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FROM : National Wildfire Coordinating Group

REPLY TO : NWCG@nifc.gov

DATE : 08/13/2001

SUBJECT : SAFETY WARNING : Heat Intolerance from performance pills

Several recent events have brought to light an evolving problem that could put firefighters at increased risk of heat related injuries. A number of prescription as well as over-the-counter drugs and treatments contain agents that interfere with the body's ability to maintain normal body temperature during work or under conditions of environmental heat stress. Therapeutic agents include drugs such as: diuretics, laxatives, antihistamines, beta-blockers, tricyclic antidepressants, vasoconstrictors and others. This includes such substances as caffeine, ephedrine and creatine, which are often used as additives in performance enhancing supplements.

In a recent incident four firefighters were treated for heat related problems after taking over-the-counter performance enhancers. These "performance supplements" are sold in stores under various names such as yellowjackets, ripped fuel and metabolife (a weight loss supplement). These supplements contain ephedrine or ephedra (ma huang), which react in the body much like amphetamines. Problems with these substances are also being seen in the military and professional sports.

Creatine is a natural substance that is often used by bodybuilders to increase bulk. The downside to this is that it causes the body to retain water in cells so it is not available to dissipate heat.

Caffeine is a diuretic, which tends to increase the flow of urine in the body. This increase of fluid output, if not offset with an increased input can increase dehydration. Coffee, tea, soft drinks and "energy drinks" contain caffeine, which also serves as a stimulant.

If you or any of your employees are taking any drugs or over-the-counter supplements, please consult a physician or pharmacist about possible side effects while working in hot conditions.

So much for what not to do, firefighters are encouraged to use sport (carbohydrate/electrolyte) beverages (Gatorade, Powerade, etc.) which enhance fluid intake, help retain fluid, provide energy, and maintain cognitive and immune function during prolonged work in the heat. And don't forget the water.
