

COOL SHIRT

*ELIMINATE
HEAT INDUCED
FATIGUE*

The World Leader
in Personal Cooling

We make racing safer...

HEAT

***And Your Internal
Engine***

It's more serious than you think

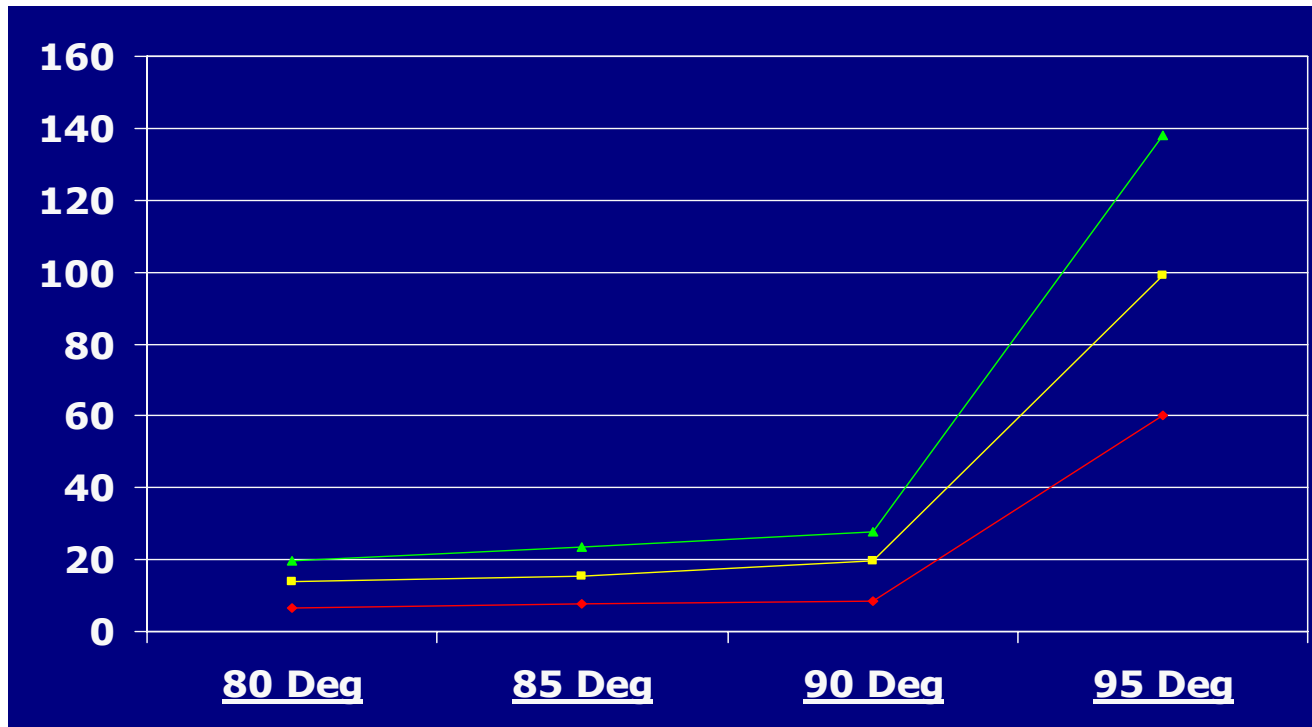
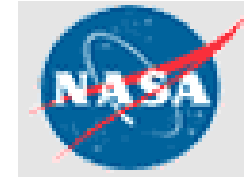
Why you need a COOL SHIRT®



- *Better reaction times*
- *Faster decision making*
- *Less mistakes*
- *Reduces sweating*
- *Reduces dehydration*
- *Reduces heart rate*
- *Helps maintain a safe core body temperature*

