



Omni Medical Systems, Inc.

Tactical Life Support Systems a division of Omni Measurement Systems, Inc.

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Tactical Dehydration is an Operational and Safety Risk for Legacy and F-35 Fighter Pilots.

The US Air Force AMXD development program was a success story for the US Air Force Life Support development program office over 7 years ago. <http://sbirsource.com/sbir/awards/10713-aircrew-bladder-relief-capability>

This US Air Force Program SBIR Topic AF02-069 was specifically funded to provide pilots (male and female) an improvement over the use of piddle packs in military aircraft because they have and still do result in a number of Class A accidents with great loss of life and aircraft. A pilot must unbuckle and partially undress and move seat to use the Piddle Pack. Furthermore, the Air Force recognized that the issuing of the piddle pack promotes the long standing practice of Tactical Dehydration, which causes up to 50% reduced G-Force tolerance at 3% dehydration, reduced SA and increased SD. These issues were at the forefront of this project over 12 years ago and it seems these facts have gotten lost to present day life support, aircrews and commands, as they are still allowing Tactical Dehydration as a viable in-flight bladder relief solution. www.acq.osd.mil/osbp/sbir/solicitations/sbir20021/af021.doc

Document: "Pilot Tactical Dehydration - An Operational Risk Comparable to Intoxication" (see attached) One of these recent studies "Effects of Dehydration on Cognitive Function of Pilots" by Paul Lindseth, PhD for the Department of Aviation that was published in Military Medicine 07/2013, showed significantly poorer results; a 57% reduction in flight performance, a 26% reduction in spatial cognition, and a 17% reduction in short-term Memory Response Time tests scores for pilots who had low fluid intakes and experienced 1-3% dehydration in comparison to properly hydrated pilots. <http://aviationknowledge.wikidot.com/aviation:effects-of-hydration-on-cognitive-function#toc2>

News Article of Pilots joking about the safety issues of using piddle pack.

"At our regular continuation training meetings we were usually briefed on the recent safety incidents around the Air Force. One of them left us in tears from laughing. An F-16 pilot at 35,000 feet had to use his piddle pack and sometime after unstrapping his lap belt, the belt interacted with the side-mounted joystick and caused the jet to do a few aileron rolls and lose a few thousand feet of altitude."

<http://www.aopa.org/News-and-Video/All-News/2012/December/17/Fly-like-a-fighter-To-pee-or-not-to-pee.aspx>

News Article "Pilot lost Jet using Piddle Pack"

An Air force Pilot Lost Control Of his \$19.9 Million F-16 fighter when he went to use his piddle pack. <http://news.google.com/newspapers?nid=1876&dat=19910322&id=FLAeAAAAIBAJ&sjid=ec4EAAAIBAJ&pg=5830,2935756>

News Article Published Fighter Pilot on Tactically Dehydration and then Over Distention (holding it) so as not to use piddle pack - a long history of practice.... "People often wonder, and it is rarely discussed - how did you relieve yourself, strapped into an ejection seat and immobile for 7+ hours? Well as for me - although we were provided with little "piddle-packs" - I personally held it for 7 hours . . . as I had planned and for which I had prepared by remaining dehydrated. (Hey, I'm a fighter pilot.) However, upon arrival in Torrejon, I could barely salute the welcoming Air Force Colonel. Bending over and doubled-up under pressure, I feverishly ran to the nearest 'head' to relieve myself - for seemingly and refreshingly forever, before I could then return to properly meet, greet, and properly salute the receiving Air Force Colonel." <http://flitetime.net/iran.html>

News Article Video on F-35 Critical Issue

Bladder relief is specified in the IAE and is current on-going Safe-to-Fly process on the F-35. See attached picture of F-35 Harness and flight ensemble, Pilot must unbuckle from Ejection Seat Harness and undress and move seat while flying. According to video interview with F-35 test pilot, they are currently using the piddle pack on long duration test flights. This means they are unstrapping ejection seat harness and they are Tactically Dehydrating for shorter flights. <https://www.f35.com/resources/test-pilot-tuesdays/detail/bathroom-breaks-flying/P12/>

Your attention to this matter is vital to the safety of your aircrew and aircraft.

Best Regards,

Mark Harvie, President