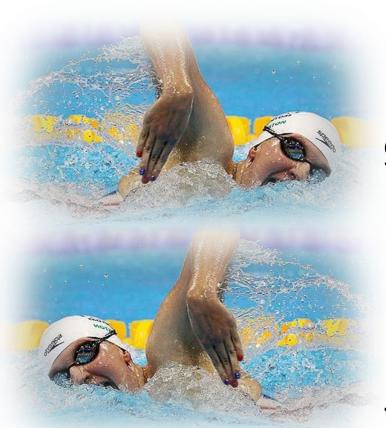


# Hazards of supplement use



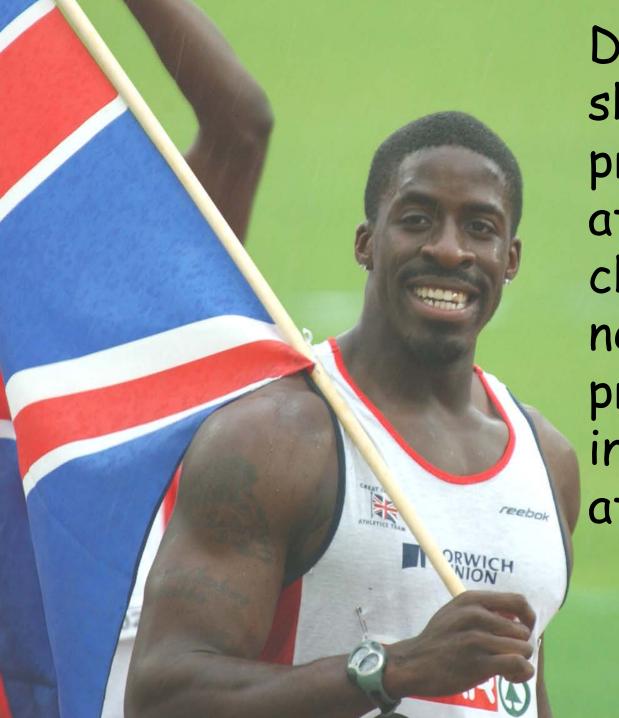
Some products contain impurities (insects, lead, broken glass, animal faeces, etc)

Some products do not to contain ingredients listed on the label, but only inexpensive materials

Some products contain toxic substances

# Athlete-specific problems:

Some products contain doping agents that are not declared on the label



Drug testing should prosecute the athlete who cheats, but it is necessary to protect the innocent athlete

UK version
 International version
 About the versions | Low graphics | Help

## BBGSPORT CYCLING

MATCH SPORTS NEWS BULLETIN

Last Updated: Tuesday, 4 September 2007, 15:26 GMT 16:26 UK

## T-Mobile hit by new drugs scandal

German team T-Mobile has been hit by a new doping scandal after Italian Lorenzo Bernucci, 27, was sacked on Tuesday for failing a drugs test.

He has tested positive for the banned appetite suppressant Sibutramine.



"We do not know if this was an attempt at performance enhancement or just poor judgement," said T-Mobile general manager Bob Stapleton.

After the Tour de France, T-Mobile axed Patrik Sinkewitz after he admitted using a testosterone gel.

## LIDA Product: Meizitang

Herbal diet capsules with sibutramine (15 mg/capsule) not declared on the label





## U.S. Food and Drug Administration



FDA Home Page | Search FDA Site | FDA A-Z Index | Contact FDA

#### Recall -- Firm Press Release

FDA posts press releases and other notices of recalls and market withdrawals from the firms involved as a service to consumers, the media, and other interested parties. FDA does not endorse either the product or the company.

Universal ABC Beauty Supply International, Inc. Issues a Voluntary Nationwide Recall of Dietary Supplement Products Found to Contain an Undeclared Drug Ingredient

#### Contact:

Sandra Tan (718) 891-6888

FOR IMMEDIATE RELEASE - April 20, 2009 - Universal ABC Beauty Supply International, Inc. of Brooklyn, NY, has been informed by the Food and Drug Administration (FOA) that FDA lab analyses of the dietary supplements distributed by the company were found to contain undeclared Sibutramine, an FDA-approved drug used as an appetite suppressant for weight loss. These dietary supplements are not supposed to contain Sibutramine. The FDA has not approved these products, therefore the safety and effectiveness of these products is unknown.

FDA advises that these products pose a threat to consumers because Sibutramine is known to substantially increase blood pressure and/or pulse rate in some patients and may present a significant risk for patients with a history of coronary artery disease, congestive heart failure, arrhythmias or stroke.

All lots of the following dietary supplement products are being recalled

#### PRODUCT NAME

- 1. ProSlim Plus, 60 capsules, bottle in box
- 2. 3 DAYS fit, 60 capsules, bottle in box
- 3. EIGHT FACTOR DIET, 60 capsules, 3 pouches/box
- 4. 24hours Diet, 60 capsules
- 5. Slim 3in1 M-18 ROYAL DIET, 90 capsules, 3 pouches/box
- 6. 3X SLIMMING POWER, 60 capsules, bottle in box
- 7. Extrim Plus 24 Hours RE-BURN Formula, 60 capsules
- 8. Slim 3in1 EXTRA SLIM FORMULA, 90 capsules, 3 pouches/box
- 9. Slim 3in1 EXTRA SLIM WAIST FORMULA, 90 capsules, 3 pouches/box
- 10. SLIM EXPRESS 360° C
- 11. SLIM EXPRESS 4in1, 60 capsules, bottle in box
- 12. ROYAL SLIMMING FORMULA, 60 capsules, bottle/box
- 13. BODY CREATOR, 90 capsules, 3 pouches/box
- 14. Slim Waistline (labeling written in Chinese)
- 15. BODY SHAPING, 90 capsules, 3 pouches/box
- 15. DODT SHAFING, 50 capsules, 5 pouches/bo
- PERFECT SLIM, 90 capsules, 3 pouches/box
   Perfect Slim 100% Natural Herbal Essence
- 18. IMELDA Perfect Slim
- 19. Slim Waist Formula, 32 capsules, 2 pouches/box
- 20. Super Slimming, 60 capsules, bottle in box
- 21. 2 DAY DIET
- 22. Powerful Slim
- 23. BODY SHAPING
- 24. SUPER FAT BURNER, 60 capsules, bottle in box
- 25. SLIMMING FORMULA
- 26. SLIM FAST 2, 32 capsules, 2 pouches/box
- 27. SLIM FAST, 60 capsules, 3 pouches/box
- 28. Slim up. 120 capsules, bottle in box
- 29. 7 DAYS DIET, 60 capsules, 3 pouches/box
- 30. Perfect Slim Up, 60 capsules, bottle in box
- 31. JM Fat Reducer
- 32. SlimBurn
- 33. 21 Double SLIM
- 34. TRIM PLUS 2

NOTE: The above products may have various UPC numbers.