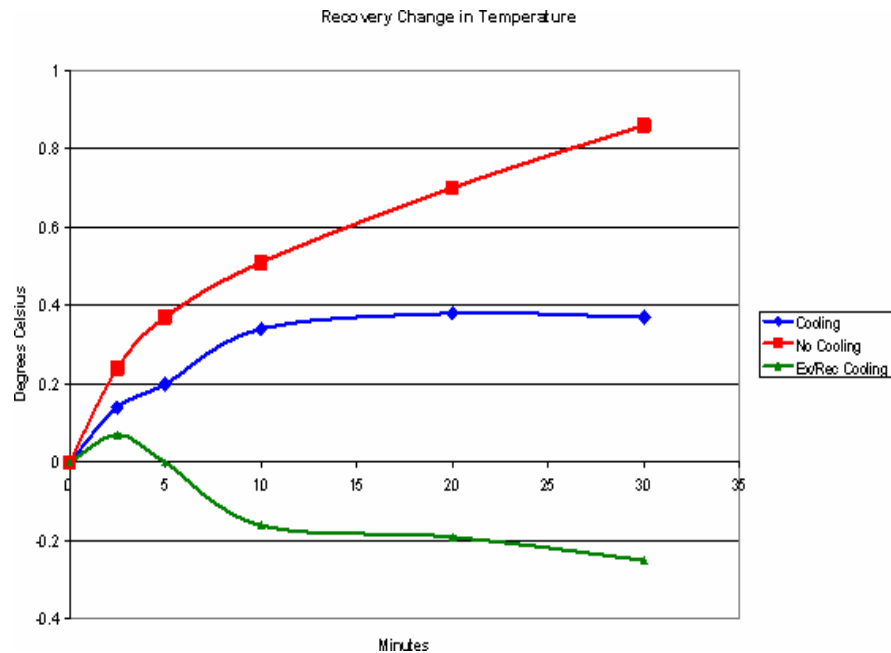
COOL SHIRT® *makes racing safer...*

Performance Study By



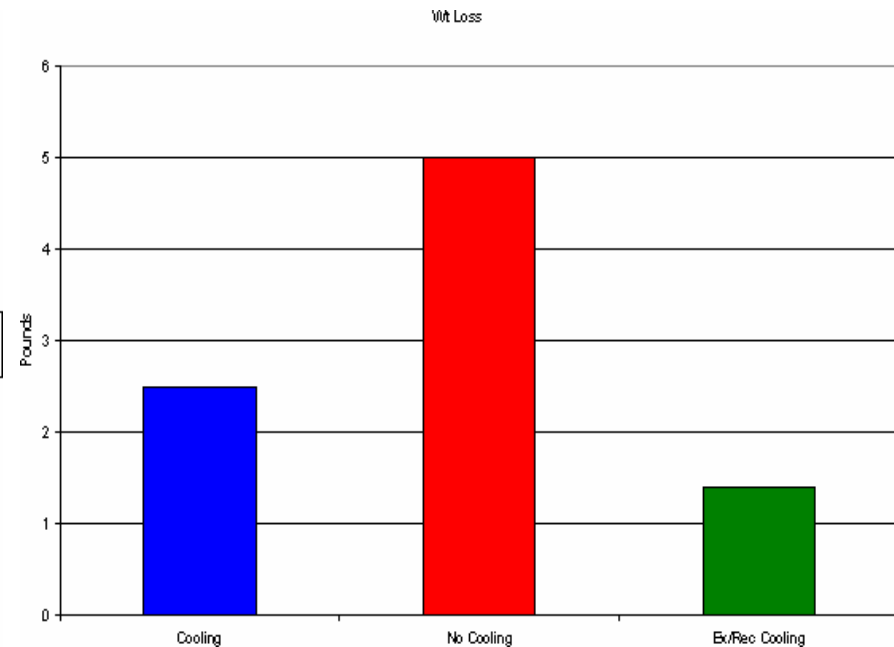
<i>Degrees F</i>	<i>NUMBER OF MISTAKES</i>		
	<i>1 Hr</i>	<i>3 Hrs</i>	<i>Average</i>
80	5	19	12
85	7	21	14
90	9	27	18
95	60	138	99

CORE TEMPERATURE OBSERVATIONS DURING RECOVERY



- Subject ran 14 mins at 6.5 MPH on a treadmill
- Subject stopped running and rested 30 minutes
- Room temperature 95 degrees
- Subject wore TYVEC Suit with hood

