



Steroids & Supplement Safety

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EDUCATION:



CAREER:




AGENDA

STEROIDS

- RISKS
- STATS
- PHYSICAL/BEHAVIORAL SIGNS
- RESOURCES

SUPPLEMENTS

- RISKS
- THIRD PARTY TESTING
- USEFUL SUPPLEMENTS

A collection of natural health products including herbs, nuts, and pills. The image shows a large white bowl filled with various pills and capsules, a smaller white bowl with almonds, a glass jar with white crystals, and a small bowl with green herbs. The background is a textured, light-colored fabric.

Physical Signs

- RAPID WEIGHT GAIN/INCREASE IN MUSCLE MASS
- SMALL RED OR PURPLE ACNE, INCLUDING BREAKOUTS ON SHOULDERS AND BACK
- GREASY HAIR OR OILY SKIN, OFTEN WITH STRETCH MARKS ON THE INNER JOINTS
- PUFFINESS IN THE WRISTS, NECK AND ANKLES
- HAIR LOSS (MALE PATTERN BALDNESS)
- IN FEMALES DEEPER VOICE, HAIR GROWTH ON FACE
- JAUNDICE OR YELLOWING OF THE SKIN, SIGNALING LIVER DAMAGE



Behavioral Signs

- EXTREME MOOD SWINGS
- UNUSUALLY AGGRESSIVE, HOSTILE OR IRRITABLE ("ROID RAGE")
- DISRESPECTFUL OR VERBALLY/PHYSICALLY ABUSIVE
- SUDDEN DESIRE TO WORK OUT 2 -3 TIMES/DAY
- STARTS STEALING OR LOSING BELONGINGS AND/OR MONEY
- BECOMES PARANOID OR SHOWS FEELINGS OF MISTRUST/FEAR
- DEPRESSION AND/OR SUICIDAL THOUGHTS
 - VERY COMMON AFTER DISCONTINUING USE

MANY STEROID USERS ARE KIDS...



MEDIAN AGE FOR
1ST TIME STEROID USE: **15**

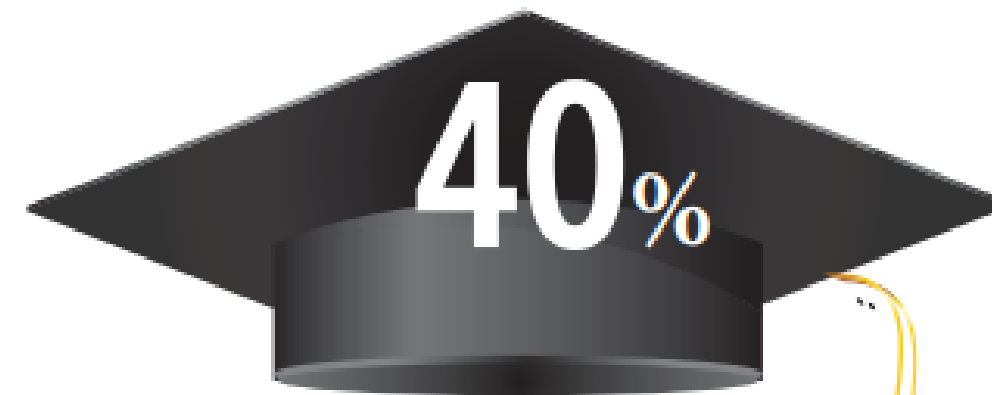
Over 1.5 million teens admit to using anabolic steroids

AND IT'S NOT JUST BOYS:
TEEN GIRLS ARE THE FASTEST GROWING GROUP OF NEW USERS



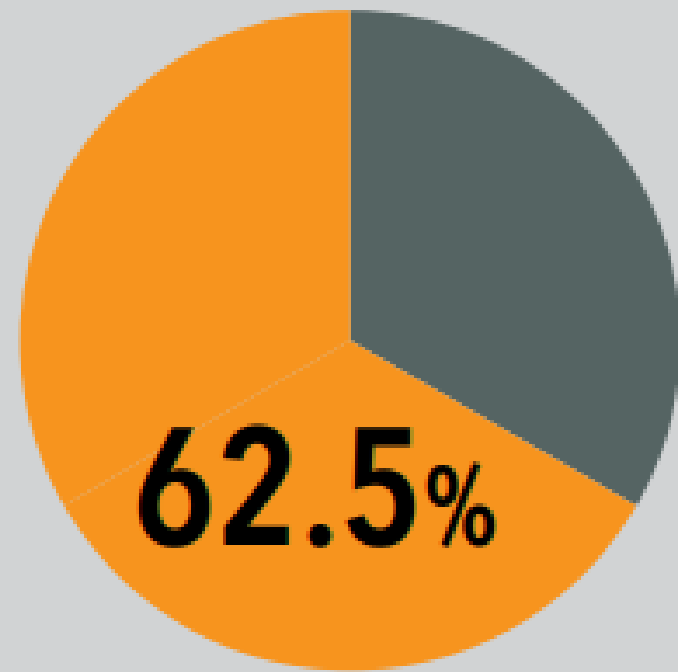
WHAT DOES STEROID ABUSE LOOK LIKE?