No illnesses or injuries have been reported to the company to date in connection with this product.

Universal ABC Beauty Supply International, Inc. is taking this voluntary action because it is committed to providing accurate information about its products and because of the concern for the health and safety of consumers. The company has discontinued distribution of these products. It sincerely regrets any inconvenience to customers.

Consumers should not consume the above products and should return the dietary supplements on hand to the place of purchase for a full refund or partial refund of the unused portion.



## U.S. Food and Drug Administration



FDA Home Page | Search FDA Site | FDA A-Z Index | Contact FDA

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## Public Notification: "Japan Weight Loss Blue" Contains Undeclared Drug Ingredient

[2-18-2012] The Food and Drug Administration (FDA) is advising consumers not to purchase or use "Japan Weight Loss Blue," a product for weight loss sold on various websites, including www.vitaminbestbuy.com.

FDA laboratory analysis confirmed that "Japan Weight Loss Blue" contains sibutramine, analogs of sibutramine, and ephedrine alkaloids. Sibutramine is a controlled substance that was removed from the U.S. market in October 2010 for safety reasons. The product poses a threat to consumers because sibutramine is known to substantially increase blood pressure and/or pulse rate in some patients and may present a significant risk for patients with a history of coronary artery disease, congestive heart failure, arrhythmias, or stroke. This product may also interact in life threatening ways with other medications a consumer may be taking.

In addition, this product contains ephedrine alkaloids. FDA has warned consumers against the use of dietary supplements containing ephedra and banned these products after research confirmed that ephedrine alkaloids raise blood pressure and otherwise stress the circulatory system.

Consumers should stop using this product immediately and throw it away. Consumers who have experienced any negative side effects should consult a health care professional as soon as possible. (See label)

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## News & Events

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Home > News & Events > Newsroom > Press Announcements

### FDA NEWS RELEASE

For Immediate Release: July 8, 2010

Media Inquiries: Elaine Gansz Bobo, 301-796-7567, elaine.bobo@fda.hhs.gov

Consumer Inquiries: 888-INFO-FDA

### FDA Public Health Alert: Que She Weight Loss Capsules Contain Potentially Harmful Ingredients

The U.S. Food and Drug Administration today warned that Que She, marketed as an herbal weight loss supplement, contains active pharmaceutical ingredients not listed on the product label that could harm consumers, especially those with cardiovascular conditions.

People who have purchased Que She should stop taking the product immediately and consult a health care professional.

Que She, advertised as "Slimming Factor Capsule" and as "an all-natural blend of Chinese herbs," has been widely distributed on Internet sites such as the Bouncing Bear Botanicals website, and at retail outlets, including Sacred Journey in Lawrence, Kan..

An FDA analysis of Que She found that it contains:

- fenfluramine a stimulant drug withdrawn from the U.S. market in 1997 after studies demonstrated that it caused serious heart valve damage
- propranolol a prescription beta blocker drug that can pose a risk to people with bronchial asthma and certain heart conditions
- sibutramine a controlled substance and prescription weight loss drug, sibutramine was the subject of a recent study whose preliminary findings showed an association between sibutramine use and increased risk of heart attack and stroke in patients who have a history of heart disease
- ephedrine a stimulant drug that is legally marketed over-the-counter for temporary relief of asthma but can pose a risk to people with certain cardiovascular conditions.

These active pharmaceutical ingredients also may interact with other medications and result in a serious adverse event.

Consumers and health care professionals are encouraged to report adverse events related to the use of Que She to the FDA's MedWatch Safety Information and Adverse Event Reporting Program: online at www.fda.gov/MedWatch/report.htm; by phone at 800-FDA-1088 (800-332-1088); or, by returning FDA form 3500, available on the MedWatch "Download Forms" page by mail to the address on the pre-addressed form or by fax at 800-FDA-0178.

## **U.S. Food and Drug Administration**

Protecting and Promoting Your Health

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**Tobacco Products** 

## Tainted\_Supplements\_CDER

FDA Home Tainted Supplements CDER







FDA's Medication Health Fraud Page

### Disclaimer

This list only includes a small fraction of the potentially hazardous products with hidden ingredients marketed to consumers on the internet and in retail establishments. FDA is unable to test and identify all products marketed as dietary supplements on the market that have potentially harmful hidden ingredients. Even if a product is not included in this list, consumers should exercise caution before using certain products. To learn more about how to reduce your risk of encountering a supplement with a hidden ingredient please visit FDA's Medication Health Fraud webpage linked above.

Date	Product Name	Company	Hidden Ingredient	Product Category	Lot
01/15/2010	Novedex XT	Gaspari	steroid	Muscle Building	All
01/15/2010	1, 4AD	Anabolic Formulations	steroid	Muscle Building	All
01/15/2010	3-AD	Anabolic Xtreme	steroid	Muscle Building	All
01/15/2010	M1, 4AD	Anabolic Formulations	steroid	Muscle Building	All
01/15/2010	Halodrol Liquidgels	Gaspari	steroid	Muscle Building	All
01/15/2010	Testra-Flex	BCS Labs	steroid	Muscle Building	All
01/24/2011	Celerite Slimming Capsules	Shaping Beauty	sibutramine	Weight Loss	All
01/24/2011	STUD Capsules	Kanec USA	sildenafil	Sexual Enhancement	All
01/24/2011	Nite Rider Maximum	Kanec USA	sildenafil	Sexual Enhancement	All
01/29/2009	Venom Hyperdrive 3.0	ALR Industries	sibutramine	Weight Loss	ALL
02/03/2012	EVER SLIM Shake Mix Strawberry	Healthy People Co.	sibutramine	Weight Loss	HPESSF/168: UPC750301320 3084
02/03/2012	EVER SLIM Shake Mix Chocolate	Healthy People Co.	sibutramine	Weight Loss	HPESSC/061: UPC750301320 3077
02/03/2012	PERFECT Men	Healthy People Co.	tadalafil	Sexual Enhancement	HPCPM/002; UPC750301320 3190
02/03/2012	EVER Slim	Healthy People Co.	sibutramine	Weight Loss	HPCES-079, HPCES-070, HPCES-071; UPC750301320 3053
02/03/2012	Acai-man Mangosteen Herbal Drink	Healthy People Co.	tadalafil	Sexual Enhancement	HPJAC/004: UPC750301320 3015
02/03/2012	Mince Belle	Healthy People Co,	sibutramine	Weight Loss	HPCMB/10-

