



WINNER TAKES ALL!

**EVERYTHING A COLLEGIATE ATHLETE NEEDS TO
BE SMART AND SAFE ABOUT SUPPLEMENTS AS
THEY LOOK TO BRING HOME THE MONEY**

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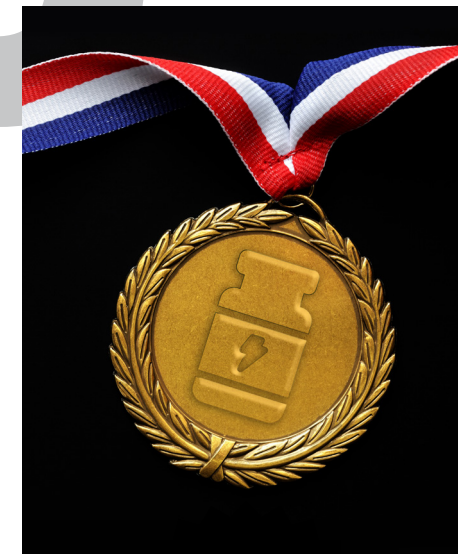
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01

CHECK PLEASE!

When it comes to collegiate sports, everything just changed. It used to be a simple system, even though many athletes may have viewed it as a little unjust.

When it comes to collegiate sports, everything has changed. It used to be a simple system, even though many athletes may have viewed it as a little unjust. Why? Well, this sporting system generates billions of dollars in revenue (\$14 billion to be precise) for universities and the NCAA, but the athletes, who in part generated this money, were not allowed to earn any money. They also couldn't promote anything or complain about the working conditions. However, collegiate sports have always been an

incredible opportunity to compete at the highest level while getting a top-class education. This has always been true despite the clear imbalances of power. Now there's been a shift in collegiate sport's power dynamic.

With the help of the supreme court, the NCAA approved a policy as of July 2021 that says college athletes can finally get paid for their talents. All athletes are still required to stick to the NCAA's guidelines, but they can now make money off their name, image, and likeness. The athletes that are the engine for NCAA profits now can share in them. While collegiate athletes

were once considered amateurs who shouldn't be earning, that's all in the history books now.

As such, you can expect to see college quarterbacks in a TV ad wolfing down a bowl of cereal and being paid handsomely for it. Although a salary can't be drawn, athletes can now promote everything, including your favorite supplement brands.

What does all this mean? One word. Incentive. Very lucrative incentives. Money is there to be made so athletes will be doing anything it takes to get a slice of it. Sports supplements will form a big part of the performance hikes, which is likely to bring a certain element of both temptation and risk. Sadly, this also means a garden variety supplement that inexplicably makes an athlete fail a drug test could see them stand to lose millions. The FDA estimates there are now 850,000 dietary supplements for sale in the US. That's a lot of choice, and room for error. So, what follows is everything a collegiate athlete needs to know to supplement the smart way as they look to cash in the checks in this new environment.

FOR MORE INFO, PLEASE VISIT [BSCG.ORG](https://www.bscg.org)



THE NCAA RULES

Once upon a time, the only way to get hold of steroids was to be an Eastern Bloc weightlifter. Today, anyone with an internet connection and a credit card is a few carefully crafted clicks away having them home delivered in a discreet brown envelope. There are obvious performance enhancers that are banned, but when it comes to supplement ingredients it pays to be informed and protected as it is not always so clear. It's wise to figure out what's allowed and what's not? To help, the NCAA Banned List outlines categories and examples of what is prohibited. According to the NCAA official website, it has banned the following classes of drugs:

1. Stimulants
2. Anabolic agents
3. Alcohol and beta blockers (banned for rifle only)
4. Diuretics and other masking agents
5. Narcotics
6. Cannabinoids
7. Peptide hormones, growth factors, related substances, and mimetics
8. Hormone and metabolic modulators
9. Beta-2 agonists

Banned List

1 Stimulants

2 Anabolic agents

3 Alcohol and beta blockers (Banned for rifle only)

4 Diuretics and other masking agents

5 Narcotics

6 Cannabinoids

7 Peptide hormones growth factors related substances and mimetics

8 Hormone and metabolic modulators

9 Beta 2 agonists

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Some of these banned performance enhancers may be hiding in the ingredients at your local supplement store. Some of these may appear on the label but others can show up as contaminants without the knowledge of the brand, or you the athlete. Third-party certification for banned substances is a key consideration for college athletes to avoid this concern.

The NCAA also has very strict rules about other doping practices that can help athletes get an unfair advantage. According to the NCAA's official website, these substances or practices are also subject to significant restrictions or penalties:

1. Blood and gene doping.
2. Local anesthetics (under some conditions).
3. Manipulation of urine samples.
4. Tampering of urine samples.
5. Beta-2 agonists permitted only by prescription and inhalation.

If you think you might be able to operate in a grey area, you're wrong. The NCAA states that there is no complete list of banned substances. Instead, any substance that is chemically related to the class, even if it is not listed as an example, is also banned. Someone could also interpret something as banned even if it is not listed. This means there is a zero-tolerance policy on any form of cheating, even if you've got a super smart friend who cooked up a magical chemical that the world has never seen. If that chemical gives you an unfair competitive advantage that even remotely relates to the other categories of drugs, you could be banned. It's never worth the risk of playing with magic potions.

Unfortunately, some dietary supplements may contain hidden substances that could lead to a positive drug test, or worse yet could cause you harm. If you are going to use supplements they should be tested for banned substances by a qualified group like BSCG. A good guide to banned supplement ingredients is outlined in the BSCG Dietary Supplement Ingredient Advisory List.



HOW BANNED SUBSTANCES IMPACT YOUR PERFORMANCE

To help you keep away from dangerous performance enhancers, it's wise to understand why the NCCAA has banned these commonly used items.

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ANABOLIC STEROIDS

Of all the banned substances, these are probably the most notorious. Anabolic steroids are old school muscle building drugs and the most common banned substance used in sport. Not surprising since they seem like a quick fix. Steroids aim to mimic the effects of testosterone but can also have a variety of adverse effects including acne, rage and mood disorders, gynecomastia or enlargement of the breasts in men, and changes in hormonal balance both in the short term and long term. While the impacts on your body are significant, steroids can also alter your mind by making you more aggressive and even more forgetful. This can create serious mental health problems that will be made worse by the negative physiological side effects. Prohormones are close cousins to steroids and they are still illegally used as active ingredients in supplements. If a supplement uses the word anabolic in marketing or has long chemical names for ingredients be careful of what is in it. For student athletes who are still developing these substances can be particularly damaging.

ALCOHOL

We know alcohol is a part of college life, but that doesn't mean it has to be a big part of yours. You're a student athlete and you need to treat your body like a

temple if you're going to succeed. Plus nobody wants a drunk representing their products. Booze can cause significant impacts on student athletes beyond the immediate impairment. For competitive athletes alcohol can decrease aerobic capability, impair hydration status, and interrupt recovery and healing by increasing cortisol levels. Over time use can result in a host of short- and long-term side effects including nutritional deficiencies, emotional changes, and sleep disturbances. Alcohol and athletics are just not a good mix, so take it easy on the Coors.

