

Water Blackout

Lack of Oxygen Reason

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County Health Officer

All local health departments in California recently received a communication from the state director of public health calling attention to the hazard to underwater swimmers of hyperventilation. A cause of fatal and nearly fatal drownings, this problem is not frequently publicized and often not understood by the swimmer himself.

Hyperventilation is sometimes called "shallow water blackout" during which a swimmer, for no apparent reason, suddenly loses consciousness and sometimes drowns.

Reasons for such a blackout have to do with the way the human breathing apparatus works. Ordinarily the body maintains a kind of balance of oxygen and carbon dioxide in the blood stream — oxygen to nourish the cells and carbon dioxide which the cells give off as waste.

THE RELATIONSHIP is really a balancing act, somewhat like a seesaw, with the high and low blood levels of each element acting in opposition and continuously reversing. As one breathes air, the blood oxygen level rises and the carbon dioxide level falls. As the body uses the oxygen and gives off carbon dioxide, the seesaw reverses and the carbon dioxide level becomes high, the oxygen level low.

When the carbon dioxide in the blood builds up to a certain point, it triggers one's impulse to breathe, thus making automatic the process of inhalation and exhalation. The speed and depth of respiration is related to one's activities.

When a swimmer, in order to prolong the time he can stay under water, takes several deep breaths before diving, he is actually washing out most of the carbon dioxide from his blood stream. This means that as he swims, the buildup of carbon dioxide starts from a lower blood level than normally and hence takes longer to reach the point at which the swimmer feels the impulse to take a breath. Meanwhile he is rapidly using up his blood oxygen supply.

IN SUCH A CASE it is possible that before experiencing a strong urge to breathe, the swimmer may "black out" because of insufficient oxygen.

Most of the reports of drowning from hyperventilation are associated with competitions in which the individual attempts to hold his breath past the point of prudence in order to complete a race. It is most important that individuals in training for competitive swimming understand the hazard of hyperventilation. It is a very real threat for them. However, any family member competing against another in a backyard swimming pool could also suffer a blackout from insufficient oxygen.

Underwater swimmers should, then, remember two important rules: 1) Never "overbreathe" or indulge in repeated deep breathing before beginning the underwater swim and 2) after swimming for a time underwater, start to rise to the surface very shortly after feeling the urge to breathe again. Both rules will help to prevent reduction of the blood oxygen level to the point of unconsciousness.

Citizens Move For 'Free' TV

Formation of a South Bay-Centennial Valley Citizens Committee for Free TV, which urges a "Yes" vote on Proposition 15, was announced by Mrs. J. Russel Shea of Palos Verdes who is serving as chairman.

Torrance committee members include: Mrs. Helen F. Robello, Herbert B. Shane, Louis S. Niezgodzki, Jack Roper and Elmo Hayes.

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