DROWNING AND RESCUE FROM DROWNING

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Abstract
Drowning is an accident, a serious condition that can lead to death due to blocked airways water or foreign, which causes suffocation by interrupting the supply of oxygen and increased concentration of carbon dioxide in the blood.
Rescue from drowning, is an action aimed at removing the victim from the danger lies, first aid and carry out effective therapeutic measures. All they have to consider survival.

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Introduction

Accidents occurring in water are usually high severity, and those involved rescue and first aid are complex and particularly important for those directly involved in the issue of preventing accidents in the water.

It must, from the outset, as savior to be a very good swimmer. The process used to swimming used, it is estimated that the process bras - variants of bras back and breaststroke underwater, crawl - with options "over" (swimming on one side), and swimming on the back, are best suited for interventions If saving from drowning.

Drowning

If the accident occurs in freshwater, blood dilution is added asphyxia caused by water entering the airways (2-3 minutes), and after entering the alveoli, the water passes through osmosis in blood, with the subsequent increase in blood volume, increased blood pulmonary and right heart load. Blood dilution with water can be followed by destruction of red blood cells, and in this case the Sunken that supports an acute shortage of oxygen is largely devoid of hemoglobin in the body that carries it.

From drowning in salt water, in addition to asphyxia occurs pulmonary edema (fluid in the alveoli) and hemo-concentration with peripheral collapse (sudden drop in blood pressure with loss of vascular tone).

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Drowning can occur for various reasons:

- moral exhaustion - characteristic of fear, because those who do not know how to swim or to appreciate forces and rushes off too much water;
- exhaustion - too high due to the effort made during swimming;
- syncopal state (stopping the heart functions and lungs) caused by seizure, angina, cramps, etc.);
- water entering the nasal passages and ears;
- hydro-electrocution - simply by contact with water, because of an increased sensitivity to water body (the phenomenon is like electrocution).

In shipwrecks, water sports accidents or jumping, can be associated with serious injuries as fractures of the skull or spine, abdomen blows, dislocations of various joints, breaking the eardrum, etc.

Waves, currents, eddies, shoals movable or fixed, fast waters, cold, aquatic plants climbing, bottom rocky, muddy, steep banks, non restricted areas (boundary beacons or buoys and regulations public), various accidents (overturning boats, hits the water during jumps, shipwrecks), are individually trigger conditions that may favor or drowning.

Even those who know very well how to swim may be at risk of drowning if you disregard their health or are very tired, consume alcohol or very cold before entering the water, sit in the sun and fall of many or a cold or make too many successive jumping and diving.

If drowning by fatigue (physical or moral), the victim struggles, uncoordinated irrational movements, thus contributing to the depletion forces. The drowning is dominated by panic, desperately cling to any and everyone cries, raising arms (this favors lifting the arms faster sinking of the victim).

If drowning by syncope (respiratory, cardiac or mixed) or hydro electrocution, the victim loses consciousness and sinks suddenly, quietly, with no sign of despair, no yelling, no fighting.

Sunken brought to shore, it is a choked: respiratory movements can be irregular, weak or absent pulse may present normal, weak or imperceptible.

In 10% of cases, the skin is white, shiny, in 20% of cases, blue-violet, while the remaining 70%, their color changes depending on the clinical condition. Cyanosis (purple skin) is more pronounced on the lips and nails, without a direct link between its intensity and degree of asphyxia.

After the appearance of sunken describes two types:

- drowning white, pale, do not swallow water;
- drowning cyanotic, harrier, the water has penetrated the lungs and stomach; the mouth and nose, rosacea may present an aerated foam, a sign of

pulmonary edema; victim's body temperature is low and sometimes can be seen different traumas and injuries.

Death by drowning occurs as follows: after the fall in the water, there is inhibition reflex cardiovascular characterized by stopping breathing or breathing rare, low pulse, low blood pressure - phenomena that lead to syncope by reducing blood supply to the nervous system central. Follow cardiorespiratory response to excitation of nerve centers of CO2, accumulated in excess. Resumes breathing frequently anarchic, resulting in filling bronchi and alveoli with water, followed by asphyxia progressive stopping breathing, the heart continues to beat then after a few moves respiratory spasmodic, lowers blood pressure, syncope Respiratory gets mixed heart stops and we are facing clinical death (apparent), followed by biological death (final).

Rescue from drowning

All actions aimed at rescuing a man who is in danger of drowning, given the seriousness of the situation must be quick, calmly and skillfully, given that there may be the possibility of restoring the life of a body that is in a state of extreme limit - clinically dead.

If, at drowning is aware and know how to swim, can be helped with some indications on the bank with a branch, rope, lifeline, etc.

Where the victim does not know how to swim or lost consciousness, rapid intervention is absolutely necessary, either by moving a boat or swim to the victim.

Savior must be a very good swimmer, who know well the risks they expose dangers of drowning and rescue maneuvers.

Before entering the water, the rescuer should try to keep as few clothes on him should not impede him nothing in the neck and mouth to remove their shoes to have more comfort in the maneuvers when they will perform. It is also very important to inform those nearby to receive additional aid.

