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# Test HyperKewl™ Evaporative Cooling Ultra Sport Vest

by

## Dutch Airmobile Combat Division

- Location:** Texas, Killeen – USA
- Period:** April 26<sup>th</sup> – 30<sup>th</sup> 2012 and May 15<sup>th</sup> – 19<sup>th</sup> 2012
- Conditions:** The professional soldiers work under very hard and difficult circumstances, where the ambient temperature plays a major role in the complexity of the tasks.
- Objective:** Effectiveness of wearing a cooling vest on exercise performance and thermoregulatory responses during a military operation.
- Test Leader:** Military Medical Department
- Participants:** 4 professional soldiers of the 11 infbat

## Findings

(Military operation)

**Outfit:** Functional T-Shirt, HyperKewl™ Ultra Sport Cooling Vest, Body Armor, Bulletproof / Fragment Resistant vest.

*Normally we are sweating excessively, but while wearing the cooling vest we sweat just moderate, especially a large difference in the abdomen.*

*The cooling vest is working great. You feel the cooling effect better when there is more airflow or better ventilation. In the extreme working environment where we operated ( $\pm 30^{\circ}\text{C}$ , high humidity) in our full military equipment, the cooling vest did last for approx. 3 hours and after that the [participants were not affected by the heat. They felt much more comfortable and had a better concentration because there was no physical and mentally pressure from the heat.*

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*During our 5-days operation, including different actions and long journeys with backpack, we sometimes felt the cooling vest did not always have enough ventilation to obtain maximum cooling effect. But by throwing some water over the back and breast, we experienced that the cooling vest did work well again.*

*We needed less water to drink. Without cooling vest we drank our 3 liter Camelback + 1 liter reserve. With cooling vest we did not need the 1-liter reserve.*

*Two of the participants we selected for this test, do historically have structural problems with the heat (heat stress, heat exhaustion).*

*We permanently did monitor / measure the body temperature and RR.*

*There was nearly no increase in core temperature (0,5 °C - 1,0 °C - between 37 °C and 38 °C).*

*Very remarkable (and positive, important) fact is, that while wearing the cooling vest, the RR stays in almost equal figures as in a normal condition of the participants. (between 120/80)*

*Without cooling vest, the systolic is between 100 and 90 and the diastolic between 70 and 60.*

## **Findings**

(Sport; running, climbing, obstacle race)

**Outfit:** Functional T-Shirt, with and without HyperKewl™ Ultra Sport Cooling Vest

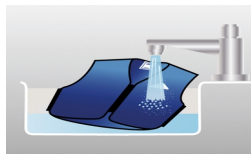
*Our conclusions after using the cooling vest:*

- ❖ *Better performance*
- ❖ *Feel much more comfortable*
- ❖ *Avoiding mental problems*
- ❖ *Avoiding heat stroke, exhaustion*
- ❖ *Need less liquid intake*

## HyperKewl™ Evaporative Cooling Ultra Sport Vest (6531)



- Pull-over w/mesh ventilation panels and scoop neck
- Comfortable, quilted nylon outer with HyperKewl™ polymer embedded cooling fabric inner, water-repellant nylon liner, and black cotton-poly elastic trim
- Hi Viz Lime with Silver trim, Royal Blue with Silver trim, Silver with Silver trim, Black with Silver trim
- Sizes: XS, S, M, L, XL, 2XL, 3XL



- Simply submerge the garment in water for 1-2 minutes allowing the HyperKewl™ fabric to absorb the water
- Gently squeeze out the excess water, wipe dry and wear
- The garment will remain activated for hours and can be re-hydrated as needed