CANNABINOIDS

More than 140 cannabinoids are found in cannabis, with marijuana plants high in tetrahydrocannabinol (THC) and hemp plants high in cannabidiol (CBD). The NCAA is all about making sure athletes optimize their health so they can perform at their peak. And while smoking marijuana may seem like a rite of passage for college life, the NCAA doesn't agree. Rightfully so. While there is a distinction between the psychoactive high you get from THC in marijuana and the recovery benefits you may get from non-psychoactive CBD products, the NCAA treats them both as banned. At least the language does since they are both cannabinoids. But in practice, the only targets in drug testing

are THC and a group of dangerous synthetic cannabinoids like 'Spice'. CBD, CBN, CBC and other natural cannabinoids have not caused any positive drug tests. If you do decide to try CBD products look for ones that are part of the BSCG Certified CBD program that tests for banned substances and quality. Stay away from Delta 8, Delta 10 and other new cannabinoids as these are made with hazardous chemicals and have caused dangerous adverse effects. Marijuana itself has been linked to panic attacks, serious paranoia, breathing troubles and even memory problems, all things collegiate athletes want to avoid.

COCAINE, MDMA, NARCOTICS

Cocaine, MDMA, and other narcotics aren't things you can walk into a store and buy. Possession can be a federal offense, which is strike one for these illegal drugs. These drugs are not only prohibited in sport but can also cause serious health problems including anxiety, mood changes, impacts on brain chemicals and production, dangerous blood pressure or heart rate changes, impacts to digestion and gut health. Remember that's a temple you are walking around in, you got to take care of it.



NICOTINE

Nicotine is a stimulant and when smoked in cigarettes it comes with a variety of other harsh chemicals that can damage lungs and create permanent respiratory problems. Chewing tobacco brings the real possibility of oral disease. If you vape nicotine you could be subjecting yourself to a group of unknown compounds including heavy metals and chemicals like diethylene glycol that can be toxic and cause lung damage. Whatever way an athlete chooses to get it into their system, nicotine can cause serious harm to any tissue it touches, whether that tissue is in your nose, mouth, or lungs. Nicotine is not on the NCAA banned list but use by athletes or other game support personnel is prohibited in or around NCAA competitions.

NOOTROPIC SUPPLEMENTS AND SMART DRUGS

Nootropics come in many shapes and sizes aimed to improve cognition, focus, memory and support brain function. Some are legal dietary supplements like rhodiola or ashwagandha, while others are drugs that may be banned in sport like adderall or noopept. Noopept and other racetams like it are actually eastern

European drugs sold illegally as dietary supplements. ADHD drugs like adderall, a pharmaceutical mixtures of amphetamines, or ritalin, methylphenidate, are prohibited in the NCAA and require therapeutic use exemptions if a student athlete has a prescription to use one of these. Be mindful of nootropic supplements as some may result in positive drug tests due to contamination or presence of drugs in disguise.

PAIN KILLERS

As a college athlete you're going to face plenty of pain. Muscles will hurt. Joints will ache. Injuries will flare up. Pain killers can become a saving grace, but this can quickly turn into an everyday thing if you're not careful. Many of them are very addictive and may negatively impact your body. If you are in serious pain, then it's wise seek formal advice on how to manage your pain from your doctor or your team's medical professional. It's never acceptable to get a few painkillers from someone else because you can never be sure what you're getting, and the NCAA has serious restrictions around this class of drugs.

SARMS

Selective Androgen Receptor Modulators or SARMS are a new class of drugs that are aimed at the androgen receptor and muscle

growth, kind of like steroids since they target the same receptor. However, SARMS are still in clinical trials and as of yet none have been approved as a drug. Safety data is incomplete for many but for some of the early SARMS like andarine safety was poor and drug development was abandoned. Some have shown significant adverse effects in trials with vision flashes, cancer and other issues reported. SARMS are prohibited in the NCAA. They are often sold illegally as dietary supplements. Only a few SARM examples are on the NCAA banned list but many more are detectable. Don't join an uncontrolled clinical trial, leave these off your list.

STIMULANTS, ENERGY BOOSTERS, AND CAFFEINE

Sure stimulants can hype you up and can give you more energy, or even help you concentrate when you're dead tired, but if used too much for too long they can cause serious problems. Caffeine is the most common and it can help performance if used in moderation. Too much caffeine can seriously impact performance and your health. Like other stimulants, you can build up a tolerance, and that is when problems can start and even put you at risk of a positive drug test. Stronger stimulants like adderall are attractive to many

students as smart drugs seem to be an easy way to help cope with the pressures of student life. Relying on stimulants to succeed academically or on the field is a temporary solution at best. Stimulant abuse can create serious anxiety problems, lead to dehydration, and cause heart problems. They come in many forms, but you should realize that whatever form they take, they are all banned by the NCAA, even caffeine if you take too much.

SPORTS SUPPLEMENTS AREN'T ALWAYS SAFE

It's easy to assume that if you can buy a supplement over the internet or from your trusted local store, then that product is safe. Do this and you're putting far too much faith in other people and may be inadvertently risking your ability to play in college or make it to the pros. Yes, the FDA does regulate both finished dietary supplements products and their ingredients. However, this is more about making sure a supplement doesn't make untruthful claims or that it doesn't present an unreasonable risk of illness and injury. Dietary supplements do not need FDA approval before they are sold. No testing is required for banned substances in sport, efficacy, or safety. If you think the FDA has got your back, it does, but it can't pick up on every supplement ingredient that may cause you to fail a drug test. That's a job too big. If you want to use a supplement make sure you check with your trainer or athletic department first and always look for products that are tested for banned substances by a third-party.



SUPPLEMENT FACTS

What's important to realize is that supplements are classed as a special category of food, not as drugs. The latter must undergo extensive clinical trials to generate mountains of data that prove their effectiveness and safety to ensure your heart doesn't fly out your chest. The FDA then reviews all this and gives a drug the yay or nay, but such is not the practice with sports nutrition supplements. When it comes to dietary supplements quality, safety, and efficacy is up to the brands to establish and demonstrate. This is where the reputable brands differentiate themselves from others in the industry. Top brands start with a commitment to quality and safety with marketing as the icing on the cake. Others may simply be pretty packages covering up products that lack in substance, or worse yet could contain illegal or banned substances. Sure the FDA has the right to pull something off the shelves if it is dangerous. Outside of that, the quality of products is up to you to research and consider. Thankfully third-party certification providers have done the work for you when it comes to product quality.