# Can it be an accident?

Undeclared ingredients in supplements

Muscle building Anabolic steroids

Tonics Caffeine, ephedrine

Weight loss Anorectics: sibutramine

Sex enhancement Viagra and analogues

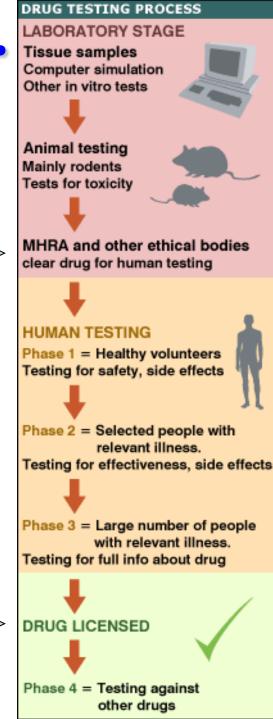
# Drug development

Preceded by:

Evidence base

Followed by:

Ongoing safety monitoring



# Industry approach to Supplements

Question 1 Will the punters buy this stuff?

If yes, start selling. Order private jet.



Purchase H+Blocker with CE-XL

For Only \$79.98+s/H (save over 35%)

regular price: \$124.98

**Buy One** 



OR

Only \$51.99

(save 20%)

regular price: \$64.99

ADD TO CART

ADD TO CART



Be Sure It's CL Approved

Mission: To identify the best quality health and nutrition products through independent testing

## Latest Results:

Click on the title of a review to view the results.

21 Magnesium Supplements Tested

— Two Fail for Lead Contamination;
19 Others Pass.

Results and expert tips on how to use now available.

Most Nutrition Powders and Drinks
Pass Tests — But Five "Protein
Powders" Found with Excess
Sodium or Cholesterol
Results released for 37 protein, diet, and general nutrition products

Nutrition Bar Tests Show
Inaccuracies and Major Differences
Among Products

Results for 34 protein, low-carb/diet, energy, and meal-replacement bars

41 Omega-3 (Fish-Oil)
Supplements Found Free of
Mercury, PCBs
But Some Low in EPA & DHA or Spoiled

### <u>Problems Found with Eleven</u> *Multivitamins*

Test Results for 47 Women's, Prenatal, Men's, Seniors, Children's, and General Multis as well as Vitamin Waters and Pet Multis

Key Ingredient Missing in Some Arthritis Supplements

Recalls and Warnings:
FTC Continues
Litigation Against
Makers of CortiSlim
and CortiStress
Supplements

www.consumerlab.com

(Date Posted: 9/23/2005)
Click on the headline above for more information and an archive of recalls and warnings for supplements and nutritional products.

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Accessibility AAA

#### Ewden Vale brand Salmon Burgers withdrawn

Home

20 October 2014

Ewden Vale has withdrawn its Salmon Burgers with 'best before' end date 28 December 2014, because they contain barley (gluten), which is not mentioned on the product label. The undeclared presence of cereals containing gluten poses a public health risk to those with an allergy or intolerance to barley (gluten). The malt vinegar used in the product should be labelled as 'barley malt vinegar'.

## Jumbo UK Ltd recalls its Nigeria Taste Brown Beans due to the risk of contamination with aluminium phosphide

16 October 2014

Jumbo UK Ltd has recalled all batches of Nigeria Taste Brown Beans due to the risk of contamination with aluminium phosphide. The dried beans were transported with envelopes of aluminium phosphide which is used as a fumigant. So far no beans have been found to be directly contaminated with aluminium phosphide but the company has recalled the product as a precaution.

## Recall of More Food Belgian Chocolate Rocky Roads: undeclared hazelnuts

15 October 2014

More Foods Ltd is recalling 340g packs of More Food Belgian Chocolate Rocky Roads with a 'best before' end date of 16 December 2014. This is because some packs have been incorrectly labelled as More Food Belgian Milk Chocolate Caramel Shortbread. This means the presence of hazelnuts is not mentioned on the label, making the product a possible health risk for anyone with an allergy to hazelnuts.

## Cow & Gate Sweet Squash & Chicken from 7 months+ 200g jar baby food recalled

14 October 2014

Cow & Gate has recalled 200g jars of its 'Sweet Squash & Chicken from 7 months+' baby food. The label incorrectly shows 'no added egg' and 'gluten free' in a tick box,



# NEWS EUROPE



25 February 2013 Last updated at 13:56



Ra

# Horsemeat found in Ikea meatballs in Czech Republic

Ikea has withdrawn meatballs from sale in 14 European countries after tests in the Czech Republic found traces of horsemeat in a batch made in Sweden.

Meatballs from the same batch had been sold in many states, including the UK, France and Portugal, the retailer said.

