**Title Prepare the soldier for operation in cold, amphibious and dark environments**

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ΝΑ ΣΤΑΛΕΙ ΑΙΤΗΜΑ ΓΙΑ ΤΑ ΣΤΟΙΧΕΙΑ ΣΤΟ ΣΥΝΤΟΝΙΣΤΗ  
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Military-oriented studies using both cold air and cold water, have showed substantial decrements in mental-cognitive and manual performance following cold stress, the magnitude of which appears to be a function of both, surface cooling and, with prolonged exposures, deep body cooling. Some studies appear to show at least some beneficial effects of cold climate training on manual skills and cognition, while some others failed to show improvements in physiological functions related to an operation, after repeatable cold exposure.

Although soldiers get prepared to take part in land operations, sometimes action can take place in water, therefore amphibious action may be required. Frequently, amphibious operations include covering a short or long distance in the sea, while swimming with personal equipment, and with a specific technique, in order to minimize visibility to others and increase combat readiness. The training adaptations in this swimming style, as well as in shooting performance after swimming, seemed to be specific, not only regarding the activity performed but also in terms of the actual conditions of an operation, which also includes equipment.

Army soldiers commonly conduct foot-borne operations at night; one reason to perform such movements at night may be to reduce heat strain in hot climate or to camouflage. However, a substantially higher oxygen uptake is observed, and hence endogenous heat production, in soldiers walking on terrain at night whilst using night-vision goggles, than when performing the same task in bright daylight. We should consider this in prolonged, high-intensity operations in which metabolic heat production and/or energy depletion can compromise the mission success.

The additional physical conditioning and/or acclimatization can not always overwhelm the negative effects of these environmental stressors on operating performance. However, it is essential that leaders prepare their military units to operate with the highest safety and maintain physical performance in such environments.