

## **Faster, Stronger, “Higher” Avoiding the pitfalls of self-medication**

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13 February 2012**

Medical personnel often receive questions from within the Coast Guard community regarding which supplements and herbal remedies members are prohibited from taking; I will try to elaborate and clarify as best I can. Most CG members are interested in products that will assist with weight loss, increased stamina, or muscle gain. However, there are also many substances out there that are either used recreationally, which one might assume is legitimate because it is not classified as a controlled substance, or because the member has a remaining amount of a controlled substance previously prescribed by a medical provider.

First, what does the CG prohibit? Current regulations stipulate that members cannot take any supplement banned by the Food and Drug Administration (FDA), controlled substances and anabolic steroids listed on the National Collegiate Athletic Association (NCAA), salvia divinorum and derivatives, hemp/hemp oil derivatives to include synthetic tetrahydrocannabinol (THC), and any other substance used recreationally to achieve a “high” or “intoxication, excitement, or stupefaction of the central nervous system”. This is a summary of the references listed at the end of this document.

### **Prescription and non-prescription (OTC) medications**

The current NCAA list can be found at [NCAA Banned Drug List - NCAA.org](http://NCAA Banned Drug List - NCAA.org) and the 2011-2012 list can be found at the end of this document. It is important to note that the focus here is on controlled substances and anabolic steroids and NOT legitimately prescribed medications or coffee (caffeine). Non-prescription medications purposely taken in excess of recommended dosage with the intent to obtain an altered mental state, and prescription medications without a valid prescription are prohibited via a lawful general order issued by COMDT. CG members may take prescription medications under a physician's order for a bona fide medical reason (authorized). CG members may NOT take a medication without a current order from a physician for a particular illness (not authorized). Do you have any unused controlled substances in your medicine cabinet from an old ailment that you are saving for an emergency? Guess what? If you use it to self-remedy and you “pop positive” during a urine analysis (UA), you will receive a drug incident unless it documented as a current or active prescription in your medical record.

### **FDA banned substances and adulterated products**

What items are banned by the FDA? Currently, the only item banned for sale in the U.S. is ephedra. Prior to 1994, the FDA had NO AUTHORITY over dietary supplements, until the passage of the Dietary Supplement Health and Education Act (DSHEA) was passed. This Act allows the FDA to ban supplements BUT only after these items are proven unsafe. Unlike prescriptions and OTC medications, supplements do not have to be proven safe and effective prior to marketing. The FDA was motivated to take action against ephedra in 2004 due to public outcry after the death of Baltimore Orioles pitcher Steve Bechler, who was taking Xenadrine.

Products marketed as supplements have also been found to contain illicit prescription medications not listed on the ingredients. These adulterants can have harmful side effects and may also be prohibited by COMDT policy. Typically, these have consisted of sexual performance enhancers, anabolic steroid type compounds, and hormones (thyroid, testosterone, estrogen). To minimize the risk of using supplements containing adulterants, always look for the "USP Verified" mark on the product label. This mark confirms the content of the product; it has been submitted for rigorous testing by the United States Pharmacopeia and conforms to good manufacturing practices.

## **Performance Enhancers and Weight Loss Products**

Ephedra has been removed by legitimate supplement manufacturers in the US, but may still exist in overseas and internet products. Watch out for other names for ephedra such as "Ma Huang" or products that contain ephedra-alkaloids (country mallow, heartleaf, pinellia, ban xia). Many manufacturers have gotten away from ephedrine-like stimulants and have switched to caffeine-containing products...guarana, green tea extract, mate, etc. In excessive quantities, these may cause toxic effects. The Hydroxycut products switched from ephedra to other substances that have caused liver damage and death, which resulted in an FDA product recall on 1 May 2009 and removal from the market. Examples of dangerous weight loss supplements that the FDA has warned consumers to avoid are LipoKinetix due to liver damage and Triax Metabolic Accelerator as it contains a potent thyroid hormone.