When the victim lie on the surface, the rescuer will approach it, seeking to support and bring it to shore. If the victim is no longer resurfaces, then the first action will be dipping deep and searching them.

If the drowning know how to swim and keep the surface, the rescuer can approach more slowly, in order to spare forces to support and transport to shore. If the victim sinking speed is required, which, however, does not exhaust the rescuer forces and lead to another accident.

If drowning is happening at a great distance from the shore, indicate use of boats or floating surfaces that are possibly on shore.

In all cases, however, it takes more calm, determination, cold-blooded toughness. Never act rashly, panic and despair.

When traveling by swimming, are the following points:

- into the water (diving with a dive or standing);
- proceed to the victim (without ignoring fatigue);
- proximity to the victim (recommended on the back of it);
- grabbing the victim (tangible or maneuver used to get rid of the wrong socket or plug desperate grab the endangered);
- transporting the injured (in the back, his mouth out of the water to breathe);
- first aid (reanimation, it is recommended breathing technique "mouth to mouth" or "mouth to nose", depending on the situation).

The processes used to immobilize a victim agitated, aim, grip eventual release savior of the one in danger of drowning, and immobilisation position required transport to shore.

In practice they were imposed following processes:

a) the issue by immersion: the victim, having no air will weaken catching or savior will give way in order to reach the surface to breathe. Before diving savior inspires powerful, and if water is not too deep, water will push to lower the victim or the shore;

b) balancing using arms and feet thrust of the lifeguard must be higher than the tightening:

- if you catch the victim savior front, wanting to keep the surface it through a sudden twitch, will release their arms and palms pressing it on the chin, he will head back; while folding her legs and feet or knees on chest applying injured, it will remove;
- if the victim will catch in the back, savior grouping, turning upside down, place feet on his abdomen and running a smooth thrust, but strong;
- release from the grip of the victim, the rescuer will then immobilize single-arm; will catch arms from behind and restrained drowning will be transported to face up to the shore, boat or other support existing water points.

Swimmer tired it can be helped using floating objects or towed by other swimmers, achieving individual (swim in the process bras or over) or using two or more swimmers (swim in the process breaststroke).

After removing the victim from the water, first aid begins draining under the airways. Open the victim's mouth, remove language, clean the mouth where it is blocked by secretions, algae, etc.; sits with the knee bent savior chest and tried by some pressures, draining the lungs or stomach. These maneuvers should last very least, the victim is then placed back with his head in hyperextension, and start blowing air into the airways through maneuver "mouth to mouth" or "mouth to nose".

To bring the head in an optimal position air insufflation, will sit below the shoulders and neck of the victim, a victim roll, a roll makeshift clothes, towel or even a pile of sand. In young children will infuse the air mouth and nose.

The first insufflations (approximately 10) will be executed in a fast pace. Rescuer must breathe short and accelerated to increase the concentration of oxygen. The following insufflations be performed at a normal pace of 15-20 breaths per minute.

Blowing air through the "mouth to mouth" has a drawback: air into the stomach. This prevents pressing down of the thyroid cartilage, which will close the esophagus. Air into the victim's lungs is recognized by the disappearance of cyanosis, expiratory character movements and spontaneous inspiration intercalation movements.

If cardiac arrest occurs, manifested by absence of pulse at the carotid, femoral and humeral artery, dilated pupil and pale face, it is necessary to apply cardiac massage.

In this case, the rescuer, who was kneeling position beside the victim will press palms overlay on the bottom of the sternum, performing compressions per minute 50-60.

The efficacy is observed by increasing the reanimation of pupillary dilation, lowering of cyanosis of the face, the appearance of peripheral pulse rate and blood pressure.

If there are two rescuers, one will take care of breath, infusing air into the lungs of the injured and the other will perform heart massage, artificial respiration coordinated with the times.

If the rescuer is alone, will apply both methods: cardiac arrest with ventricular fibrillation, he will pause for 30 seconds insufflation (6-10 exhales) will do heart massage, then the method will return again blowing, paying injured five exhalations. It continues then, and instilling cardiac massage until the cord will resume. Pressures on the chest will run only during expiration.

Advice to those who may be in danger of drowning:

- stay on places where you can find a haven when you're tired;
- you feel a security threat affecting your buoyancy, do not panic, try to stay lucid, swimming executing movements correctly and relaxed as possible;
- do not lift the arms out of the water when diving for, you can limit your opportunities to swim, favoring sinking;
- if you've sunk your breath and movements using your feet, trying to reach the water surface, then passed away the cork back;

- if the hazard is caused by a muscle cramp painfully manifested, keep calm, trying to get a relaxation of the affected segment or the other; is not appropriate or stinging blows affected area.

Tips for saving:

- see precisely where the accident occurs, quickly assess the level of danger and the number of those at risk; to save from a major accident rescuers needed 2-3;
- check regularly and use promptly, if necessary, emergency equipment (seat, rope, boat rescue, first aid instruments); without special rescue materials, can throw the endangered rope at the end of which binds a piece of wood. If the accident happens near the shore, it can use a branch or stick longer.

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