidelines 2005 are available in book form (ISBN 1-903812-10-0). Contact the Resuscitation Council on 020 7388 4678.

The general aim of the changes is to:

- Simplify the protocol
- Increase the number of compressions given to a casualty in cardiac arrest and minimise the interruptions between compressions



The main teaching points are:

- If the casualty is **unresponsive and not breathing normally** assume a cardiac arrest.
- take no more than 10 seconds to check for normal breathing
- If there is any doubt that breathing is normal, assume not normal. In the first few minutes following a cardiac arrest the victim may take occasional, noisy gasping breaths, these should be seen as an indication to start CPR immediately.
- for an adult in cardiac arrest start with compressions, omitting the first 2 breaths
- Hand placement should be taught as "in the centre of the chest", demonstrating the correct position for students to copy
- The ratio of compressions is 30:2, the depth and rate remaining the same
- Each rescue breath should be about 1 second and make the chest rise as in normal breathing
- Only check the mouth for visible obstruction if the chest does not rise normally

- Do not attempt more than 2 breaths each time before returning to chest compressions
- Only stop to check the casualty if they begin breathing normally
- If possible change the person doing CPR every 2 minutes, with the minimum of delay

Also:

- If unable or unwilling to do rescue breaths give chest compressions only, continuously at the rate of 100 per minute. This may be as effective as full CPR for the first few minutes if there is oxygen in the blood, as in the case of a non-asphyxial arrest. Only stop to check the casualty if they start breathing normally
- use the head tilt-chin lift method to open the airway, the jaw thrust is no longer recommended for first aiders
- occasional noisy, gasping breaths, known as agonal gasps, are present in about 40% of cardiac arrest victims

## Drowning

The new guidelines include a differential to basic CPR for a victim of drowning. This is because they have suffered a respiratory arrest, depleting the blood of oxygen, prior to the cardiac arrest.

- Give 5 initial breaths before starting the 30:2 CPR
- If alone give 1 minute of CPR before going for help

This should be included on the RYA First Aid Course.

## DISCUSSIONS:

We split into groups after coffee to discuss the minor changes to the syllabus and the recommended first aid kit for safety boats.

From the discussions the 2006 syllabus has been finalised and is included with this report. **The changes will be all implemented from July 31<sup>st</sup>, when we introduce the new CPR guidelines into our courses.** Students and instructors taking courses before July 31<sup>st</sup> will not need to re-qualify, and their certificate will remain valid for the full 3 years.

These changes include:

- The four hour update will not be available after 31<sup>st</sup> July. To update the qualification the one day course must be taken every three years. This brings the certificate in line with other similar first aid qualifications.
- From July 31<sup>st</sup> if the Category C first aid part of the syllabus is to be taught, a kit must be available. The special section on the certificate for the instructor to sign will be retained. (This is only required by skippers of vessels covered by the Code of Practice, categories 2-6)

Edition 9 of the First Aid Manual, containing the new protocols for CPR, will be available by August. The book remains the official book for the course.

The other topic under discussion was whether the requirements for the first aid kits for safety boats should be changed from:

### A waterproof box containing:

2 large and 2 medium wound dressings  
triangular bandages  
thermal protection aid

The general conclusion from the instructors present, many of whom were also powerboat instructors and dinghy coaches, was that centres should do a risk assessment and provide a basic

first aid kit to cover their needs. This assessment should take into account the location and the students participating on the courses that they run. Additional items suggested were gloves, and possibly a face shield or pocket mask.

## Mike Tipton

After lunch Mike Tipton spoke on Cold Shock and Hypothermia, having just returned overnight from Canada where the temperatures were probably down to about  $-20^{\circ}$ , London must have seemed quite warm.