AN ENDLESS LIST OF BANNED SUBSTANCES

The NCAA banned substance list has perhaps the fewest number of drug examples of any major sporting body. But don't be fooled, the catchall language also bans, "any substance that is chemically related to one of the above classes, even if it is not listed as an example." This requires you to do more work as a student athlete as you are ultimately responsible for anything you put in your body. So you have to figure out if something you want to take, or represent, is banned. Similarly, the NCAA has no list of approved supplement products. You take any supplement at your own risk. Take the wrong product and you'll get banned for a year. Simple. It's the equivalent of jail for a student athlete. You don't have to

take supplements. You can very easily train without them and have zero risk, but without them you may miss out on performance advantages that supplements can offer. Surveys have shown that around the world 30-80% of competitive athletes use dietary supplements. Rock. Hard place. You. Fortunately, you can protect yourself by supplementing smart with products that have been tested for banned substances.

SUPPLEMENT RULES TO LIVE BY

Thankfully there are a few simple things you can do as a college athlete that can help keep you on a good path when it comes to dietary supplements. Doing these things can be the difference between testing positive and ruining your sports career or testing clean and being able to focus on winning.

CHECK WITH YOUR SUPPORT NETWORK

You're not an expert in every supplement or ingredient and you have resources available to you at your school. Even if you're studying pharmacy and the supplement label looks to have completely safe ingredients, there can be added extras that could be a red flag. It is essential that you take your supplement to your coach or trainer and put it on their desk and ask if it's okay for you to take before using it. This is a key step if you have problems on a drug test down the road.

QUESTIONABLE PRODUCTS EVERYWHERE

Just because mom and dad swear by a specific brand of vitamin pill, doesn't mean that pill is suitable for you. They're not getting drug tested and many health supplements can put you at risk without you being aware of it due to hidden drugs or contaminants. Please don't take samples of a product at a gym, you never know what might be in it. Drug Free Sport Axis (<https://dfsaxis.com>) offers

free supplement reviews and a host of information to support your decisions.

RISKY CATEGORIES PUT YOU AT RISK

There are a few notorious categories of dietary supplements that carry special risk as they have a history of containing substances that can make you fail a drug test. Anabolic muscle builders have been powered by prohormones and SARMs; pre-workout and weight loss products often contain stimulants. Be wary of new categories like nootropics, or brain pills, as these often include stimulants as well, or products marketed as myostatin inhibitors or AMPK activators as these are categories of banned substances. If it sounds like it may give you super powers a product is more likely putting you at risk.

BANNED SUBSTANCES CAN POP UP AT ANYTIME

Banned substance contamination can happen at any time in any product due to raw material impurities or contamination during the manufacturing process. Using a product one day without any issues does not

guarantee the next time you use it everything will be OK. Even tiny parts per million amounts of a drug in a product can show up in your urine sample at parts per trillion levels that sport drug testing can now detect. Third-party certification programs like BSCG Certified Drug Free test finished product lots for banned substances to provide you with the maximum protection possible. Make sure the lot you have in your hand has been tested as not all third-party certification providers test every lot like we do!

These simple rules can be the difference between success and failure as a college athlete. You have a huge support network to lean on so use it as much as possible. Don't take risks that could put your future in danger. Even if other athletes around you are being careless with dietary supplement decisions don't fall into the same trap. Maybe if you share this simple guide with them you can help keep your friends safe too.



GETTING TO KNOW ILLEGAL PERFORMANCE ENHANCERS

Illegal performance enhancers are a serious placebo that does nothing for you. Here's why

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CLEAR YOUR MIND

If you want to understand why athletes dope, it's wise to get into the mind of a cheater. Doing this may help you stay away from temptations. Winning is a thrill, often seen as a certainty with the help of pharmacology's dark arts. Sadly, the decision to use banned performance enhancers is often thanks to pressure applied when athletes are at a very young age sometimes even by mentors, coaches, or friends. The pressure to perform is often magnified when there are financial incentives or scholarships on the line. It's further amplified when you start at a new college and may not be the best athlete out there as you were back in your town. This is the burden of perfection. Sadly, pressure often comes from parents and can even make young athletes feel positive about doping, found research at the University of Kent. "With the rise of so-called 'tiger-parenting', where strict and demanding parents push their children to high levels of achievement, this study reveals the price young athletes may choose to pay to meet their parents' expectations and dreams," explains Daniel Madigan a Ph.D. student in the university's School of Sport and Exercise Sciences. The seeds are often sown at an early age,

THOUGH PERFORMANCE-ENHANCING DRUGS ARE PERCEIVED AS PHYSICAL IMPROVERS, THERE IS A BIGGER PSYCHOLOGICAL ASPECT TO THEM.

creating a cerebral root structure for collegiate athletes who are seduced by the prospect of becoming a professional athlete.

MIND AND BODY

Most of the time we think of doping as gaining a physical advantage, but the body is nothing without the mind. Though performance-enhancing drugs are perceived as physical improvers, there is a bigger psychological aspect to them. Lance Armstrong had something to say about this, "My ruthless desire to win at all costs served me well on the bike but the level it went to, for whatever reason, is a flaw. That desire, that attitude, that arrogance." Though he may be the poster boy for cheats, he's not alone in his ambitions. A study in the journal PLoS ONE on roughly 3,000 hobby triathletes found 13.7% of them used banned performance-enhancing drugs. Of those people, they were more likely to also take substances

that boosted mental functions. "The results correlated with earlier findings about doping in leisure and popular sports and brain doping in society as a whole," explains Mainz University Professor of Sports Medicine Dr. Dr. Perikles Simon. "The findings also illustrated for the first time that physical doping and brain doping often go together, at least for recreational triathletes." It's clear the mind is the true flex behind performance enhancement, but don't let your mind lead your body astray, or vice versa. Seeking extra enhancement of mind or body might not be a smart decision not just because of the risks you take, but also because studies have shown that some of them might just be nothing more than glorified placebos.



WHAT'S ALL THE HYPE ABOUT?

Anabolic steroids are seen as the boss hogs of performance but there is some doubt about whether they make a notable difference on records. A paper in the *Journal of Human Sport and Exercise* gathered all sporting records (including Olympic and world records) of male and female athletes across 26 sports, between 1886 and 2012, and drew comparisons between the pre-1932 records when steroids first became available and post. They found that the times, distances, and other results did not improve as expected in the doping era. "The average best life records for 'doped' top athletes did not differ significantly from those considered not to have doped. Even assuming that not all cases of doping were discovered during this time, the practice of doping did not improve sporting results as commonly believed," explains Dr Aaron Herman, the lead author of the paper. "This research demonstrates that doping practices are not improving results and in fact, may be harming them - seemingly indicating that 'natural' human abilities would outperform the potentially doping 'enhanced' athletes - and that in some sports, doping may be

highly prevalent." These muscle-developing drugs may sound good in practice but you don't really need them to perform, plus they are spring-loaded with serious negative effects that can play havoc on an athlete's mental and physical well-being.

