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Meeting: 77th Annual Scientific Meeting

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Tracking Id: 148950

Abstract Type: Panel

Status: Draft

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Associated Abstracts:

Group	Tracking Id	Title	Presenting Author	Status	Preview
Incorporation of Science and Technology to Counter	148894 (Intro)	Incorporation of Science and Technology to Counter Physiological Threats in Operational Environments	HEBERT, MATTHEW	Submitted	Preview
Incorporation of Science and Technology to Counter	148924	Technological Approach to Improving Pilot Orientation	Albery, William	Submitted	Preview
Incorporation of Science and Technology to Counter	148943	The Use of Multimedia and Non-Motion Based Simulation to Combat Spatial Disorientation in Naval Aviation	Folga, Richard	Draft	Preview

Topic: Aerospace Physiology

Title: Simulator Physiology (SIMPHYS) in Naval Aviation: the evolution of hypoxia training in the Naval Aviation Survival Training Program

Text: Background: Since 2004, the Naval Survival Training Institute has investigated the efficacy and utility of normobaric hypoxia training in combination with flight simulators to enhance training realism and reduce altitude exposure risks. Previous work by investigators at the Naval Aerospace Medical Research Laboratory and the Naval Operational Medicine Institute has verified that using the Reduced Oxygen Breathing Device (ROBD) is highly effective for refresher jet aircrew. The purpose of this study is to describe the use of the ROBD with experienced fleet aviators in tactical flight simulators (Naval Aviation Survival Training Program SIMPHYS concept) and to present results from student surveys. Methods: Instruction in hypoxia recognition and recovery was provided to Navy and Marine Corps F/A-18 aircrew in tactical flight simulators using the ROBD. Aircrews were individually exposed to 25,000 feet of simulated altitude while performing complex flight duties. Subsequent to ROBD training, all aircrew completed a 19-question survey rating the quality of the instruction as compared to previous low pressure chamber (LPC) experience. Results: Of the 121 aircrew trained with the ROBD in combination with a flight simulator, 114 (94%) were able to recognize their hypoxia symptoms and recover the aircraft, and 117 (97%) rated ROBD training as "more realistic" and 110 (93%) as "more effective" than traditional LPC training. Discussion: Student feedback indicates that using an ROBD in combination with actual flight duties is a safe, effective, and preferred means of training experienced aviators to recognize and recover from hypoxia. Description of current operations and results of rapid fielding of the ROBD throughout the Naval Aviation Survival Training Program will also be presented.

Learning Objective:

Order	Learning Objective
1	The audience will gain insight into how the Naval Aviation Survival Training Program is applying new technologies to deliver hypoxia training to Navy/USMC aircrew.
2	The audience will gain insight into the recent evolution of normobaric hypoxia training in the U.S. Navy.

Author Thomas C Jones

Conflict(s): Conflict: Will your presentation include discussion of any commercial medical products or services?
Description: Yes. The Reduced Oxygen Breathing Device is for pilot training, high altitude training, and medical stress training.

Declarations: Has this work been published or presented elsewhere prior to the AsMA meeting?

No

Are all authors aware that their names appear on this abstract?

Yes

Is presenting author a Full or Part-time Student?

No

Is presenting author a Resident Physician?

No

Is presenting author a First Time Presenter at an AsMA Meeting?

No

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No

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