- Mood swings
- Increased aggression
- Oily skin
- Joint pain
- Secretive
- Irritable
- Paranoia**
- Hair loss
- Hyperactivity
- Bad breath
- Fast muscle growth
- Locks bedroom door
- Depression
- Asks for money**

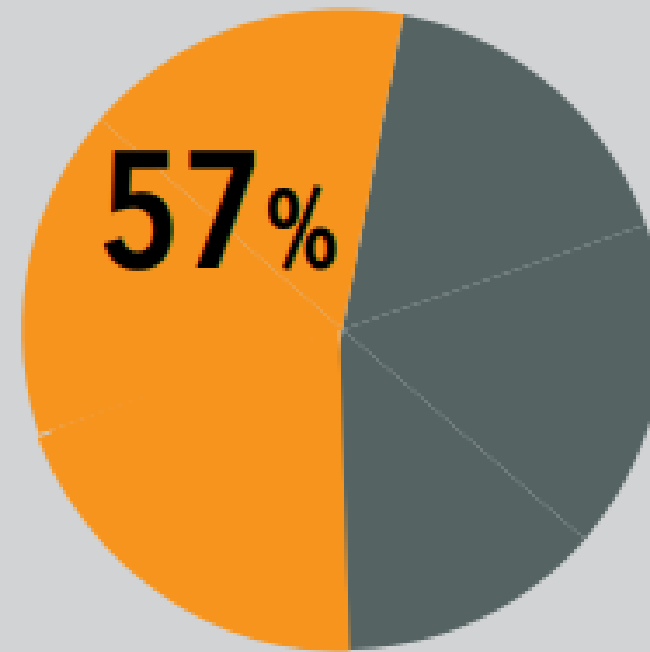


40%
OF HIGH SCHOOL
SENIORS SAY IT'S
EASY TO OBTAIN

STEROIDS CAN SKEW A “REASONABLE PERSPECTIVE”



Steroid users do it to
**IMPROVE
THEIR LOOKS**



Steroid users said they would take a pill or powder if it guaranteed reaching their athletic goal — even if it might
SHORTEN THEIR LIFE!

IT TAKES A **00:01** SECOND FOR A STUDENT TO FIND STEROIDS FOR SALE ONLINE





SUPPLEMENT INDUSTRY

\$40bil

unregulated, no FDA backing

Target Audience: athletes

Three Clemson players fail drug test ahead of College Football Playoff game in Cotton Bowl



[Jori Epstein](#)
USA TODAY

Published 3:11 p.m. ET Dec. 24, 2018 | Updated 6:13 p.m. ET Dec. 24, 2018

N Nebraska starting OL Nouredin Nouili ruled ineligible for 2022 season following failed drug test

Nouili started Nebraska's final seven games in 2021 and was slated to be a critical part of the offensive line

Minnesota State goalie Dryden McKay receives 6-month doping suspension

The banned substance found in vitamin supplement was not listed among its ingredients, which meant a less severe penalty for the Hobey Baker-award winner.

By Rachel Blount Star Tribune | APRIL 19, 2022 — 6:29AM

TWO CHAMPIONS, THREE TEAMS HAVE RESULTS VACATED AT 2022 CHAMPIONSHIPS

PROPRIETARY BLENDS

Be cautious of "proprietary blends," this is a fancy way for the supplement company to not report the exact ingredients and amounts in the product.

Supplement Facts

Serving Size: 4 Capsules
Servings Per Container: 30

	Amount Per Serving	% DV
STEM Free Testosterone Complex		
Fenugreek (<i>Trigonella foenum-graecum</i>) 50% Fenusides standardized extract	600mg	†
Long Jack (<i>Eurycoma longifolia</i>) 30% standardized extract of 9-Hydroxycanthin-6-On	550mg	†
KSM-66 [®] (<i>Withania somnifera</i>) Ashwaganda Root standardized extract	300mg	†
ZMA Complex		
Magnesium (as oxide)	166mg	40%
Zinc (as oxide)	30mg	237%
Vitamin B6 (as Pyridoxine HCl)	10mg	588%
Proprietary Blend	1225mg	†
L-Arginine, Tribulus, Horny Goat Weed, Tongkat Ali, Maca Root, Saw Palmetto, L-Citrulline, Butea Superba, Muira Puama, Damiana Extract, Xanthoparmelia Scabrosa, Rhodiola Rosea		

