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TO: All Fire and Rescue Personnel  
FROM: JD Orndorff, Battalion Chief  
RE: Hydration Chart  
DATE: March 27, 2014

## **INFORMATIONAL BULLETIN IB-14023**

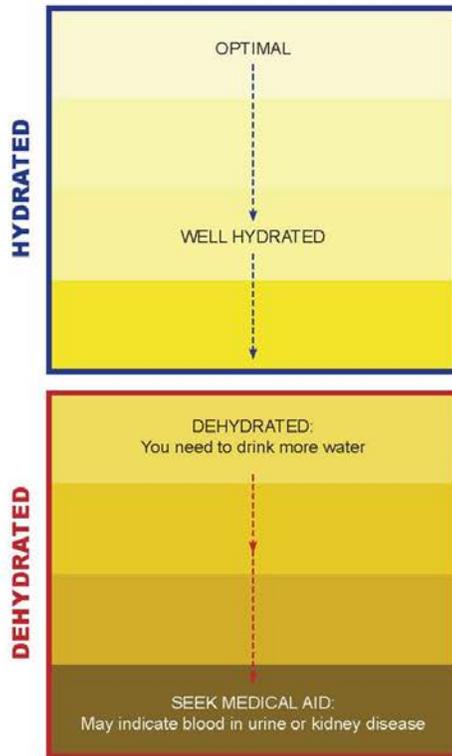
In fire departments across the world we continue to succumb to injuries and illness. Winchester Fire and Rescue personnel must take steps to assure we are battle ready when the next emergency occurs. This means having reminders around the station and training facilities to make sure our body and systems are ready.

Plan for the next event by paying attention to the chart and what your body is telling you. The attached chart below is being laminated and sent to each station to be hung in the restrooms. Make every effort to hydrate prior to coming to work, and before and after training/incidents. This chart is not an all-inclusive to proper care and maintenance of our bodies.

# Are You Hydrated?

## Take the Urine Color Test

### Urine Color Chart\*



\*This color chart is not for clinical use.

### Water Consumption Table

Heat Category	WBGT Index, °F	Easy Work	Moderate Work	Hard Work
		Water Intake (Quart/Hour)	Water Intake (Quart/Hour)	Water Intake (Quart/Hour)
1	78° - 81.9°	1/4	3/4	3/4
2	82° - 84.9°	1/2	3/4	1
3	85° - 87.9°	3/4	3/4	1
4	88° - 89.9°	3/4	3/4	1
5	> 90°	1	1	1
Body Armor + 4°		Easy Work - walking on a hard surface at less than 2 mph with less than a 20 pound load, weapon maintenance, in an emergency training, and ceremony	Moderate Work - patrolling, walking in the sand at 2.5 mph with no load, call check, patrolling, individual movement techniques (i.e., high/low crawl)	Hard Work - walking in the sand at 2.5 MPH with a load, load stack
MOPP 4 + 10°				
Rest - sitting or standing in the shade if possible				

The fluid replacement volumes will sustain performance and hydration for at least 4 HOURS of work in the specified heat category. Fluid needs can vary based on individual differences and exposure to full sun or full shade.

**CAUTION:** Hourly fluid intake should not exceed 1.5 quarts. Daily fluid intake should not exceed 12 quarts.

U.S. Army Public Health Command (Provisional)  
<http://phc.amedd.army.mil>  
 CP-070-0510 (Also available as a bp card)

### Purpose

- With normal kidney function, your level of hydration is indicated by the color of your urine. Some vitamins and supplements may cause a darkening of the urine unrelated to dehydration.
- Since heat-related illness often follows dehydration, this simple test will help protect your health.
- Dehydration also increases your risk for kidney stones.

### How does it work?

- Match your urine color to closest color in the chart and read the hydration level on the chart.
- Watch the urine stream not the toilet water, as the water in the toilet will dilute your urine color.
- In response to dehydration, the kidneys conserve water and excrete more concentrated urine; the more concentrated the urine the darker the color.

### Prevent Dehydration

- No amount of training or acclimatization can reduce the body's requirement for water.
- Follow the water consumption guidelines in the water consumption table.