Swiss food giant Nestle meanwhile said it had found horse DNA in meat from the Spanish



Josef Duben, Czech Veterinary Authority: "It doesn't

# Contaminated supplements

- In about 1999-2000, a number of high profile athletes returned positive tests for nandrolone
- The diagnostic metabolite may result from ingestion of nandrolone (19-nortestosterone) itself or of one of its metabolic precursors
- Most of these athletes protested their innocence
- The IOC commissioned the Cologne laboratory to investigate dietary supplements

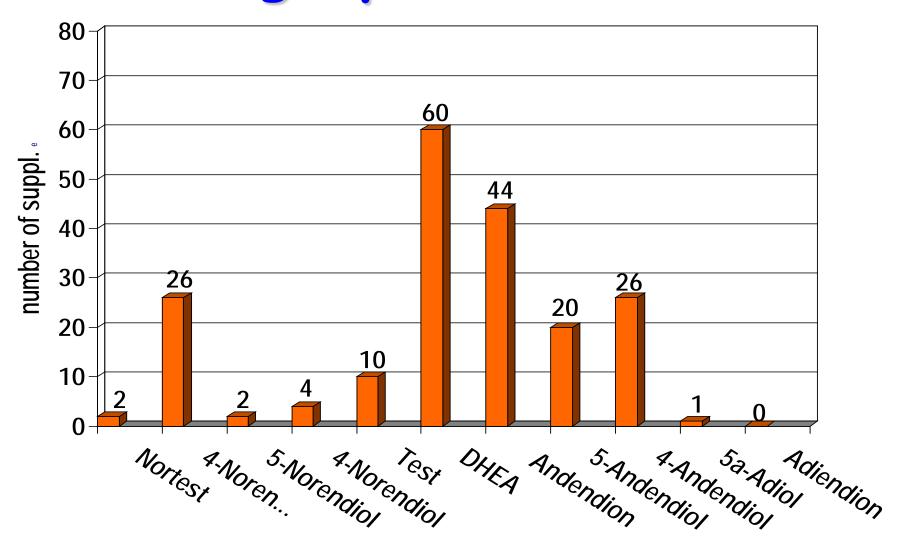
# The IOC Study from Cologne

- In 2000-2001, 634 non-hormonal nutritional supplements were obtained in 13 countries from 215 different suppliers
- Supplements were bought in shops in various countries (578 samples), on the internet (52 samples) and by telephone order (2 samples). Two samples were sent by the IOC
- 289 supplements were from prohormoneselling companies; 345 supplements came from companies which did not offer prohormones

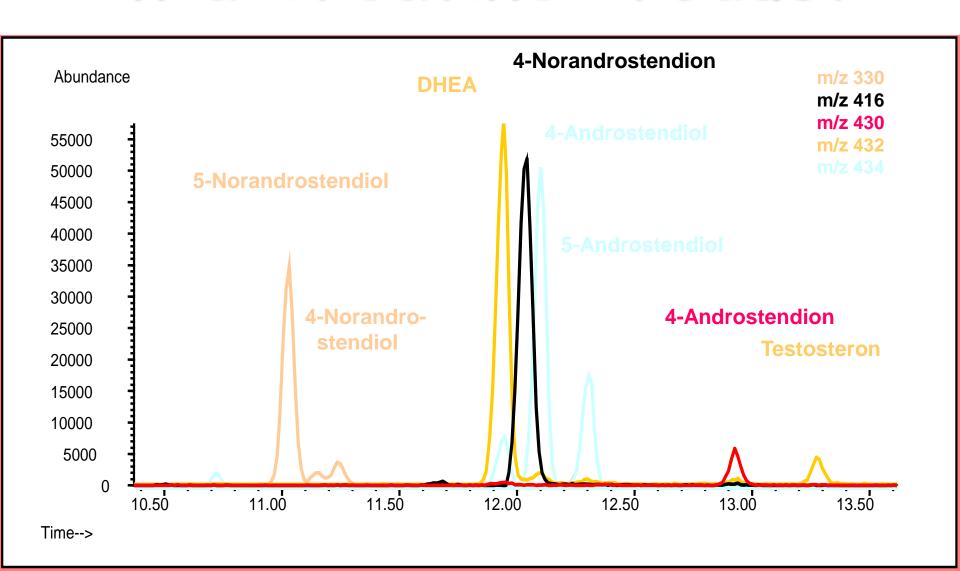
# The IOC Study from Cologne

- 11 different anabolic androgenic steroids, mainly prohormones of testosterone and nandrolone, were detected
- 94 samples (15%) contained prohormones. No reliable data were obtained for 66 samples (10%) because of matrix effects
- 23 samples contained prohormones of nandrolone and testosterone, 64 samples contained only prohormones of testosterone, 7 samples contained only prohormones of nandrolone

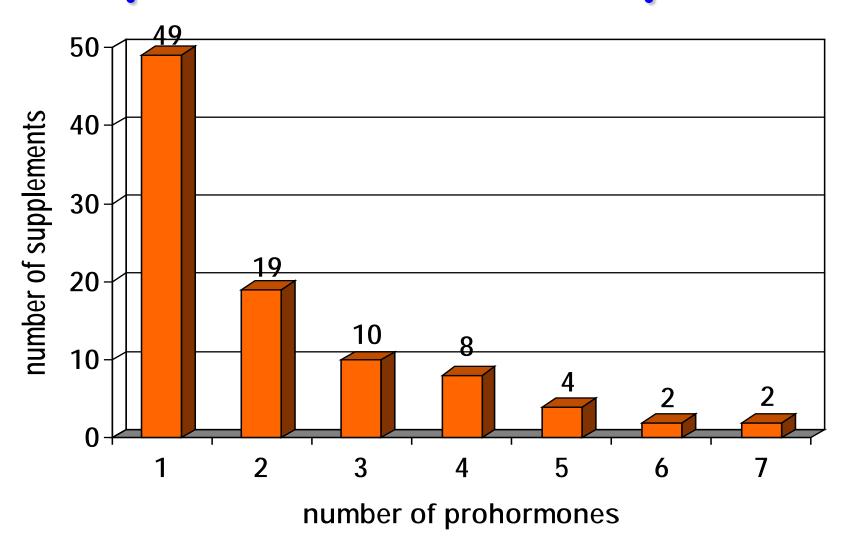
# Number of Positive Supplements Containing Specific Prohormones



# Not Declared Prohormones in a Creatine Product



# Number of Detected Steroids per Positive Sample



# The IOC Study from Cologne

Country	No. tested	No.'positive'	% 'positive'
Netherlands	31	8	25.8
Austria	22	5	22.7
UK	37	7	18.9
USA	240	45	18.8
Italy	35	5	14.3
Spain	29	4	13.8
Germany	129	15	11.6
Belgium	30	2	6.7
France	30	2	6.7
Norway	30	1	3.3
Switzerland	13	-	_
Sweden	6	-	_
Hungary	2	-	-
Total	634	94	14.8