STAMINA FAILS

What about endurance aficionado's, like cyclists, who have a well-publicized affair with the substance erythropoietin (EPO)? Similar to testosterone, the king of steroids, EPO occurs naturally, being produced by the cells in your kidneys to regulate the production of red blood cells in your bone marrow. These red blood cells carry more oxygen in your blood, so the EPO increases your oxygen levels, which can reduce fatigue and increase endurance. That's the theory anyway. Research in the *British Journal of Clinical Pharmacology* found no scientific evidence that it does enhance performance but did discover plenty of markers that suggest it caused serious harm. EPO thickens a person's blood, increasing the risk of blood clots, which can block the flow to an organ such as your heart or brain. "I believe there is a clear

need for high-quality research to investigate the effects of supposedly enhancing drugs in sport," explains lead researcher professor Adam Cohen. "If, as is expected, many substances in current use are found to be ineffective it will help keep our athletes safe and improve confidence in sporting results."

REWARDS ARE A HEAD GAME

That's two very clear examples that some of the more notorious

substances associated with doping may not be as effective in the grand scheme of things. So, why do collegiate athletes keep risking their reputations, scholarships and earning? The slightest edge, be it physiological or psychological, can put winners over the line, which is why performance enhancers are so attractive in the first place. Consider that the placebo effect can be quite powerful. Research in *The Gunderson Lutheran Medical Journal* told runners they were

being given super oxygenated water, but in truth they were given plain ole H₂O. This didn't stop them from running 8% faster! Ironically, the best way to enhance performance might be to give an athlete a placebo but tell them it is the latest in nutrition technology designed to enhance mind and body and maximum athletic performance. The mind is an amazing performance enhancer on its own if you use it positively. If you truly believe that your commitment, dedication, discipline and training is all you need to win, you probably will!

YOU WON'T GET AWAY WITH IT

Think you're onto a magic pill that enhances performance but is undetectable? Think again. Drug testing changes fast and something that can't be found one day might be detected the next. Sensitivity of urine drug testing has been vastly improved over the last decade. A substance that used to be found at parts per billion levels can now be found at parts per trillion levels. That means the timeframe of detection has significantly expanded as a result. So even something you took months ago or a year ago might be detectable today. Anti-doping scientists are years ahead of the game with methods already in hand for gene doping techniques that are just becoming a concern. Don't let yourself be a guinea pig, you're better than that.



THE INADVERTENT CHEATS

You could be doping without even knowing it, even if you don't take sports supplements at all. A study in Drug Testing and Analysis found the illegal use of clenbuterol in livestock farming could impact the results of doping tests in sports. Clenbuterol is a weight loss and muscle boosting aid that increases a metabolism,

which is used in farming to improve the volume of lean meat on an animal. The researchers found soccer players who had eaten red meat tested positive for this banned substance. Fortunately, clenbuterol is banned in farming practices in many

parts of the world including the U.S. but unscrupulous farmers who illegally use this or other anabolic agents to improve meat production could put athletes at risk of testing positive. Unfortunately, clenbuterol is not alone with nandrolone,

IF YOU'RE A COMPETITIVE ATHLETE, WHOSE FUTURE COULD BE ON THE LINE THEN IT'S WORTH TAKING EXTRA PRECAUTIONS.

trenbolone, and even SARMs also potential meat contaminants. Food choices are as important as supplement decisions, but at least

you can do something to protect yourself when using supplements by looking for products that have been drug tested so you don't pop positive yourself.

SPORTS SUPPLEMENT DIFFICULTIES

When you start taking supplements your risks factors increase. It's that simple. A study at the University of Loughborough found traces of banned substances in some dietary supplements can leave athletes vulnerable to failed drugs tests. "It is now well established that many dietary supplements contain compounds that can cause an athlete to fail a doping test," explains Ron Maughan who chairs the Sports Nutrition Group of the International Olympic Committee Medical Commission. "In some cases, the presence of these compounds is not declared on the product label. For some prohibited substances, the amount that will trigger a positive test is vanishingly small." Sure, the FDA has put

in place stringent guidelines for supplement manufacturers to adhere to, but that does not mean they actually do. In 2014 roughly two-thirds of FDA recalled dietary supplements still had banned drugs at least 6 months after being recalled, according to a study in the Journal of the American Medical Association. The FDA may be there to protect everyday consumers, but nothing is a failsafe, so the duty of care rests on you and your coaching team to find out if your supplements could put you at risk of failing a test. Remember to look for products that have been tested and certified to be free of banned substances. Just because it carries a seal doesn't mean the lot in your hand has been tested as not all program certify every lot of a product. You want to make sure the lot number on the bottle you're holding has been tested. The BSCG Certified Drug Free program and Informed Sport test every lot of a product for banned substances, Informed Choice is monthly testing of retail samples, NSF Certified for Sport has a variety of options when it comes to frequency of testing, and Lab Door conducts occasional lot specific testing.



SUPPLEMENT YOUR MENTAL GAME

Your body and mind will be tested through every academic year. These are psychological risk factors you'll be facing and how you can use them to your advantage

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Student athlete. It's two words. Two words that mean you have two jobs. Jobs that demand you to take control of both body and mind. Being a student comes first because if you don't get the grades, you often won't be able to keep competing. It's not easy as it may seem. Life isn't as beautifully simple as it used to be. There's pressure to craft a complete profile in the real world. There's pressure to craft a good presence digitally too. So, while the standard of living has never been higher, it's also far more stressful than what your parents had to go through when they were studying. On top of this, being a student athlete is a time when everything changes. You're travelling. Competing. Making new friends. New routines are forged. Old habits are broken. There are hardly enough minutes on a clock to get everything done. What does this mean? Stress. In fact, A review in Frontiers in Sports and Active Living found college life can increase your risk of both physical and mental stress. It's a seminal review that's factored in all it means to be a student athlete and the following section will unpack how this relates to you.

STRESS MANAGEMENT 101

Does training and competing make stress better or worse? Both. Stress is cumulative. Your

body doesn't care if the stress is real. If it's physical. If it's mental. If it's travel stress. If it's imagined. Take home message? You don't want to cram in hours of study or assignments then smash a monster hill sprints workout. That won't do you any favors. Cortisol levels will climb like Spiderman on a burning building. However, there's no excuse to skip training, just because you have a hectic study period. People who participated in exercise three times a week not only improved their fitness, but also significantly dropped their anxiety levels in less than two months, says a study at Ohio State University. Exercise releases endorphins that work as antidepressants, energy stimulators and stress relievers. However, whizzing around like a caffeinated Tasmanian devil certainly isn't going to calm you down. You'll probably be too exhausted to study, let alone care about anything else.

LONG HAUL STRESS TRIP

If you think you can just brush off stress, it's wise to make sure you know the consequences. The review in Frontiers in Sports and Active Living outlined many dire consequences that could unravel your student athlete experience. The paper found when student athletes are stressed for long periods of time, they increase their risk of developing anxiety, depression, or metabolic

disorders. Worse yet, they were also more likely to get injured or sick. To make things trickier, how you respond to an event is always down to your individual perception. So, while your team might win, you may have had a bad game and might feel miffed because you didn't excel personally. Even if your coach and team loved your performance, stress is down to your unique perspective. This means you better become a gold medalist at managing it or you could be risking being at your best.

