BOATING

incapacitated by hypothermia. This distance will obviously be affected by one's swimming ability, amount of insulation and water conditions. It is not easy to judge distance and the shore may appear to be closer than it actually is.

In cold water, an individual is likely to be able to swim a distance of no more than 1/10th of what he could easily swim in warm water.

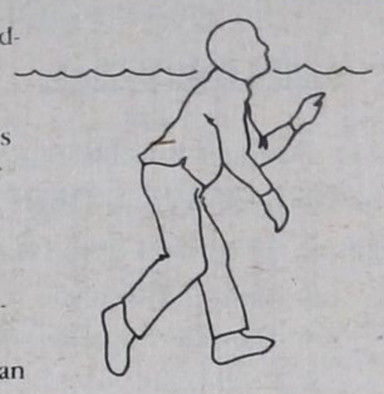
In most instances, the best advice is to stay with the boat!

6 What if I have no lifejacket or other flotation?

In this unfortunate situation, one is forced to adopt either of the following two "anti-drowning" techniques: treading water or drownproofing.

Treading Water

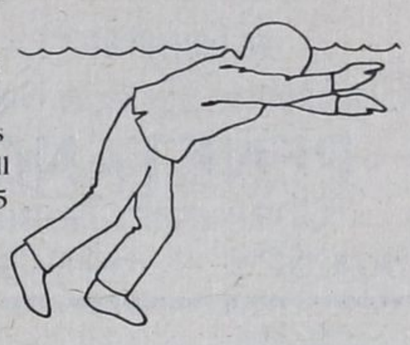
This technique is recommended over the drownproofing method.



Treading water involves continuous movement of the arms and legs in various patterns in order to keep the head out of the water. Test results show an average cooling rate of persons treading water that was 34% faster than while holding still in a life jacket.

Drownproofing

In studies so far, drownproofing in cold water appears to be the fastest way to die from hypothermia.



This procedure involves restful flotation with lungs full of air, interrupted every 10-15 seconds to raise the head out of water to breathe.

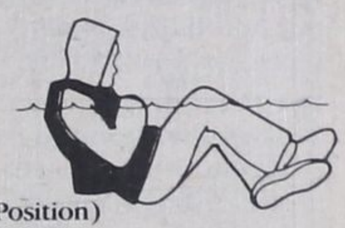
Drownproofing experiments in 10°C (50°F) water show that the body's cooling rate was 82% faster than while holding still in a lifejacket. This is mainly due to putting the head (a high heat loss area) into the water with the rest of the body.

Drownproofing is a survival technique that should be practised only in warm water.

7 What body regions are the critical areas for heat loss?

The head and neck are the most critical heat loss areas. In addition, certain other body regions have high rates of heat loss while a subject is holding still in cold water. Infrared pictures show that the sides of the chest (where there is little muscle or fat) are the major routes for heat loss from the warm chest cavity. The groin region also loses much heat due to large blood vessels near the surface. If an effort is made to conserve body heat, these regions deserve special attention, as described in section 8 following.

8 What behaviours will increase survival time?



Based on the heat loss information in section 7, two techniques were tested that attempted to reduce heat lost from the critical areas.

H E L P (Heat Escape Lessening Position)

This technique involves holding the inner side of the arms tight against the side of the chest over the "hot region" described in section 7. The thighs are pressed together and raised to close off the groin region. This body position was indeed a significant help, resulting in nearly a 50% increase in predicted survival time. It should be noted that the picture shows a person wearing a flotation device that has all its buoyancy high on the body, close to the surface of the water. This type of device is especially suitable for H E L P. This is a difficult position to maintain and it is advisable to practise it.

•Continued

Compasses very necessary

A compass is indispensable to any boat operating offshore or in a large lake or bay. It should be securely fitted, and located where it always is easily seen by the helmsman and where magnetic influences such as electrical wiring or movable steel objects are minimal.

The compass should be of a type suitable for marine use and should be adjusted periodically to compensate for magnetic forces. If you are not familiar with compass adjustment, seek professional assistance from a marine consultant.

If you frequently operate in one location, record compass headings during clear weather, so that in restricted visibility you will know what compass course is needed to proceed in the desired direction.

Venting inboard motors is a good practise

Accidental, disastrous explosions usually happen when the engine is started.

To ensure efficient ventilation, fit at least two ventilation ducts in each space containing engines or fuel tanks, one duct for exhaust and one for supply. The exhaust duct should lead from the bilges under the engines or fuel tanks to the surface; the supply duct should extend from the surface to a level below that of the carburetor intake. Supply and exhaust ducts should be as far apart as possible and the supply cowls should be at least 10 cm higher than the exhaust outlets. Remember, the two ducts mentioned above may not be sufficient, and additional ventilation should be fitted as necessary depending on the size and arrangement of your boat. Ensure that no pockets of gas accumulate in boats with deep-V bottoms owing to lack of proper ventilation.

Each duct opening should be the same size, with an area no smaller than 42 cm2 per metre of beam. The exterior ends of the ducts should have obstructed cowls or equivalent fittings with openings at least equal in area to those of the ducts.

Exhaust ducts may be fitted with wind-actuated, self-trimming or rotary exhauster heads, or with power-operated exhaust fans. If a power-operated fan is used, the electric motor and the switch for operating the motor should be installed outside the ventilation duct and, preferably, outside the machinery space. If this is impracticable, the motor and/or an explosion-proof switch may be installed within the machinery space. The exhaust fan should be run for about five minutes before starting the engine.

Air cushion vehicles

All water users should know that these vehicles operate differently from conventional boats and ships in these ways:

-An ACV is most controllable and creates minimum wash when moving at high-speed. Do not be alarmed at high-speed operation.

-An ACV is not necessarily travelling in the direction that its bow or its navigation lights indicate. Do not be alarmed if an ACV is pointing straight at you—look instead for its direction of movement relative to you.

-When operating, an ACV has no draft. Do not try to follow an ACV and do not be alarmed if you see one heading for shore or shallow water at high speed.

-ACVs are subject to the Collision Regulations, but may have a high noise level. Sound signals may not be heard either by the ACV operator or other water users.

ACVs may be identified from other craft by an all-round flashing amber light, which they always must show when operating. (This is in addition to conventional navigation lights.)