# Main Ingredients Declared on the Labels of Positive Samples

- Amino acids / proteins
- Vitamins + minerals
- · Carnitine
- · Creatine
- · Ribose
- · BCAA

- HMB
- Pyruvate
- · Chrysin
- Enzymes
- · CLA and other oils
- Herbal extracts
- Melatonin

# It gets worse . .

- 3 products from a UK supplier were found to be contaminated with methandienone
- Declared ingredients: Met-AD17-diol? 1-T matrix? MetX synergistic blend? AD-4 complex?
- Content was: 0.4, 0.9, 29 mg/g methandienone
- This would give a dose of 10-43 mg in recommended dose
- The therapeutic dose is 5-10 mg/d
- "This was not contamination, but a criminal act of intentional admixture"

# How does contamination occur?

- Contamination may occur from two main causes:
- 1. Cross-contamination during the production process: the same equipment and storage facilities are used for supplements and for doping agents
- 2.Deliberate adulteration: many products are completely ineffective. Adding pharmaceuticals may mean that the consumer sees a benefit from using the product

# Manufacturer's guarantees

## Prolab Creatine Monohydrate 300g + 300g and FREE T-Shirt

Prolab Creatine Monohydrate is a product designed to allow for increased performance and muscle mass, as well as sustain enhanced athletic performance.

Creatine is a natural substance found in the body that plays a very powerful role in energy metabolism. Oral supplementation of creatine monohydrate has been shown to increase the resynthesis of ATP (andenosine triphosphate) from ADP (andenosine diphosphate) during muscle contractions. ATP is the molecule the muscle cells burn during muscle contraction. When the energy is released from the ATP molecule it drops off a phosphate, thus becoming ADP. Creatine combines with a phosphate molecule forming a phosphocreatine molecule which delivers the phosphate to the ADP molecule reforming ATP. This resynthesized ATP molecule is then ready to be utilized for energy again. Because the body only stores an 8 - 12 second supply of ATP, it is very important to increase the creatine pool and maximize the ATP-ADP phosphate shuttle. The result is more explosive muscular contractions, increased stamina and endurance, greater intensity and less muscular fatigue which delivers more muscle size and strength.

Prolab Nutrition's creatine monohydrate is produced in Germany in an ISO 9000 & 9001 certified factory. An ISO certification is the highest award a laboratory or factory can achieve. It surpasses the standards of OTC and even surpasses the strict standards of pharmaceutical manufacturing.

Creatine Monohydrate is produced via a chemical synthesis route. The synthesis is done by reacting sarcosine sodium salt with cyanamide under heated conditions. Sarcosine sodium salt is a derivative of acetic acid. Cyanamide

Prolab's creatine then undergoes rigid testing for purity against a creatine monohydrate standard. monohydrate under this testing procedure will typically score as 99% pure creatine monohydrate.

#### Label Information

100% Pure pharmaceutical grade Creatine Monohydrate

#### Usage

During the loading phase, take one rounded teaspoon of prolab Creatine Monohydrate (5 grams) 4 times per day (20 grams total) for maintenance period, take one rounded teaspoon (5 grams) 2 times per day. Dissolve in juice, water, or another beverage.

# Acceptable levels of impurities

- Some websites tell athletes that acceptable levels of contaminants are in the range of 50-100  $\mu$ g/g)
- At a creatine dose of 20 g, this will give an intake of 1000-2000  $\mu$ g (1-2 mg)
- Most contaminants at this level have no effect on health or performance
- BUT some doping agents may cause a failed test at very low levels

How low?

# Urinary Nandrolone Metabolite Detection after Ingestion of a Nandrolone Precursor

PHILLIP WATSON<sup>1</sup>, CATHERINE JUDKINS<sup>2</sup>, ED HOUGHTON<sup>2</sup>, CAROLINE RUSSELL<sup>2</sup>, and RONALD J. MAUGHAN<sup>1</sup>

<sup>1</sup>School of Sport and Exercise Sciences, Loughborough University, Loughborough, UNITED KINGDOM; and <sup>2</sup>Drug Surveillance Group, HFL Sport Science, Newmarket Road, Fordham, Cambridgeshire, UNITED KINGDOM

#### ABSTRACT

WATSON, P., C. JUDKINS, E. HOUGHTON, C. RUSSELL, and R. J. MAUGHAN. Urinary Nandrolone Metabolite Detection after Ingestion of a Nandrolone Precursor. Med. Sci. Sports Exerc., Vol. 41, No. 4, pp. 766–772, 2009. Introduction: Quantities of various anabolic/androgenic steroids have been found in dietary supplements without their presence being disclosed on the label. The aim of this study was to quantify the excretion patterns of the diagnostic metabolites, 19-norandrosterone (19-NA), and 19-noretiocholanolone (19-NE) after ingestion of small doses of 19-nor-4-androstene-3,17-dione (19-norandrostenedione). Methods: Eleven males and nine females entered the laboratory in the morning after an overnight fast. An initial urine sample was collected, and volunteers then ingested 500 mL of water containing 5 g of creatine monohydrate and 1.0, 2.5, or 5.0 µg of 19-norandrostenedione. The volume of each urine void was measured, and an aliquot was taken. Samples were analyzed for the metabolites 19-NA and 19-NE by GCMS. Results: Baseline urinary 19-NA concentrations were  $0.19 \pm 0.14 \text{ ng mL}^{-1}$ . Ingestion of the supplement resulted in peak mean urinary 19-NA concentrations of  $0.68 \pm 0.36$ ,  $1.56 \pm 0.86$ , and  $3.89 \pm 3.11$  ng·mL<sup>-1</sup> in the 1.0-, 2.5-, or 5.0- $\mu$ g trials, respectively. Under current WADA regulations, ingestion of the 1.0-µg dose produced 0 positive doping tests, 5 subjects (20%) tested positive in the 2.5-µg trial, and 15 subjects (75%) had urinary 19-NA concentrations exceeding 2 ng·mL<sup>-1</sup> after ingesting creatine containing 5.0 μg of the steroid. The recovery of the ingested dose was highly variable between individuals, with values ranging from 11% to 84% (mean  $\pm$  SD = 47%  $\pm$ 18%). Conclusions: Ingestion of trace amounts of 19-norandrostenedione can result in transient elevations of urinary 19-NA and 19-NE concentrations. The addition of as little as 2.5 µg of 19-norandrostenedione to a supplement (0.00005% contamination) appears sufficient to result in a doping violation in some individuals. Key Words: 19-NORANDROSTENEDIONE, STEROIDS, DRUGS IN SPORT, WORLD ANTI DOPING AGENCY

500 mL of water containing 5 g of creatine and 1.0, 2.5, or 5.0  $\mu$ g of 19-norandrostenedione.