† % Daily Value (DV) not established

Other Ingredients: Gelatin, Magnesium Stearate, Calcium Carbonate
FD&C Blue #1, FD&C Red #3, FD&C Yellow #6, FD&C Red #40, Ti02



INFORMED CHOICE

<https://choice.wetestyoutrust.com/>



NSF CERTIFIED FOR
SPORT

nsfsport.com



US PHARMACOPEIA

usp.org

3RD
PARTY
TESTING

TOOLS

- Direct athletes to sports med doc, AT, registered dietitian

TABLE 2 *OPSS Questions to Risk Stratify Supplements as Likely Safe vs Likely Unsafe*

Questions	Yes = 1	No = 0
1. Is any one of these third-party certification seals on the product label? (i.e., BSCG, Informed Sport, NSF Certified Sport, USP)		
2. Are there less than six ingredients on the Supplement Facts label?		
3. Is the label free of the words proprietary, blend, matrix or complex?		
4. Can you easily pronounce the names of each ingredient on the Supplement Facts label?		
5. Is the amount of caffeine listed on the label 200mg or less per serving? (If caffeine is not listed mark "Yes")		
6. Is the label free of questionable claims or statements?		
7. Are all the % Daily Values (%DV) on the Supplement Facts label less than 200% (If % DV is not listed, mark "No")		

Read the label on your supplement and mark 1 for "yes" and 0 for "no".

Total: Add up the "1's". 4 or more is okay. Less than 4 is a "no-go".

HOW TO EVALUATE A DIETARY SUPPLEMENT LABEL	Good	Bad	Ugly
Lists Individual Ingredients and dosage on Label	✓		
Tested for Banned Substances	✓		
Uses Branded Ingredients/Raw materials	✓		
Manufactured in an NSF facility that carries both cGMP and Athletic Banned Substances	✓		
Uses Generic Ingredients		✓	
Uses a Proprietary Blend		✓	✓
Uses stimulants to cover for an insufficient ingredient profile (i.e. pre-workout supplements)		✓	✓
Contains Banned Substances		✓	✓

SAMPLE SUPPLEMENT GUIDE

	NAME	PURPOSE	START DATE	DOSING/PROTOCOL	POTENTIAL SIDE EFFECTS
	CREATINE	<ul style="list-style-type: none"> Explosive Burst Recovery Brain Health Potential Concussion Reduction/Mitigation 	<ul style="list-style-type: none"> As soon as desired 	<ul style="list-style-type: none"> 5g/day, will peak in 30 days Take at least 5 days wk Time of Day: pre or post training 	<ul style="list-style-type: none"> Potential weight gain (fluid/muscle)
	BETA ALANINE	<ul style="list-style-type: none"> Lactate Threshold Extension Endurance Recovery 	<ul style="list-style-type: none"> Start Date: June 1 Potential Peak Date: July 11 	<ul style="list-style-type: none"> Time of Day: 2.5g in am & pm Will peak around week 6 	<ul style="list-style-type: none"> Potential paresthesia (tingle in fingers/toes)
	CAFFEINE	<ul style="list-style-type: none"> Reduce Fatigue Enhance Performance (power, strength, cognitive) 	<ul style="list-style-type: none"> As soon as desired 	<ul style="list-style-type: none"> 3-5mg/kg or 150-200mg Time of Day: Consume 30-60min pre game 	<ul style="list-style-type: none"> Anxiety Insomnia Restlessness Jitters
	FISH OIL	<ul style="list-style-type: none"> Anti-inflammatory (joint/muscle aid) Brain Health Potential Concussion Reduction/Mitigation 	<ul style="list-style-type: none"> As soon as desired Ramp up with intensity 	<ul style="list-style-type: none"> Maintenance/Training - 1-2g/day High Stress/WC - 3-4g/day Time of Day: AM & PM - split does 	<ul style="list-style-type: none"> None Noted
	CURCUMIN	<ul style="list-style-type: none"> Anti-inflammatory (joint/muscle aid) Antioxidant 	<ul style="list-style-type: none"> As soon as desired Ramp up with intensity 	<ul style="list-style-type: none"> Maintenance/Training - 500mg/day High Stress/WC - 1,000mg/day Time of Day: AM & PM - split does 	<ul style="list-style-type: none"> None Noted
	MAGNESIUM	<ul style="list-style-type: none"> Sleep Muscle Recovery/Repair 	<ul style="list-style-type: none"> As soon as desired 	<ul style="list-style-type: none"> 200-400 mg/day Time of Day: PM, prebed 	<ul style="list-style-type: none"> Potential vivid dreams Potential laxative effects

SUPPLEMENT CONSIDERATION

Supplements should be secondary to a well-rounded diet.



