

Shallow Water Blackout – The production of a position statement from the ILSF Medical Committee

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Organisation

This abstract is based on work for the ILSF Medical Committee

Background

Shallow water blackout is one of several reasons why a swimmer may suddenly lose consciousness in water. The definition of shallow water blackout is variable with numerous terms describing the same phenomena. There are also various phenomena described using the same terms! As a result of no standard definition or classification, records of incidence are vague. In a survey of Australian snorkelling deaths between 1987 and 1996, 20% (12 of 60 deaths) of the deaths were attributed to hypoxia from breath holding and hyperventilation (1). There are several different proposed physiological mechanisms.

Aims/Objectives

This work set out to clarify the physiological mechanisms and propose practical casualty reduction measures, to be implemented on a global basis, via the publication of an ILSF Position statement (2).

Target

The International Life Saving Federation, the ILS Member Organizations and collaborative partners in drowning prevention.

Methods/ Implementation

The Statement was constructed using literature searches and working with input from the membership of the ILSF medical Committee.

It has (by the date of the conference) been published on the ILSF Website with specific casualty reduction measures. These are intended for use by the ILS Member Organizations, to be implemented by the member organizations as soon as practically possible.

Results

We have identified four potential physiological mechanisms that may result in shallow water blackout.

1. Hypoxia associated with Hypocarbica
2. Alteration of free calcium ions
3. The 'Samba' Phenomenon
4. Air Embolism

The work has generated the following recommendations:

The International Life Saving Federation, the ILS Member Organizations and the collaborative partners in drowning prevention should:

1. Institute guidelines for water users that:
 - a. Actively discourage hyperventilation prior to 'breath hold' diving
 - b. If an individual is stationary or showing signs of swim failure underwater following a breath hold dive there should be a low threshold for immediate rescue and recovery
2. Develop a standardised definition and name for the condition currently known as shallow water blackout This could be achieved with a forum of experts from lifesaving, swimming, free diving, and scuba diving during the 2011 World Conference on drowning prevention
3. Commence global reporting of suspected shallow water blackout incidents. This can only be achieved once a standard definition is approved
4. Encourage more research into the area of shallow water blackout

Discussion / Conclusion

The publication of the position statement on shallow water blackout marks a milestone in the identification and prevention of death and injury due to this phenomenon. It is also intended to encourage further discussion of, and research into this phenomenon. By presenting the work at the World Conference on Drowning Prevention, we hope to further pursue these aims.

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References

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