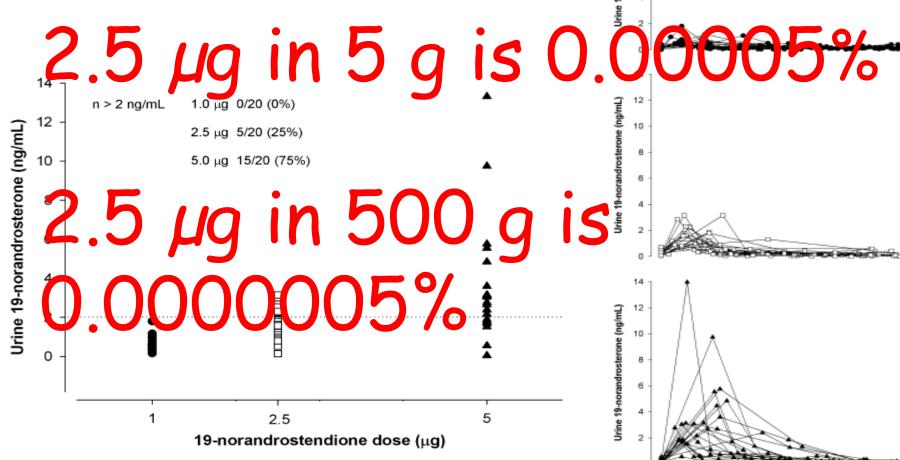
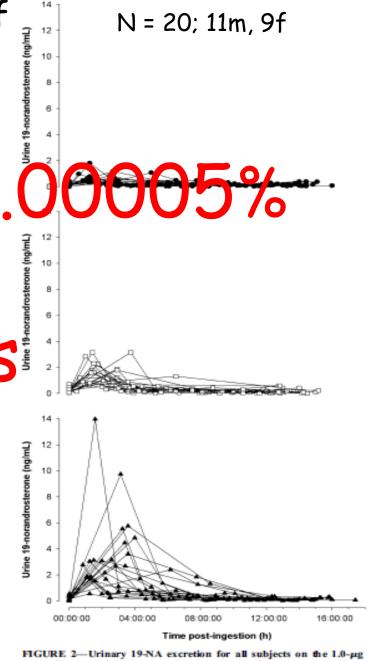


FIGURE 3—Peak urinary 19-NA concentrations on each trial. These data have been corrected where necessary for specific gravity of the sample according to the procedures required by WADA. The dotted line marks the 2-ng·mL<sup>-1</sup> level that constitutes a doping violation under current WADA rules.



(top), 2.5-µg (middle), and 5.0-µg (bottom) 19-norandrostenedione trials.

Davids faces two-year ban for drug use

By Richard Bright

Published: 7:11PM BST 16 May 2001

EDGAR DAVIDS, the Juventus and Holland midfielder, could be banned from football for up to two years after failing a second drugs test.

Results from his B sample confirmed that 28-year-old Davids had tested positive for banned anabolic steroids, the Italian Olympic Committee (CONI) announced yesterday.

#### Related Articles

- Lazio defender faces jail over drug-taking
- Davids just says 'no'
- De Boer denies steroid use
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CONI said in a statement that a second urine sample given by Davids after a Serie A match between Juventus and Udinese on March 4 confirmed the result of an earlier test.

A CONI spokesman said: "The findings have been passed to our anti-doping commission, who will now launch an inquiry. It will then be up to the football federation and the football league [in Italy] to impose the relevant punishment."

CONI's statement said Davids had tested positive for norandrosterone and noretiocolanolone. Both are banned anabolic steroids.

After CONI announced in April that Davids had failed a preliminary doping test, the midfielder denied having used any illegal substance.

Davids has enlisted the help of New York-based lawyer Robert Geerlings.

Assisting Geerlings is Belgian lawyer Luc Misson, who helped Jean-Marc

Bosman in 1995 in the famous Bosman trial, and doping expert Emile Vrijman.

"I understand that the first test had a result of 2.6 nanograms per millilitre and the second test showed a 2.7," said Geerlings. The limit of nandrolone allowed in the body is 2.0 nanograms.

Davids was the first of two Holland internationals to have failed a drugs test. Barcelona defender Frank de Boer last week protested his innocence after submitting a positive sample which also showed traces of nandrolone.



# Strict Liability

Strict liability gives no room for error

The offence lies in having a prohibited substance in your sample

Some athletes are undoubtedly victims of contaminated dietary supplements

For others, it is a convenient excuse

# The power of advertising

Athletes generally do not discriminate between scientific evidence and advertising hype

Supplement sellers have large budgets and can use effective advertising

Scientists are cautious and often not good at communication



# A closer look..



## Stop using Hydroxycut products, FDA says

STORY HIGHLIGHTS

- FDA recalls Hydroxyc
- Hydroxycut products
- Damage from produ

updated 6:06 p.m. EDT, Fri May 1, 2009

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By Saundra Young CNN

TEXT SIZE





WASHINGTON (CNN) -- Hydroxycut products, popular dietary supplements used for weight loss, have been linked to liver damage and are being recalled, the U.S. Food and Drug Administration said Friday.



including a death, linked to Hydroxycut products.

The FDA said it has received 23 reports of serious liver injuries linked to Hydroxycut products, which are also used as energy enhancers and as fat burners.

The reports include the 2007 death of a 19-yearold man living in the Southwest, which was reported to the FDA in March. Other serious liver problems reported included liver damage that resulted in a transplant in 2002, liver failure, jaundice, seizures and cardiovascular problems.

