

# Here's To Your Health!

A Phoenix Fire Department Health Center Publication  
[www.phoenixfirehealth.com](http://www.phoenixfirehealth.com)



June  
2008

## Hydration Information

On average, you lose about one liter (about 34 ounces) of fluid per hour of exercise. Extreme heat and humidity can raise that amount to three liters in one hour. A trained athlete will store enough muscle glycogen to provide energy for approximately 90 minutes of aerobic exercise. As your muscles burn glycogen, water is released as a metabolic by-product and excreted as sweat. Researchers found that during a marathon (26.2 miles), runners released an average of two liters of sweat from muscle glycogen stores. This is in addition to sweat from other body liquids.



You can control or lessen these sweat rates by acclimatization and training for the event. Acclimatized athletes can reduce electrolyte and fluid loss up to 50%, but note that those losses cannot be fully replaced during the event. According to nutrition expert Bill Misner, Ph.D., "The endurance exercise outcome is to postpone fatigue, not replace all the fuel, fluids, and electrolytes lost during the event. It can't be done, though many of us have tried." In other words, our hydration goal is not to replace water pint-for-pint, but to support natural stores by consuming as much as we can adequately process during exercise.

At the most, you can absorb about one liter (about 34 fluid ounces) of water per hour, but only under the most extreme heat and humidity. Most of the time you can only absorb about half that amount, even though it won't fully replace your loss. Repeated intake of one liter (about 34 fluid ounces) per hour will ultimately do you more harm than good.

So how do you know when it's time to drink? You don't wait until you're down a quart. A good hydration regimen starts before you even get moving. Based on the available research, 20 – 25 oz/hr is an appropriate fluid intake for most athletes under most conditions. For lighter weight athletes, or those exercising in cooler temperatures, 16 – 18 oz/hr may be perfect. In addition, to avoid dilutional hyponatremia, fluid intake should not routinely exceed 28 oz/hr.

Lastly, this information is targeted towards endurance athletes. The one variable that these athletes have that firefighters don't, is a known race day. Firefighters don't have the luxury of exactly knowing the day, time and particulars of the physical demands they will face. Therefore, they don't have the luxury of tailoring their fitness regiment to peak on that specific date. The key is to be prepared year-round.

Source: Hammer Nutrition's "The Endurance Athlete's Guide to Success", 7<sup>th</sup> Edition.



### FDNY Bravest vs Phoenix Thunder

Congratulations to the Thunder for making it to the 2008 National Public Safety Football League Championship! The 2008 National Public Safety Football League Championship

game is set for Saturday, June 14th, 2008, 7:00 pm kickoff. The Bravest vs the Thunder at **North Canyon High School in Phoenix, Arizona.** The last time either team was in the National Championship, it was exactly the same way. In 2006 the Thunder beat the Bravest 31 - 26 at the very same field. The last time the two teams faced each other the Bravest were victorious at home in April 2007.

# 7 Symptoms Men Should Not Ignore

When it comes to health, men often take better care of their cars than their own bodies—or their roofs. “If they spot a leak in their roof, they want to fix it before it damages the whole house,” says Dr. Jean Bonhomme of the Men’s Health Network. “The slightest funny noise in their car will send men to the garage. If they could only do that with their own bodies.” In fact, a possible reason for men’s higher mortality from major illnesses such as heart disease, cancer, stroke and diabetes is their unwillingness to seek medical help as often as women do. Perhaps young men can get away with ignoring various aches and pains, but in middle age, these can be signs of something that might get worse over time. Indeed, there are some symptoms that a man should always take seriously, whatever his age. If you have one or more of them, stop, think and call a doctor.

**1. Chest pain.** This is the holy grail of symptoms. If you feel as if an elephant is sitting on your chest, head for the nearest ER. (Call an ambulance or have somebody drive you.) Often, however, signs of a heart attack are less obvious, involving left-arm pain, jaw pain, sweating and shortness of breath. Chest pain that catches you after exertion, lasts a few minutes and then goes away could mean your heart is not getting enough blood (a condition called angina). Yes, sometimes chest pain is only heartburn, but why take a chance?