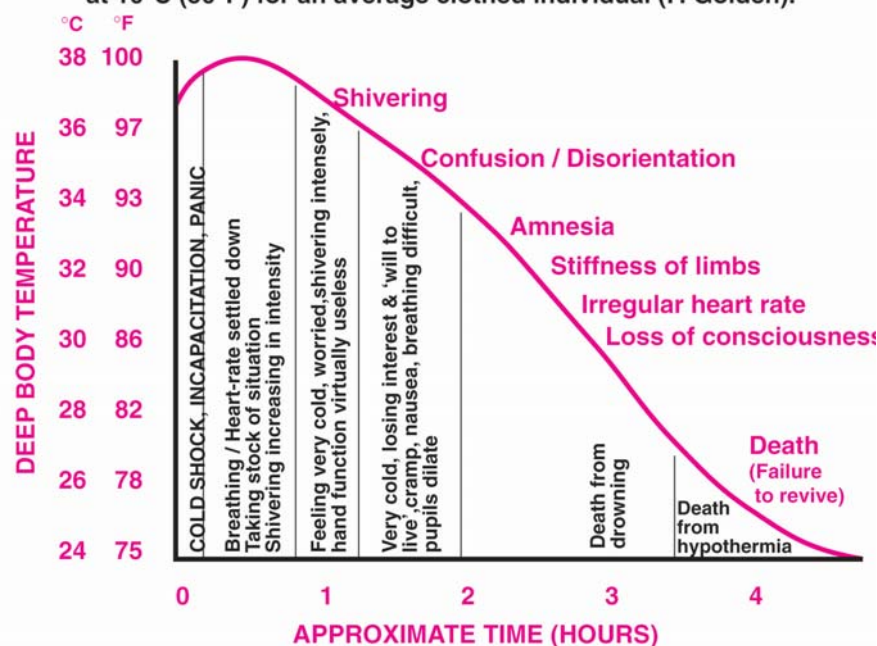
He reminded us that the water temperature off the UK coast can be as low as  $5^{\circ}\text{C}$  in February. Rarely rises above  $18^{\circ}\text{C}$  and that a substantial number of fatalities every year are caused by a sudden fall into cold water. Sailing courses are run throughout the year in many areas and cold shock and drowning must be considered as a risk for anyone falling into the water. Hypothermia may overwhelm a casualty where rescue is delayed and can dangerously reduce the capabilities of crew exposed in a dinghy or yacht cockpit.

The initial response to immersion is **cold shock**. It only lasts a few minutes but is the cause of many deaths. On contact with the cold water the blood vessels in the skin constrict and increase the blood flow back to the heart. This effect, together with an increased heart rate and hydrostatic squeeze from the water, raise the blood pressure dramatically. This dangerous combination can lead to death from cardiac arrest and stroke in susceptible individuals. In a fitter casualty the inability to breath-hold and a phase of rapid, uncontrollable breathing may lead to the inhalation of water.

Avoidance is the best defence. The use of the harness on the lifejacket or wearing a dry suit in a dinghy could be enough to save a life.

In the **second phase** of immersion the heart and breathing rate decrease and there begins a gradual decline of muscular strength. The ability to swim fades and hands become useless as the body temperature falls. A sprayguard used with a lifejacket can reduce water inhalation by 50%, but deploying it or any other lifesaving equipment must be done before dexterity is lost. Without a splashguard the casualty in cold water is likely to drown, not living long enough to develop hypothermia. Getting the casualty out of the water is the priority.

Typical change in deep body temperature during immersion in stirred water at  $10^{\circ}\text{C}$  ( $50^{\circ}\text{F}$ ) for an average clothed individual (F. Golden).



**Hypothermia** is unlikely to develop in less than 30 minutes in a fit, clothed adult if the head is out of the water. The slide into unconsciousness is gradual but once this happens, without a splashguard, drowning is likely as the waves wash over the face of the deeply hypothermic casualty. Even out of the water, in a life-raft, the body temperature may continue to fall until cardiac arrest occurs.

After rescue the reduction of further heat loss is vital. "Space blankets" reflect radiant body heat and are useless in this situation. A full bag type TPA (thermal protection aid), especially if it is possible to get the casualty inside, will be most effective. Insulate from any cold surface beneath the body to prevent conductive heat loss. The casualty needs to be treated gently, kept lying down to minimise the load on the heart. A too rapid rise in temperature can cause **rewarming collapse**.

## SUMMARY

### The Stages of Immersion:

1. Cold shock: possibly leading to drowning or cardiovascular problems.
2. Muscle and peripheral nerve cooling: possible leading to weakness and drowning.
3. Hypothermia: possible to unconsciousness and drowning.
4. Hypothermia: possible leading to cardiac arrest.

### Update

The new course for those who want to qualify as RYA First Aid Instructors was introduced at the beginning of 2006 and the uptake has been good. There are courses running in the West Country, the South, East Anglia, the North West, the North East and Scotland. The instructor course gives the opportunity for the skills of new instructors to be assessed, for the syllabus to be discussed and how the first aid course fits into the program of courses to be explained.

Instructors already qualified do not need to attend a course but are required to keep their First Aid at Work, or equivalent qualification, up-to-date.

In 2005 there were 11,500 First Aid Certificates issued.