

## **APPENDIX C**

### **Cold Water Effects**

The human body loses more heat when wholly or partially immersed in water than it does while only exposed to the air. Thermal loss in water is 2 to 5 times greater than in the air

Most experts in immersion hypothermia and cold water near drowning/drowning define cold water as temperatures below 20C. Hypothermia is defined as a drop in body temperature below the normal level. At this lower temperature, a person's muscle and mental functions are affected. A person exposed to cold water, and becoming hypothermic, can exhibit certain progressive signs and symptoms. They are as follows:

- Shivering and slurred speech, conscious but withdrawn at the early stage
- Slow and weak pulse, slow respiration, lacks co-ordination, irrational, confused and sleepy at intermediate stage; and finally
- Weak, irregular or absent pulse or respiration, loss of consciousness at final stage

If you end up in the water, do everything you can to conserve body heat.

- Wear your PFD or lifejacket. Valuable energy will be lost keeping your head above water if you are not wearing it.
- Climb onto your boat to get as much of your body out of the water.
- If alone and your boat sinks, adopt a "heat escape lessening position" (h.e.l.p.) by crossing arms tightly against the chest and by drawing the knees up close to the chest.
- If with others and your boat sinks, "huddle" with other persons by getting the sides of everyone's chest close together with arms around mid to lower back and legs intertwined.

### **Rescue and Treatment**

The general principles include:

- The safety of the rescuer(s) as well as the casualty, must be ensured at all times. The point of rescue is the vulnerable time for rescuers and casualties.
- Victims of immersion incidents should be handled gently, and placed and maintained in a horizontal position as much as possible.
- Consider the mechanism of injury for possibility of trauma, but realize the biggest immediate threat is likely to be the airway due to the aspiration of fluids. Medical observation is recommended as the effects of aspiration can be delayed for hours.
- Upon recovery, the objective is to prevent further heat loss. Remove wet clothing if the environment allows, insulate with available materials and remove to shelter.

- Any re-warming attempts of the hypothermic casualty should be passive and focus upon the body core. Rapid full surface warming is to be avoided.
- Pulses in the hypothermic casualty are hard to find and should be assessed for up to two minutes at the carotid artery prior to CPR. If CPR is indicated, it should be at the normal rate for the age of the casualty.