The FDA is warning consumers to immediately stop using 14 Hydroxycut products manufactured by Iovate Health Sciences Inc. of Oakville, Ontario. and distributed by lovate Health Sciences USA Inc. of Blasdell, New York.

Journal of Clinical Gastroenterology:

August 2009 - Volume 43 - Issue 7 - pp 672-675

doi: 10.1097/MCG.0b013e318188be6d

LIVER, PANCREAS AND BILIARY TRACT: Clinical Research

# Prolonged Intrahepatic Cholestasis and Renal Failure Secondary to Anabolic Androgenic Steroid-Enriched Dietary Supplements

Krishnan, Prashant V. MD; Feng, Zhen-Zhou MD; Gordon, Stuart C. MD

## Abstract

The illegal enrichment of anabolic androgenic steroids in over-the-counter dietary supplements is well documented, but the health consequences have not been widely recognized. Three recent reports document cholestatic jaundice and nephropathy due to these compounds. We present 3 additional cases of anabolic androgenic steroid-enriched dietary supplement-induced hepatotoxicity and 1 case of renal failure, and we review the literature and the relevant features of this growing health concern. Recognition of this entity could obviate the need for invasive diagnostic testing and hospitalization and facilitate diagnosis and appropriate counselina.

### One Athlete's day

#### JUNE 11TH

10.10am 3g L-lysine with 30mg Vit B6
4 phosphate tablets
2 scoops protein powder
3 teaspoon acetylglutamine
3g Vit C
3 tablets detox
50 mg zinc

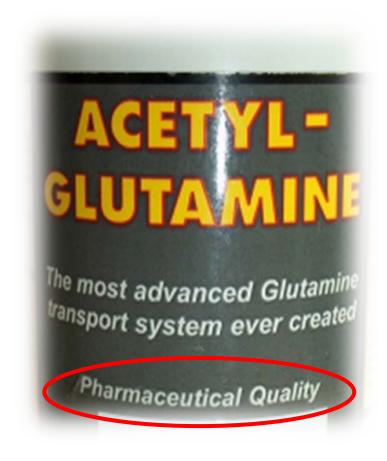
#### Drank isotonic drink whilst training

1.45pm 3g L-lysine with 30mg Vit B6 3g Vit C 3 tablets detox 50 mg zinc

11.00pm 3g L-lysine with 30mg Vit B6
3g Vit C
3 tablets detox

1 scoop protein powder

3 teaspoon acetylglutamine



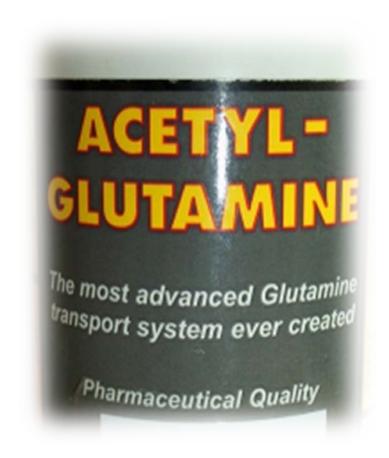
No acetylglutamine Caffeine

## An unexpected consequence

Many of the papers in the scientific literature have used commercially available dietary supplements

Where there was an effect, this may have been due to the presence of an undeclared drug

Where there was no effect, this may have been due to the absence of the active ingredient



# Risk management

Athletes, and those who care for them, should take precautions:

Use supplements only when a benefit is likely

Use supplements and doses that are "safe"

Use products that are "low risk"

BUT, how do you assess risk?

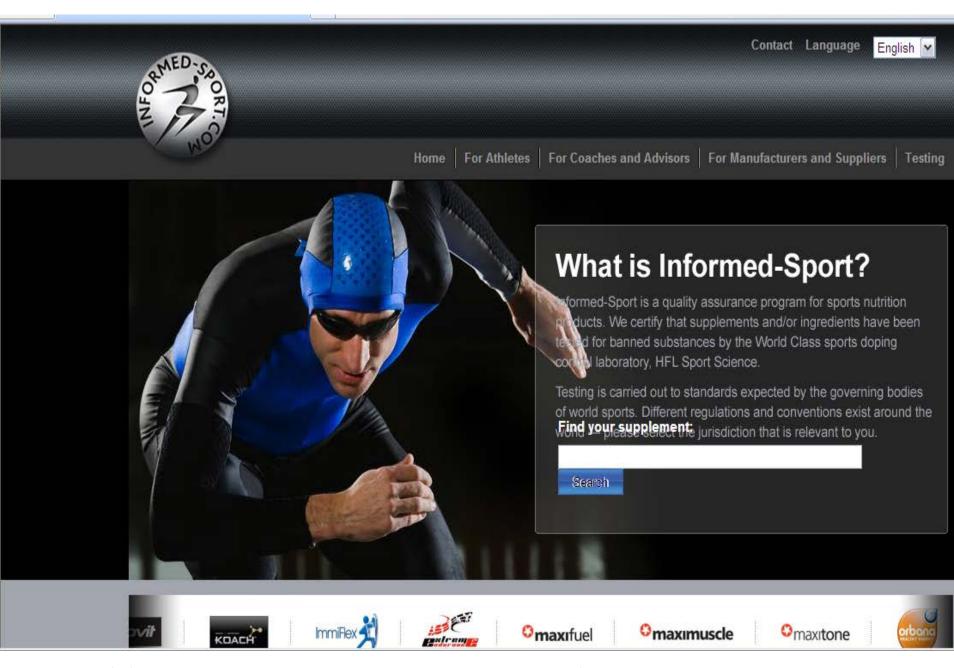
## Label of a glutamine product

Centro Espanol de Medicina y Fisioterapia del Deporte General Pardinas 92, 315 Madrid, Spain

"We declare that GM (glutamine) is controlled and produced in a chemical and technical high standard, so that no contamination with banned substances occurs"

### Not declared ingredients:

Oxandrolone 6.5-26.2  $\mu$ g per capsule



## Is the situation improving?

The industry says "yes", but . . .