Creatine

- Explosive Bursts
- Increase Muscle Mass
- Recovery
- Brain Health/Memory
- Concussion



Beta Alanine

- Extend lactate threshold
- Support endurance



Caffeine

- Reduce Fatigue
- Enhance Performance

SUPPLEMENT CONSIDERATION



Magnesium

- Sleep
- Recovery



Fish Oil

- Anti-inflammatory
- Brain Health
- Concussion Mng



Meriva/Curcumin

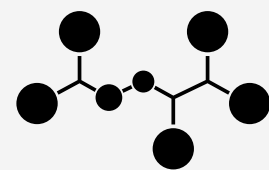
- Anti-inflammatory
- Antioxidant

PROTEIN POWDER

One of our most studied supplements that comes with many benefits if taken correctly and safely.

WHAT IS IT

- Protein powder can come in the form of whey, casein or a plant protein
- Convenient way to include all essential amino acids
- Select type depending on timing and athlete preference



RISKS

- Minimal risks in taking a high quality protein powder with healthy kidney and liver function
- Avoid protein powders with numerous ingredients -- these are typically unnecessary

BENEFITS

- Convenient way of incorporating protein
- Contains all essential amino acids that support muscle building and recovery
- Good option for athletes who are vegetarian/vegan



PROTOCOL

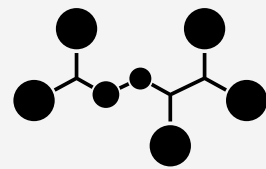
- Whey protein: ideal post-workout or as a snack when combined with carb
- Casein: ideal before bed or as snack due to extended digestion
- Plant: digests similarly to casein protein

CREATINE

One of our most studied supplements that comes with many benefits if taken correctly and safely.

WHAT IS IT

- A compound of amino acids found naturally in meat & fish
- A compound naturally occurring in muscles+ brain
- Fuels the Phosphocreatine energy system (8-10 sec sprints)



BENEFITS

- Potential increase in high intensity bursts and strength movements (<20 sec)
- Promotes gains in muscle mass
- Increased strength adaptations
- May benefit brain health and cognitive processing



RISKS

- Very minimal, as it's made naturally in kidneys (just not enough to be beneficial)
- Potential side effects if used long-term (>4 years continuously)
- Potential weight gain (which is lean mass)

PROTOCOL

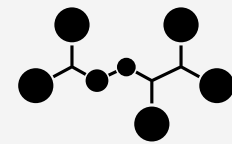
- Load: 5 days of 10-20g (optional, yet beneficial for quickest results)
- Daily: 3-5g creatine monohydrate
- Look for 3rd Party testing seal
- Use a single creatine monohydrate with no other ingredients



CAFFEINE

WHAT IS IT

- A compound classified as a stimulant
- Effects the central nervous system
- There is evidence to support it's benefits on physical and mental performance



RISKS

- High doses of caffeine (ingestion of ~500mg) can result in a positive drug test. Moderate amounts are NOT banned.
- Beware of other ingredients in caffeine containing drinks (such as: energy drinks and pre-workout)
- High doses can cause "overstimulation" and additional side effects (headaches, insomnia)

BENEFITS

- Decrease pain and perception of fatigue
- Increase ability to sustain hard bouts for longer periods of time
- If taken in moderate dose can improve concentration and mental clarity



PROTOCOL

- Consume 2-5mg/ kg body wt, 1hr before training
- Doses around 100-300mg are usually well tolerated
- Use natural sources or supplements with no-other/ minimal ingredient



8oz = 100mg



2oz = 100mg
(espresso)



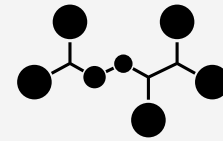
8oz = 60mg
(green tea)

COLLAGEN

Collagen can be an easy way for athletes to support tendon and ligament health to reduce injury risk and speed recovery.

Fast Facts

- A protein found in skin, bones, and connective tissue
- Especially important in tendon and ligament health
- Provides protein, but is not a complete protein on its own



Benefits

- Increase tendon resilience and promotes injury resistant tendons
- May help reduce recovery time following soft tissue injuries
- Only 10 min of activity required following ingestion to produce benefits



Protocol

- Serving: mix 1-2 scoops with water, juice or Gatorade
- When: drink daily about 1 hour prior to activity
 - Activity includes: strength training, practice, rehab



CITATIONS

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QUESTIONS?

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