IS EXERCISE THE FIX?

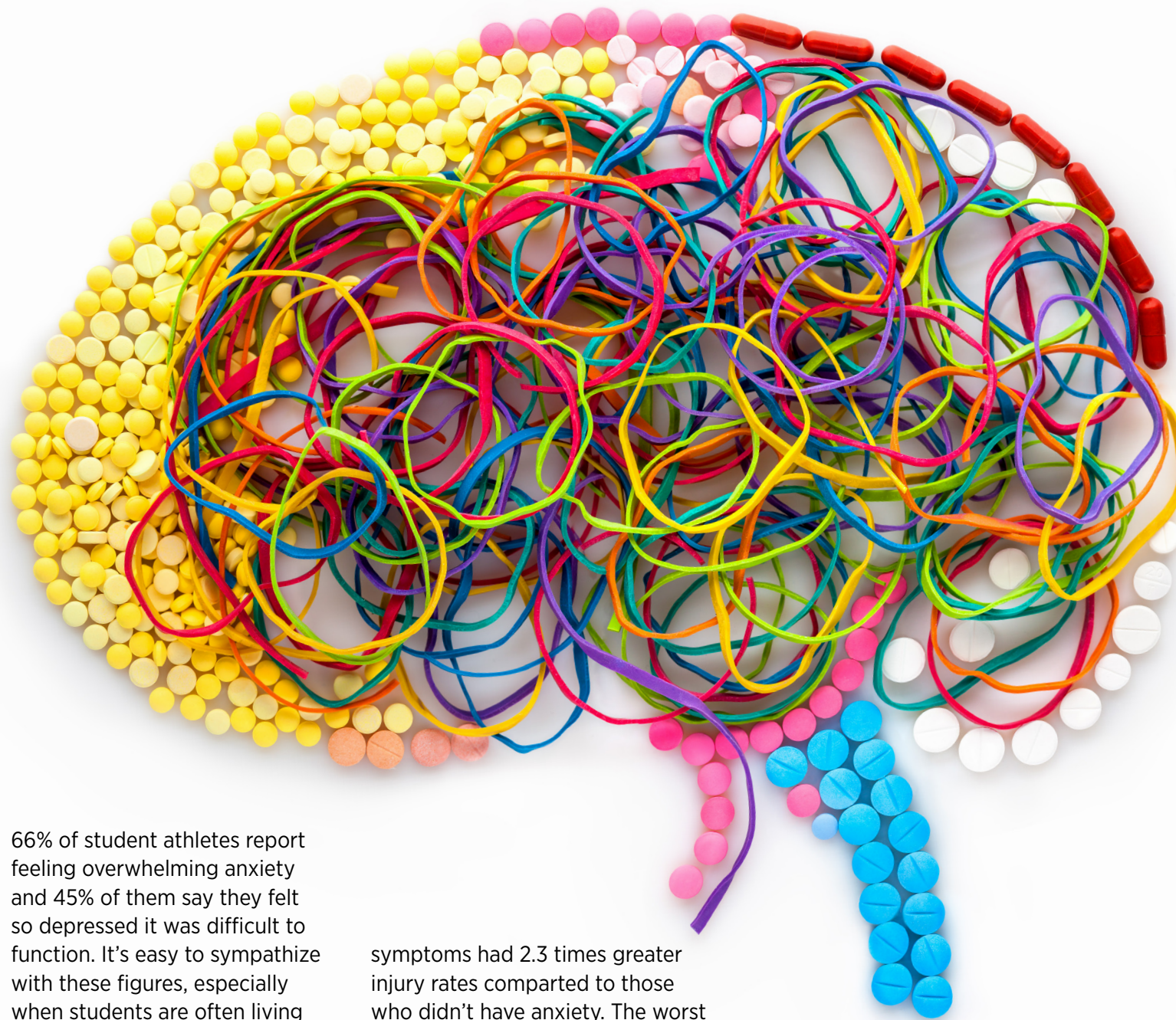
How can you possibly manage all the pressure? Well, a University of Wisconsin study found low impact resistance training elevates mood better than medium to low intensity lifting. So, if you're studying hard, then counterbalance it by keeping your training chilled. Get some stretching done afterwards and you'll be better at dealing with your stress. Worried you won't train intensely enough to improve your performance? You will. Exercise is there to stimulate your muscles, not annihilate them. Forget the mantra that you



need to train so hard you'll puke. Instead, you just want to get that blood flowing when you need to study. Do you have a choice? Not always. Low impact training is a best-case scenario. It's not always something you have control over when you have a coach and teammates with expectations. Sadly, this scenario can often create enough stress to make you shake like a rattlesnake with a hernia. Exercise can help but only at the right intensity.

ACADEMIC STRESS

Many, if not all, student athletes are required to maintain a certain level of academic performance to keep playing sport. Getting the grades you need is a natural source of pressure, even if you're cracking A's. Academic stress was the most common source of stress, found the review mentioned above. Interestingly, it wasn't that the students found the academic work too challenging. They were stressed because of time management issues. The students had a lot of trouble managing sports practices and studying which caused a lack of sleep quality. This again opens the door to a lack of energy, illness, and injury. It's for this reason that



66% of student athletes report feeling overwhelming anxiety and 45% of them say they felt so depressed it was difficult to function. It's easy to sympathize with these figures, especially when students are often living away from their normal support bases like parents, friends, and family. What does this all mean for your sports performance? Well, student athletes with anxiety

symptoms had 2.3 times greater injury rates compared to those who didn't have anxiety. The worst part is that this is more likely to happen in freshman collegiate athlete than in older students. Worrying about it, will only give you more to worry about.

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DANGER: STUDY DRUGS

With all the pressures of academic work, it's important not be tempted by so called study-drugs. Prescription drugs, like Adderall, offer a minefield of misinformation to your body. With big ups in concentration come big downers for your nervous system. Despite their negative aspects, 1 in 5 students still use study drugs. Of course if you suffer from a medical condition like ADHD and these drugs are prescribed you should use them just make sure you notify your Sports Medicine staff in advance. If you take them without a prescription, you're putting yourself at a very serious risk. Adderall and many other similar drugs are classed as stimulants and will unquestionably make you fail an NCAA drug test. What about nootropic supplements that help you concentrate? While many of these advertise themselves as legal supplements the compounds that are actually in them are often eastern European drugs that may make you test positive. They might be the next banned substance to hit the list. An automatic 365-day suspension awaits if you make a mistake with study drugs. What's more, testing policy and frequency of the tests gets accelerated significantly when you start to reach championship levels of your sport. This means that as a student athlete it's never worth

flirting with any kind of study-drugs that you think may give you an advantage when you're behind the books.