## **2. Shortness of breath.**

Being a little short of breath after running or a game of pickup basketball is not a big deal. But if you feel short of breath lying in bed at night, after walking a block or two or climbing one flight of stairs, you should see your doctor at once. These may be signs that your heart is getting weak—also called congestive heart failure.

## **3. Blood in the urine or stool.**

True, some people don’t even want to look. But they should. The bottom line is: There shouldn’t be any blood in your urine or stool. Urine travels from the kidneys to the bladder in special pipes called ureters, and then to the urethra before it leaves the body. Any disruption along the way from cysts, stones, infection or inflammation can introduce blood in the urine. So can cancer of the kidneys or bladder. Blood in the stool may be trickier to see. If you see bright red blood, it’s a no-brainer.

But sometimes blood in the stool may make your bowel movement look dark and tarry. Don’t assume it’s hemorrhoids. When there’s blood in the stool, colon cancer must be ruled out, usually by a colonoscopy. (Blood in the stool also can be related to a bleeding ulcer or a condition called diverticulitis.)

## **4. Changes in urination.**

Getting up too many times at night to visit the bathroom, a weak stream, having difficulty passing urine or getting urine started can all be signs of an enlarged prostate. The walnut-sized gland that surrounds the urethra grows as men age and can cause a common condition called benign prostatic hyperplasia (BPH). It’s not life-threatening, but it can have a profound effect on quality of life. Identify it early, and you can prevent its progression. Prostate cancer—a life-threatening condition—has similar symptoms. A physical exam and a PSA blood test can often tell the difference between the two. Increased visits to the bathroom also can be a symptom of other conditions, including diabetes—a serious illness that may lead to heart and kidney disease.

## **5. Unintended weight loss.**

Many Americans are trying to lose weight. But what if you’re losing weight without even trying? If your pants are suddenly too loose, something else may be going on. It may be something relatively benign, like an overactive thyroid gland, but sometimes it’s the first hint of cancer.

## **6. Leg swelling.**

When fluid accumulates in your feet, ankles or legs, don’t ignore it. The swelling, also called edema, may be a warning of heart, kidney or liver disease. While there are medications (diuretics, or “water pills”) that can help reduce the swelling, it is critical to find the underlying cause: Is the heart not pumping effectively? Are the kidneys not filtering all the fluid they’re supposed to? Is the liver congested? A battery of tests is likely to reveal the reason and get you started on the right course of treatment.

## **7. Skin lesions that don’t go away.**

Many people ignore skin wounds, especially when they are not on the face. Skin ulcers, particularly on the legs and feet, that don’t heal after a few days should raise a red flag. They may be a tip-off that something is wrong with the circulation. Nonhealing wounds also can be the first clue of diabetes. A skin lesion anywhere on the body that doesn’t go away, becomes larger or changes color and shape can suggest skin cancer. Don’t brush it off. If caught early, the chances of a full recovery are great.

Source: Dr. Mark Liponis, PARADE Magazine

# Toxic Exposure Notification

This notification is about the use of the Fire Personnel Toxic Exposure Form. This form is to be used for all exposures to a toxic substance, known or unknown, and periods of exposure to fire smoke. It is important to document exposures to smoke since this is the most common vehicle of exposure to toxic substances. Documentation for all fires is important especially when exposed to heavy smoke for extended periods of time. Turnouts become saturated and the exposure can be reoccurring each time you don your equipment from the “off-gassing” of toxins in the turnouts.

Turnouts that become saturated with the products of combustion or with any toxic substance need to be decontaminated before being used again. Decontamination can be as simple as a thorough rinsing off with a red line.

Exposures are investigated to determine, if possible, the toxins and their concentrations that you were exposed to. Consultation with a toxicologist for some exposures is sometimes done to determine if any testing or treatment is needed.

E-mail notification or personal contact will be made to exposed individuals to instruct them on the course of action to be taken if the exposure dictates medical intervention.