## **Muscle Building Products**

Weightlifters must be wary of any products that may contain steroid derivatives. As stated by the NCAA, the list is by no means complete as various derivatives and precursors exist. Androstenedione (Andro) is a perfect example as it is a precursor to testosterone and is found in a variety of products such as Endo-Stak, Andro-Fuel, Andro-XS, etc. Citing safety concerns, the FDA issued warning letters to 23 manufacturers on 11 March 2004 warning them to cease production. A Google search for "androstenedione" on 13 February 2012 quickly returned multiple websites promoting Andro products. However, this should become less of an issue with the implementation of the Ryan Haight Act which provides greater DEA regulation and enforcement regarding internet distribution of controlled substances including anabolic steroids. Again, Coast Guard regulations clearly state anabolic steroids and related compounds are prohibited.

## **Recreational Drugs**

First off, to summarize, Coast Guard personnel are prohibited from experimenting with recreational drugs and related chemicals via COMDT general order. It does not matter if it is chemical, herbal, natural, huffed, puffed, etc; if the intent is alteration in mood or affect resulting in "intoxication, excitement, or stupefaction", you will be held accountable. Salvia divinorum (Maria Pastora, Salvia, Salvorin A, Divinorin A, etc) and "Spice" (Genie, Skunk, Sence, Yucatan Fire, etc) have gained a lot of press recently as up and coming recreational drugs. Salvia divinorum users experience hallucinogenic effects while "Spice" contains marijuana-like compounds that are much more potent than THC. The active ingredients in "Spice", "K2", and

other “fake pot” products are classified as illegal (Schedule I as of 3/1/2011, 5 compounds) and the active components of salvia divinorum were banned by the Coast Guard in 2009. Please refer to ALCOAST 605/10 for additional information regarding this topic.

## **Aviation Personnel**

All Aviation Personnel need to consult with a flight surgeon prior to taking any medication or supplement. Please refer to the Aviation Medicine Manual for a list of herbal medications and supplements that are classified as allowable or prohibited as well as any restrictions that may apply.

## **Resources**

The following information is provided to educate Coast Guard members on what is considered safe and possibly effective. It is not an endorsement by medical but a means of providing legitimate resources. Please be aware there are many unsubstantiated and false claims for products on the market.

So, where can you go to get valid and current information regarding dietary supplements? Excellent online reference specific for military members are the [Human Performance Resource Center](#) and [Use of Dietary Supplements by Military Personnel](#) (free online). Another excellent resource is the FDA’s [Center for Food Safety and Applied Nutrition](#).

## **USCG References:**

COMDTINST M1000.10, Chapter 1.A.2.k

COMDTINST M5000.3B, Chapter 9.2-15

COMDTINST M6000.1E, Chapter 10.A.8.b

COMDTINST M6410.3, Chapter 12

ALCOAST 605/10 SUBJ: General Order Prohibiting Wrongful Use And Possession Of Certain Non-Controlled Substances

ALCOAST 297/09 SUBJ: Ban of Salvia Divinorum products

ALCOAST 221/06 SUBJ: Over-The-Counter Ephedra Use

COMDTNOTE 5355 SUBJ: Ban of Hemp Seed Oil Products



## 2011-12 NCAA Banned Drugs

### **The NCAA bans the following classes of drugs:**

- a. Stimulants
- b. Anabolic Agents
- c. Alcohol and Beta Blockers (banned for rifle only)
- d. Diuretics and Other Masking Agents
- e. Street Drugs
- f. Peptide Hormones and Analogues
- g. Anti-estrogens
- h. Beta-2 Agonists

**Note: Any substance chemically related to these classes is also banned.**

The institution and the student-athlete shall be held accountable for all drugs within the banned drug class regardless of whether they have been specifically identified.

### **Drugs and Procedures Subject to Restrictions:**

- a. Blood Doping.
- b. Local Anesthetics (under some conditions).
- c. Manipulation of Urine Samples.
- d. Beta-2 Agonists permitted only by prescription and inhalation.
- e. Caffeine if concentrations in urine exceed 15 micrograms/ml.

### **NCAA Nutritional/Dietary Supplements Warning:**

**Before consuming any nutritional/dietary supplement product, review the product with your athletics department staff!**

- Dietary supplements are not well regulated and may cause a positive drug test result.
- Student-athletes have tested positive and lost their eligibility using dietary supplements.
- Many dietary supplements are contaminated with banned drugs not listed on the label.
- Any product containing a dietary supplement ingredient is taken at your own risk.**