Contamination and poor quality control remain widespread

"Reputable" companies are more alert to the problem and require more of third party suppliers

Batch testing offers some reassurance

## Maughan's Rules of Dietary Supplements for Athletes

- 1. If it works, it's probably banned
- 2. If it's not banned, then it probably doesn't work
- 3. There may be some exceptions

### Food contamination: Public Health issues

- 2006: over 330 people in Shanghai were reported to have been poisoned by eating pork contaminated by clenbuterol fed to the animals to keep their meat lean
- 2009: at least 70 people in Guangdong suffered food poisoning after eating pig organs believed to contain clenbuterol residues
- 2011: China's Ministry of Agriculture identified clenbuterol-contaminated pork in meat products. 72 people in central Henan Province were taken into police custody for allegedly producing, selling or using clenbuterol



Cologne 14.02.2011

## Warning for athletes: Risk of inadvertent doping with clenbuterol when travelling to China

The Manfred Donike Institute for Doping Analysis (MDI) and the Center for Preventive Doping Research of the German Sport University Cologne are warning athletes from risks of inadvertent doping with the ß2-agonist clenbuterol when travelling to China.

An investigation, presented on the 14<sup>th</sup> of February 2011 at the Cologne Workshop on Doping Analysis, showed that the analyses of the urine samples of 28 travellers, returning from China to Germany, resulted in findings of low concentrations of the doping substance clenbuterol in 22 out of the 28 urine samples. The results were obtained between the 15<sup>th</sup> of September 2010 and the 15<sup>th</sup> of January 2011. The findings are most probably due to a food contamination problem, potentially caused by misuse of clenbuterol as growth promoter in stock-breeding.

#### Reference

Guddat S, Fusshöller G, Braun H, Schwenke A, Haenelt N, Klose C, Geyer H, Thevis M, Schänzer W: Clenbuterol - regional food contamination as possible source for positive findings in doping control? Lecture at the 29th Cologne Workshop on Dope Analysis 14th February 2011



#### Football first

Match organisation

Protecting the game

Football development

Financial fair play

Protection of young players

#### Clenbuterol warning for players

Published: Friday 8 April 2011, 13.56CET

The German-based Nationale Anti-Doping Agentur (NADA) is warning footballers against the dangers of unintentional doping with the prohibited substance Clenbuterol.



The German-based Nationale Anti-Doping Agentur (NADA) is warning footballers against the dangers of unintentional doping with the prohibited substance Clenbuterol.

The warning has particular significance for young European players who will be travelling with their national teams to the FIFA U-17 World Cup in Mexico from 18 June to 10 July this year.

#### RELATED ITEMS

- Anti-doping panel meets
- New WADA prohibited list
- Alert over supplements
- Elearning about doping danger

### FIFA reveals positive clenbuterol tests

October 17, 2011

🖂 Email 🚇 Print

Contaminated meat in Mexico led to traces of the banned drug clenbuterol being found in urine samples given by more than 100 players involved in the FIFA Under-17 World Cup in June, the world governing body's medical chief has revealed.

Of the 24 squads involved, 19 - possibly including England's youth team - had several players showing the presence of clenbuterol but at concentrations lower than the prohibited level.

Positive tests for five players from the senior Mexico squad had alerted FIFA to a possible issue, and when four more positive tests emerged from the youth tournament the governing body decided to reanalyse all the 208 urine samples taken.



**GettyImages** 

Mexico's team won the Gold Cup despite the doping suspensions

A laboratory in Cologne discovered the presence of the steroid in 109 of those samples - 52.4% - but most in concentrations lower than the banned level so they had not been reported. Clenbuterol is banned in farming in most countries but is used to speed up growth and increase muscle mass in cattle.

FIFA's chief medical officer Jiri Dvorak said players from 19 of the 24 squads, in roughly equal numbers, had shown traces of the drug. Dvorak would not say whether England's under-17 squad was one of those involved but insisted no harm had been done to the players.





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14 February 2013 Last updated at 13:19



### Horsemeat scandal: Bute found in eight horse carcasses

Eight horses, killed in the UK, tested positive for the painkiller bute and six may have entered the food chain in France, the Food Standards Agency said.

Some 206 carcasses were tested, with eight found to contain phenylbutazone.

England's chief medical officer said the highest level detected was 1.9mg of bute per kg of horsemeat, which posed "very little risk to human health"



The small levels of bute found in horsemeat pose little risk to human health



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REVIEWS

### Daryl Impey cleared to race

Gregor Brown August 29, 2014 1 Comment



Orica-GreenEdge's Daryl Impey cleared of charges after failing test for Probenecid in February



South African Daryl Impey is free to return to racing with Orica-GreenEdge after a doping positive for hanned drug Probenecid that forced him to miss the Tour de France



#### 2014 major dates



#### Deals of the Week



Mammoth Thatcham Approved Bolt-In Ground

South African Daryl Impey is free to return to racing with Orica-GreenEdge after a doping positive for banned drug Probenecid that forced him to miss the Tour de France.

At a hearing yesterday in Johannesburg, a pharmacist took the blame for contaminating empty gelatine capsules that Impey bought.

"I'm thrilled to have been given the notification that I'm 100 per cent OK to race again and no sanction whatsoever will be applied," Impey said. "I was confident in my defence and I'm thankful that I was given the chance clear my name beyond any type of doubt.

The diuretic may also be used as a masking agent. 1988 Tour de France winner, Spain's Pedro Delgado returned a positive for Probenecid but was later cleared and kept his title.

Impey was cleared because he and his lawyers were able to show the positive was due to contaminated gelatine capsules he bought from a pharmacy in Durban in the country's east. A report in *The Star* newspaper explained the pharmacist gave Probenecid to another customer and he had contaminated hands when he prepared Impey's capsules. At the hearing, register receipts showed the times of the purchases.

Impey's capsules were for bicarbonate of soda, to help against the effects of lactic acid in the national championships.

"The use of supplements does not compensate for poor food choices and an inadequate diet.

Athletes contemplating the use of supplements and sports foods should consider their efficacy, their cost, the risk to health and performance, and the potential for a positive doping test."

IOC Consensus Statement on Sports
Nutrition

## Summary and Conclusions

Some dietary supplements contain ingredients that may cause an athlete to fail a drugs test

In many cases, these are not listed on the label

Strict liability means that ignorance is not an excuse

Athletes should limit the risk by limiting supplement use and by using products from "safe" sources

Food contamination presents a challenge for the athlete and for those who are responsible for doping control