Personnel will be notified via e-mail or Buckslip, in the form of a Toxic Exposure FYI for incidents that need an in-depth explanation of the exposure at that incident.

When documenting an exposure please use the proper form. The correct form to use is the [Fire Personnel Toxic Exposure Form 91-38d](#). Please do not use the old Hazardous Materials Exposure Form or Infectious Exposure Form.

The form can be found and ordered from the commodities catalog. Be complete and accurate as possible when filling out the form. If there is any question about the toxin exposed to, leave that part blank and the exposure officer will fill it out. Use only the last four digits of your social security number. Send all forms to the Health Center attention G. Tambascio. If you have any questions please feel free to contact me at Station 31-C or cell phone (602) 617-6711.

Get a canvas tote bag, fill it up with sand and try these exercises. Sandbags are great for building grip strength as well as balance, coordination and power.

**1. Shoulder the Load.** Like a power clean, shouldering a sandbag -- lifting it from the floor to your shoulder in one explosive movement -- requires a coordinated effort from your core, upper body, and legs. It also challenges your balance, because the bag's weight distribution shifts as you lift it.

**How to do it:** Place the sandbag on the ground directly in front of you. Bend at your hips and knees while maintaining the natural arch in your lower back, until you can grab the bag by its sides. In one powerful movement, rise to a standing position and lift the bag to your right shoulder by forcefully straightening your legs, thrusting your hips forward, and pulling the bag with your arms. Reverse the movement, and repeat. Make sure you do both sides of your body.

*Sandbag continued on page 4*



**Sandbag** continued from page 3

**2. Walk Off Your Gut** With its awkward shape, a sandbag requires you to expend more energy to lift it. But in addition to burning calories you can also challenge your toughness and increase stamina with the bear-hug walk. **How to do it:** Wrap your arms around a sandbag (or hold it overhead) and walk while maintaining perfect posture – that is, standing tall with your abs braced, chest up, and shoulder blades pulled back and down. Perform the bear-hug walk for 30 seconds. Then proceed to the next movement in the circuit. Hold the bag as if you're hugging it.



**3. Grip, Row, and Grow** There's no convenient place to grip a sandbag. To hang onto it, especially in muscle-making moves like bent-over rows, you must crush the bag with your hands and pinch it with your fingers. As a result, you'll train all the muscles in your hands and forearms while intensively training both your back and biceps. **How to do it:** Grab the bag with both hands and stand with your knees slightly bent. Maintaining the natural arch in your lower back, bend forward at your waist until your upper body is almost parallel to the floor. The bag should hang straight beneath your shoulders. That's the starting position. Now, without moving your torso, pull the bag as close to your lower rib cage as possible. Pause and then lower the bag to the starting position. Do 8 reps, rest 1 minute, and repeat before going on to exercise 4.



**4. Squat for Strength** Sandbag lifts don't have to be complicated to be effective. And few exercises can compare to the classic squat for building total-body strength and muscle.

**How to do it:** Stand holding a sandbag in a bear hug. Initiate the movement by pushing your hips back. Lower your thighs until they're at least parallel to the floor, and then press back up. Too easy? Pause for 2 or 3 seconds in the down position of each rep. Perform 5 reps, rest another minute, then start over with the first exercise.

Source: Mike Morris, C.S.C.S., for Menshealth.com

## Healthier Grilling

In one study by scientists, charcoal-grilled meats contained more carcinogens called polycyclic aromatic hydrocarbons (PAHs) than meat heated with propane. When fat drips from meat, the fat burns and creates PAH-infused smoke, which coats what you're cooking. And charcoal makes more smoke than gas does. Also, charcoal flames are hotter, which chars meat and creates heterocyclic amines (HCAs), another carcinogen. Propane still produces some PAHs and HCAs, though, so take these steps with any grill. Trim fat. Lean meats create less drippings and less smoke, which reduces PAHs. Marinate. Soaking meat in vinegar or lemon juice reduces HCAs by 90 percent. Flip frequently. Studies have shown that turning meat frequently results in fewer HCAs.

Source: Menshealth.com