ATHLETIC STRESS

As a collegiate athlete you probably feel near invincible. Yes, you may have plenty of improvements to make and you may think you've got the energy to achieve them. But do you know what they'll be? Individual training. Team training. Competition. Travel. Injury rehab. Sport-specific social support. Playing status. Nutrition. Most student athletes see this as a positive stress and challenge. However, this only holds true if these demands are in synch with your capacity to fulfill them. Ask yourself what you think this time commitment might be? Got a number in your head? See how it matches up. The review found collegiate athletes dedicated up to 34 hours per week to athletics and spent 40 hours per week working on academic related tasks. It's possibly one of the most demanding jobs you could ever do. To accomplish this, you must be a Doctor Strange-level time management master. Even if you can, you better learn to get



on well with others such as your coach, trainer and teammates. These have been reported as major stressors for many athletes. Mash your athletic and academic stress together and it's easy to see why some student athletes turn to supplements and sometimes drugs to get a leg up on life, or in sport.

MANAGING STRESS THROUGH DATA MANAGEMENT

There is plenty to worry about. Sadly, these pressures can lead to the kind of fatigue that creates sports injuries. To combat this, it's best to use a data driven approach. Yep, it's one more thing to do. The review found there was a close relationship between athlete workloads, injury, and performance. You'll fluctuate naturally in your ability to metabolize stress. A big mid-term on the horizon might make you more susceptible to injury so it's best to communicate this with your coaches. When you use a data driven approach, you'll keep yourself safe. And if your coaching team isn't doing it then you need to take notes yourself. You can do this via a notepad where you record your training and academic workloads or do it digital via wearable tech. Almost

all wearables now offer high level summaries about how you're sleeping, recovering and the stress on your body. Listen to your body and grab as much data about it as you can. Remember, these won't always reflect exactly how you're feeling about everything internally. However, it will help you create a deeper understanding of how your body and mind are coping with the overall load of being a student athlete.



FIGHTING ANXIETY AND DEPRESSION

One thing you're probably not taught how to do is cope with stress. In the long term this can create anxiety and depression. You're schooled on how to give your body plenty of stress. Run harder. Study longer. Be perfect. These all need a yin to their yang. A passive to the active. A cold to the hot. To do this, the review

in the Frontiers in Sports and Active Living found student athletes should be led down this path by their coaches, but also adapt to how they feel in the moment. The following are some coping strategies that a good coach should be exploring with their athletes to counterbalance stress.

- 1 Sharing health and wellness resources
- 2 **Seek help from coaches and talk about your issues.**
- 3 Deep breathing techniques
- 4 **Positive self-talk**
- 5 Education on good sleep habits
- 6 **Structured goal setting**
- 7 Visualization

THE TAKE HOME MESSAGE?

Even if you don't play a team sport, the team that supports you is important. Whether it's your technique coach or a strength and conditioning coach, or another trusted mentor, those who are responsible for making you better need to take a holistic approach to stress management. You also need to take an active role and look to manage your stress levels using your support network and a good set of tools. Learn how to do it the right way because it's a skill that will stay with you for life.



SUPPLEMENTING SAFELY

The critical analysis you need to do to make sure your supplements are always helping and never hindering your goals. Here's 5 questions every collegiate athlete need to ask about their supplements

If you're a college athlete you have plenty of things to take care of between mixing studying, training, eating well and competition. Making smart decisions about dietary supplements is another key factor in your success. Reviewing your supplements with your trainer or sports dietitian and looking for products that have been tested for banned substances

are essential steps to take if you do decide to use supplements as many athletes do. Ask these questions first and you are on your way to supplementing safely.

1. DO I NEED A BETTER DIET OR DIETARY SUPPLEMENTS?

Student athletes are always on the go and it can be hard to eat right, but doing so is essential as proper diet is the foundation for any athlete. Because you are more active than others you need to eat a lot to fuel your body. Consider eating 6-7 times a day with a healthy amount of fruits, vegetables, beans, oils and nuts to get consistent energy and a variety of nutrients into your body. To maintain weight male athletes generally need 17-23 calories per pound of bodyweight while females need between 16-30 calories per pound. The more strenuous your workouts the higher in the range you are likely to be.

Protein intake is key for athletes as it is an important building block of muscle. Student athletes need a lot of it in their diet ideally from a variety of sources. There have been arguments for years over whether animal or plant sources are better. Experts now

recommend you get protein from a variety of sources if you can and note that plant sources are good options. A position paper from the Academy of Nutrition and Dietetics, Dietitians of Canada, and the American College of Sports Medicine suggests 0.5 to 0.9 grams of protein per pound of bodyweight for both strength or endurance athletes.

Quick nutrition options are key for student athletes. The NCAA Sports Science Institute and Sports, Cardiovascular, and Wellness Nutrition (SCAN) recommends granola or sports bars, bananas, dried fruit, and peanut butter with jelly during training and low-fat chocolate milk, trail mix, cereal, yogurt parfaits and fruit smoothies for recovery. If you do decide to use supplements to top off your protein or optimize your potential you are certainly not alone as surveys show 30-80% of competitive athletes do so, but make sure you make good decisions and watch out for banned substances.

2. IS THIS SUPPLEMENT HIGH QUALITY, DOES IT HAVE A HISTORY?

You're sold the sizzle, not the steak. Every company will launch a sexy marketing strategy for their supplement but it is quality and compliance that ensure the proper ingredients get into the bottle and that can be hard to see.

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Treat fancy pictures, models, and gimmicks with distrust. Quality and purity must be a priority for brands, and for you. Look for those that focus on quality and talk proudly about it on their sites. Third-party seals can demonstrate that a brand has gone above and beyond industry standards to verify the quality of a product. Don't be fooled by fake or made up seals that mean nothing, always check to verify a reputable third-party is behind a seal. BSCG along with NSF, LGC, USP, and UL are some of the leaders in third-party certification for nutrition products. Certifications focus on things like current Good Manufacturing Practices (GMP), which is the backbone of supplement quality control, or testing to ensure what's on the label is what's in the product. Sport certifications like BSCG Certified Drug Free, NSF Certified for Sport, and Informed Sport add banned substance screening to the equation. Often several elements are combined into one seal as they are in banned substance certifications. If a brand says nothing about quality you should consider looking elsewhere.



Let history be a guide

History can be a guide when it comes to dietary supplement brands and some are serial violators of the regulations or have become notorious for putting banned substances in products. Always do your research first on the brand you are considering. When exploring on the internet use keywords like 'FDA warning' or 'doping' to see if there have been prior issues with a brand. Some groups like the FDA test products for drugs and have created databases of those that are adulterated. Check to see if a brand or product is on the FDA Health Fraud Product Database or the U.S. Anti-Doping Agency (USADA) High Risk List as part of your research on product quality.

