



FACT SHEET

Delaware County Community Emergency Response Team Supplemental Training Series

INTRODUCTION TO WILDERNESS SEARCH & RESCUE

Section IV - Fitness and Physiology

- Physical and mental fitness are integral to the primary SAR objective of working for the victim.
- SAR personnel must have working knowledge of human biological survival.

Food and Nutrition

- What you eat today is what you run on tomorrow.
- Humans in cold environments need as many as 2000 extra calories per day.
- Heavy activity significantly increases caloric requirements.

Activity Level	Male Calories per lb	Female Calories per lb
Light	17	16
Moderate	19	17
Heavy	23	20

Daily Caloric Needs

Water Needs

- Humans are two thirds water.
- Decrease in normal water levels:
 - 1% decrease causes thirst.
 - 10% decrease causes mental deficiencies.
 - 20% decrease can cause death.
- An inactive person requires a minimum of 1.2 liters per day.
- Active searchers need as much as 8-10 liters of water per day.
- Water is more essential than food.

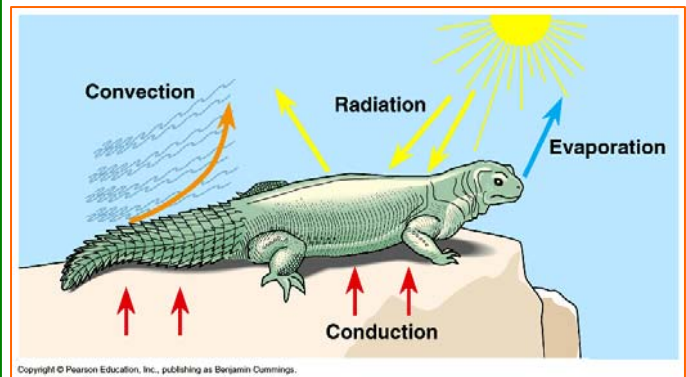
The Heat Balance Equation

- Body heat produced by:
 - Metabolism
 - Muscle movement
- Body heat lost by:
 - Environment
 - Heat loss mechanisms

Body Heat Balance

- Body heat is produced and lost in an effort to maintain homeostasis.

Heat Loss Methods



The Four Components of Fitness

- Strength
- Agility
- Flexibility
- Endurance

Admitting Limitations

- Make a realistic assessment of your physical abilities.
- Worse than being in poor physical condition during a mission is not realizing you are unfit!
- Everyone is different— Set your own limits.

Mental Fitness

- The victim needs you to be alert, resourceful, and thinking clearly.
- Be thorough, confident, conscientious, and assertive.