WEIGHT DIFFERENTIAL AFTER EACH TRIAL

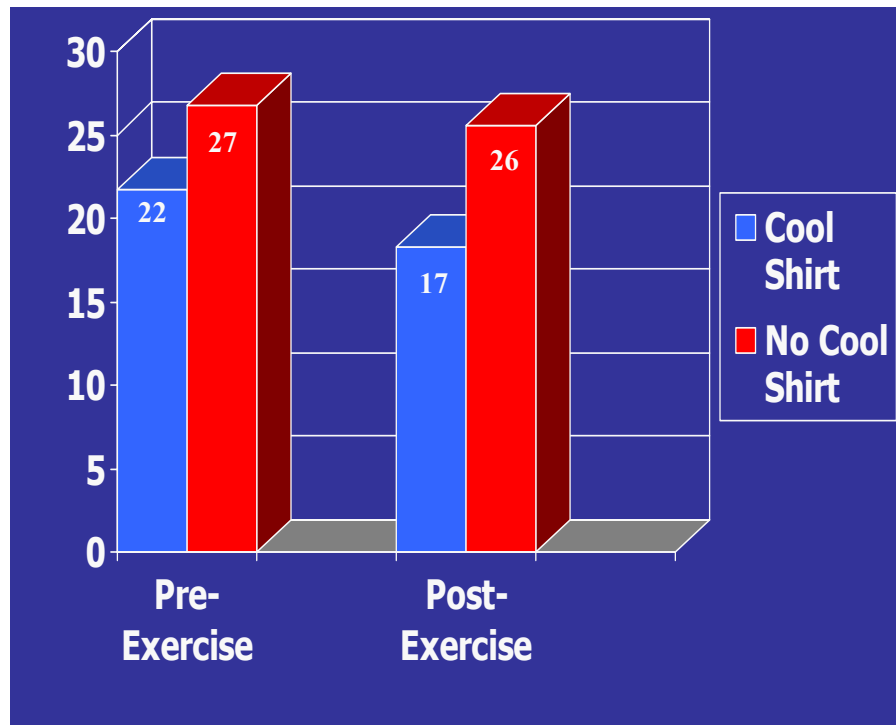


FACT: 2% or more of body weight loss through perspiration = HEAT EXHAUSTION

- **RED** – NO COOLING, weight loss 5.0 pounds or **2.6% HEAT EXHAUSTION**
- **BLUE** - COOLING AFTER EXERCISE, weight loss 2.5 pounds **NO HEAT EXHAUSTION**
- **GREEN** – COOLING DURING AND AFTER EXERCISE, weight loss 1.4 pounds **NO HEAT EXHAUSTION**

MENTAL PERFORMANCE TASK TIME (in seconds)

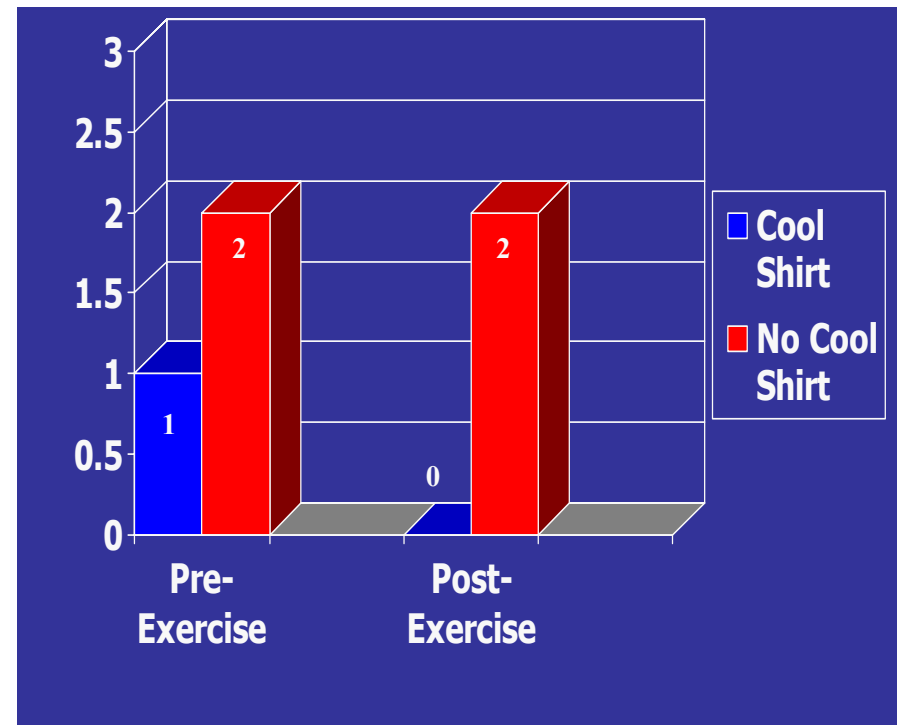
*Faster Decision Making
Using COOL SHIRT®*



- 15 minutes sitting
- 30 minutes exercise
- Room Temp 95 degrees
- Subject wore a 3-layer fire suit

MENTAL PERFORMANCE ERRORS

*200% Fewer Mental Errors
Using COOL SHIRT®*



- 15 minutes sitting
- 30 minutes exercise
- Room Temp 95 degrees
- Subject wore a 3-layer fire suit

Human Body Generates Up to 50 degrees of Heat in 24 Hours
How Does the Body Lose Heat?

65% *RADIATION* occurs when the air temperature is lower than your body temperature

10-15% *CONVECTION* is heat loss to air and water vapor around your body which must be lower than your skin temperature

2% *CONDUCTION* is the transfer of heat from warmer to cooler objects by direct contact

25% *EVAPORATION* is the release of perspiration through the sweat glands on the skin surface

*When the temperature around
you is over 95 degrees....*

RADIATION, CONVECTION and *CONDUCTION*
stop working

EVAPORATION is all you have left

Any clothing, especially protective type used by
racecar drivers, industrial workers and welders
MAKES the *heat situation* *EVEN WORSE*

NORMAL *Blood Circulation*

Average human blood capacity is 5.6 liters or 6 quarts.