3. IS THE SUPPLEMENT BACKED BY REPUTABLE SCIENCE?

If the supplement science doesn't stack up, then don't take it. Your first task as a student athlete should be to study your supplements. It's the most important assignment of the year because it could either improve or degrade your body and performance, not to mention your wallet. This subject area

requires you to become a bit of an expert. Supplements start with ingredients so do some digging on what is in a product to see if the ingredient really has been proven to be effective. You can refer to the BSCG Dietary Supplement Ingredient Advisory List for a black list of ingredients to stay away from. You can also look for branded ingredients as these often have more published research available on safety and efficacy. Some brands put finished product formulas through studies that demonstrate the claims they are making, this is a sign that a brand has put more science and thought into a formula.

Read the label

According to the FDA, supplement manufacturers need to list all the ingredients in a product on the label along with the appropriate amount of each in terms of

weight. That said, if the ingredients are part of a proprietary blend – the specific amount of each individual ingredient in the blend does not have to be listed, only the total. That's not to suggest that any product with a proprietary blend should be shunned. The specific combination might be so unique it needs to be kept a secret. However, the gold standard for throwing your support behind a supplement is always transparency. If it sports as many all-natural ingredients as possible. Box ticked. If it has a track record that's based on clinical studies that have real world results. Box ticked. Third-party seals. Box ticked. Anything less and you may be taking your body to the casino. A place where the house always wins. And you lose.

Show me the science

Before a supplement brand shows you the money ask them to show you the science. If they are using ingredients that have clinical studies that support the effectiveness and safety of the ingredients they will be happy to share. If not, that is usually a bad sign. Understanding the science behind the product will help you make a critical decision about whether the supplement is a good fit for you, whether you are representing the brand or just buying a product. Science based studies and reviews are the only reliable sources to back up the claims made by supplement companies. The better the research the better the product. Good science can help you make good decisions about supplements.

4. DID YOU REVIEW YOUR SUPPLEMENTS IN ADVANCE?

You are not alone. Your trainers and dietitians are some of the best resources you can rely on in your quest for nutritional and athletic superiority. Not only that, it is an NCAA requirement for student athletes to review dietary supplements in advance with school personnel and Drug Free Sport, the group that manages NCAA drug testing. You can submit supplement products to Drug Free Sport AXIS to have them checked by

a professional to assess the risk level. Just make sure you keep a record of the products you review with printouts or copies. If you are unfortunate enough to test positive on a drug test one of the first questions the appeal committee will ask is whether you appropriately reviewed your supplements in advance. But don't be mistaken, it is ultimately your decision alone to use dietary supplements and if one is contaminated with a banned substance you will still be held accountable to the full letter of the law even if you reviewed the product in advance.

5. IS YOUR SUPPLEMENT TESTED FOR BANNED SUBSTANCES?

Ingesting a banned substance smaller than a grain of salt can make you test positive on a drug test. This is perhaps the biggest risk you face when using supplements as you could lose a year of your athletic career if you're not careful here. Even if you take all the other steps to eat well, review product quality, the science, and have professionals evaluate them in advance a banned substance could still be hiding in a supplement. The only way to protect yourself from this critical concern is to use dietary supplements that have been certified by a third-party to be free of banned substances in sport. That includes your protein

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shakes. The BSCG Certified Drug Free program is a gold standard in the industry covering 500+ drugs including 296 banned substances in sport, more than any other program today. Other leading programs include NSF Certified for Sport, which covers more than 280 prohibited drugs, and Informed Sport or Informed Choice, that covers more than 250. But just because a product carries one of these third-party seals doesn't mean your job stops there. You need to verify the lot number you have in your hand has been tested by searching the program database. BSCG and Informed Sport test every product lot for banned substances; Informed Choice is monthly retail testing; NSF Certified for Sport has a variety of options when it comes to frequency of testing so the lot in your hand may not have been tested. Trust but verify, that's what we always say.

BSCG is proud to be listed as a resource by Drug Free Sport and the Academy of Nutrition and Dietetics along with many other groups. Feel free to reach out, we've got your back when it comes to supplement safety.



HOW CAN YOU TELL?

To embrace the best third-party testing protocols for banned substances, look for the BSCG Certified Drug Free stamp of approval. BSCG offers a complete suite of certification, testing, and GMP compliance services to the dietary supplement industry. GMP is a set of manufacturing guidelines designed to create a consistent and systematic approach for ensuring the quality of products, including dietary supplements. The BSCG Certified Drug Free program begins with a GMP compliance review that double checks the quality control process from start to finish. But proof is in the pudding so the program also checks to make sure testing is done to verify what's on the label is what's in the product.

Use a product with the BSCG stamp of approval and you're taking something that's been through the gold standard of testing for banned substances so you can have all the confidence you need. With more than 25 years of experience in anti-doping and sport drug testing, BSCG tests products with the same methods used to test you as an athlete, just adjusted to work in supplements. BSCG

brings the Olympic standard in drug testing to finished product brands, ingredient suppliers, manufacturing facilities, teams, leagues, athletes, and other consumers that want to verify that the quality of supplements meet expectations. This critical assurance verifies that products are not contaminated with drugs or other agents that can lead to health concerns or positive drug tests. Product quality is verified from head to toe offering the collegiate athlete the best possible outcome. Want to use your name, image or likeness to represent a nutrition brand then start your search by looking for the BSCG gold seal. In short, BSCG is the company that keeps collegiate athletes and supplement manufacturers safe and in the clear.

WHAT BSCG DOES

BSCG looks out for product quality and banned substances so you don't have to. They make supplement shopping easier for you. Is this product made with legit ingredients? How do I know it was made right? I think this is a good product but has it been tested for banned substances?

Find the BSCG Certified Drug Free stamp on a product and you know your biggest questions have been answered. BSCG President and Co-founder, Oliver Catlin is a thought leader in the realm of dietary supplements, drug testing, and anti-doping in sport. Oliver, the son of renowned anti-doping guru Don Catlin, M.D., has been working in the arena of sports anti-doping science and dietary supplement certification and testing for almost 20 years. Oliver

started his career at the UCLA Olympic Analytical Laboratory as the director of finance and administration. He helped oversee drug-testing programs for USADA and the U.S. Olympic Committee (USOC), the National Football League (NFL), Major League Baseball's Minor League Drug Prevention and Treatment Program, the National Collegiate Athletic Association (NCAA) program administered by Drug Free Sport, as well as the U.S. military and other organizations and sports leagues.

After leaving the UCLA Olympic Lab, Oliver worked with Don and colleagues to create several organizations that address a range of issues related to sport anti-doping science, including identifying and developing tests for new and evolved banned substances, conducting drug testing in human and equine sports, and working to build healthy sporting cultures for athletes.

At BSCG, Oliver has led the way in developing its Certified Drug Free brand, growing its sports testing menu and rounding out the scope of services. Under his leadership, BSCG expanded its industry leading drug testing menu to over 500 drugs, added coverage for drugs not banned

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in sport for consumer protection, customized drug testing for animal supplements, and added label claim and contaminant testing and GMP audit services. Today BSCG is proud to certify more than 85 brands and 500 products in over 100 countries and counting.