Three circulation cycles per minute

For normal heat loss, $\frac{1}{4}$ liter of blood is sent to your skin surface per minute for cooling

BLOOD CIRCULATION for *HEAT LOSS*

When heavy perspiration occurs, *6 to 8 liters of blood flow to your skin's surface per minute* for evaporation. This is up to *one-half* of your body's normal blood supply.



Now your body's brain, muscles, & vital organs are working on only ONE-HALF of what is normally required.



What Are The Signs of Heat Exhaustion and Stroke?

- *Heavy perspiration*
- *Fatigue & Weakness*
- *Skin is cold, pale and clammy*
- *Muscle and body ache*
- *Headache*
- *Nausea*
- *Possible vomiting and collapse with or without loss of consciousness*
- *Skin is hot, dry and red*
- *Rapid heartbeat*
- *Confusion*
- *Loss of consciousness*

Cause is high heat/humidity, loss of body fluids and electrolyte imbalance (i.e. loss of sodium, dehydration)

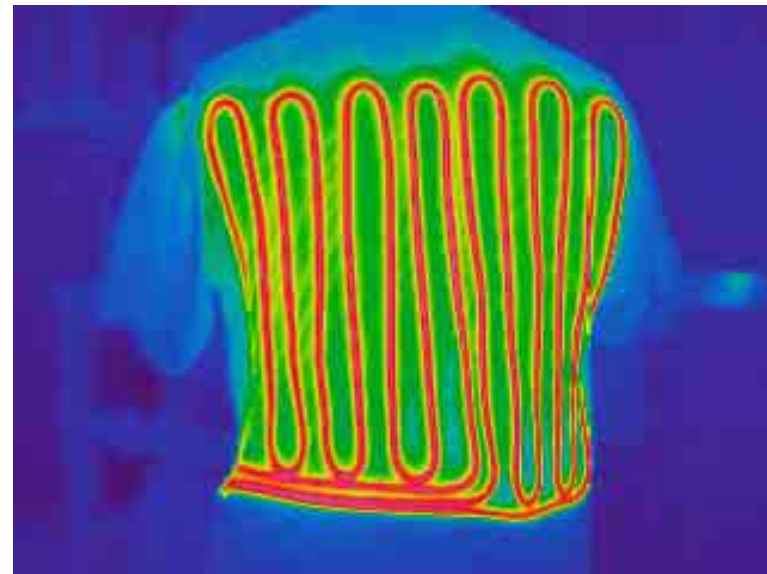
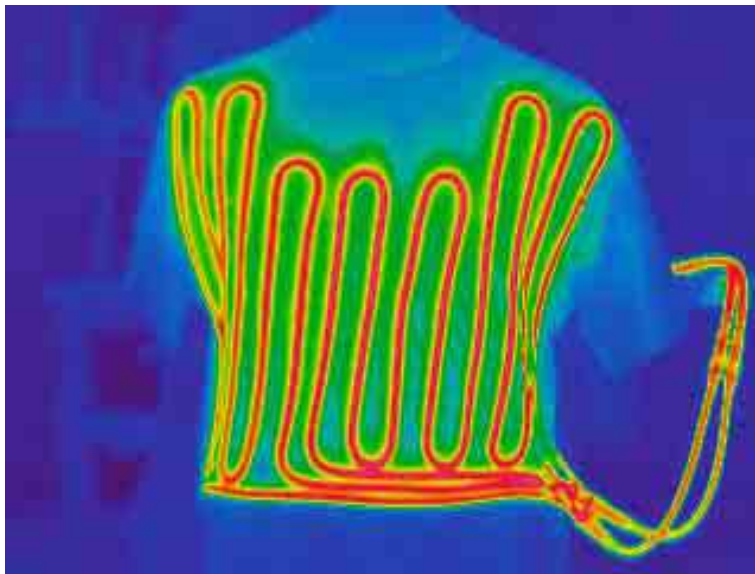
How the COOL SHIRT® works

- The shirt uses conduction to cool the blood
- **50 feet of tubing on the front and back - 4 cooling zones**
- The shirt covers 30-40% of the skin's surface with temperature-controlled cool water - 45 to 60 degrees
- **Perspiration and dehydration are greatly decreased**
- **Cool water transfers body heat 28 times faster than air**

Titanic

Hot Tub 104 degrees

Sauna 200 degrees



In conclusion:

**ALL OF YOUR SAFETY EQUIPMENT
ONLY HELPS YOU *IF YOU CRASH***

- *Helmet*
- *Belts*
- *Neck Restraint Systems*
- *Driver's Suits*
- *Gloves*
- *Roll Cage*
- *Fuel Cell*
- *ETC, ETC, ETC*



COOL SHIRT™ is the *only* piece of
equipment that will help you ***PREVENT***
a crash