Oliver is intimately involved with BSCG on a day-to-day basis, working closely with responsible manufacturers, concerned athletes, and other interested parties to ensure their products are free from banned and dangerous substances and meet the highest quality standards. Need something good to read? His writing takes an unflinching look at sport drug testing and the interconnections with the dietary supplement and natural product industries. Exploring the depths of the testing process and often combining little known facts with unvarnished opinions based on two decades of experience as a leader in third-party certification and testing. His leadership reflects a depth of thought, a commitment to integrity, and a desire to make the industry work better for all concerned. For collegiate athletes the articles often provide important supplement safety tips.



SUPPLEMENT EPIC FAILS AND WINS

Not everything you find on the supplement shelves is safe

There are plenty of examples but this one is bigger than most. In late January 2020, a massive recall of dietary supplements was announced in the United States. More than 800 brands of supplements from contract manufacturer ABH Nature's Products, ABH Pharma, and Stocknutra.com were recalled due to Good Manufacturing Practice (GMP) compliance

violations. A lackluster approach to GMP compliance can lead to the demise of an entire brand sometimes at the expense of collegiate athletes who used the products in question. Brand owners and managers are responsible for ensuring compliance as much as manufacturers. Third-party seals help you avoid brands with sketchy quality.



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HOW TO FIND A WIN

Compliance with GMP, proper quality control and verification of label claims, and banned substance testing create a winning combination in a supplement, and a certification program. You can do your own research, and you should, but third-parties like BSCG take the guess work out. Take advantage of decades of experience and look for brands that have made a commitment to go above and beyond industry standards to demonstrate the quality of their products through third-party certification. BSCG offers a full suite of certification programs. All programs include initial review of ingredients, claims, quality control, and GMP compliance assessment. BSCG Certified Drug Free is the gold standard in banned substance protection with every lot tested for more than 500 drugs. Our BSCG Certified Quality program is the retail standard with annual testing for our industry leading drug testing menu, and verification of ingredient identity and label claims, and screening for contaminants. BSCG Certified CBD is an all-in-one certification program customized for the CBD product industry which includes testing for CBD and cannabinoid levels, environmental contaminants, and banned substances in sport and other drugs with strict limits on THC to protect against positive drug tests. The BSCG Certified GMP program shows that manufacturers have been audited for GMP compliance. BSCG is proud to be a global leader in third-party certification and testing. We are here to protect you and your supplements.

REWARDING BEST PRACTISES

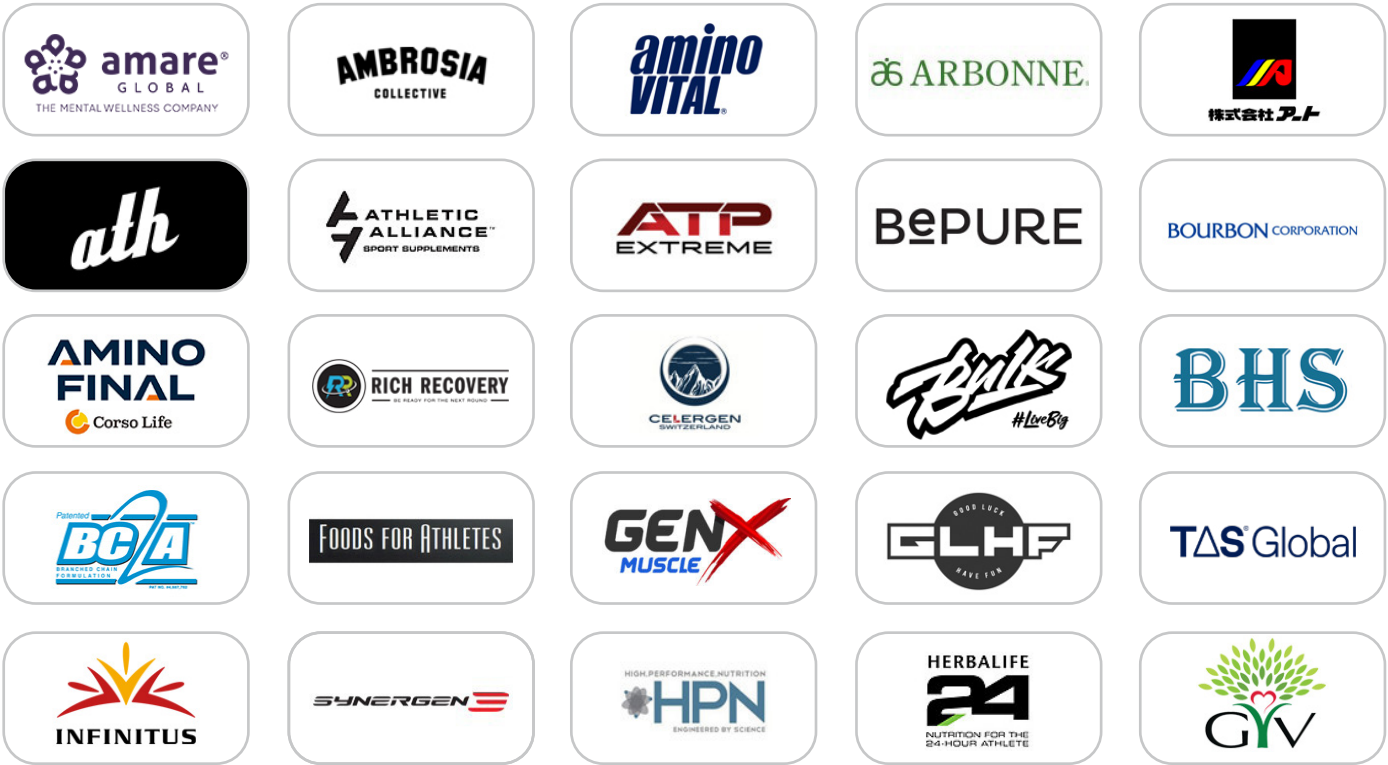
The UFC is one of the biggest sporting organizations in the world and BSCG is officially recognized in the UFC Prohibited List as an approved third-party supplement certification provider for its athletes. The UFC is not alone with many other organizations acknowledging BSCG and the Certified Drug Free program as an important resource including; Drug Free Sport, the National Institutes of Health – Office of Dietary Supplements, Academy of Nutrition and Dietetics, International Society of Sports Nutrition, LPGA, CrossFit, USA Triathlon, USOC Sports Nutrition, National Academy of Sports Medicine, National Athletic Trainer's Association, U.S. Department of Defense Operation Supplement Safety (OPSS), IMG Academy, Sports Nutrition and Dietitian Japan (SNDJ), and other groups. BSCG is proud to be a leader in third-party certification and we are grateful for acknowledgement from the UFC and others. Third-party certification programs like BSCG's help athletes navigate the risks inherent in supplement use. Reward yourself with some of the highest quality supplements you can find so your mind can focus on the game.



WHO CAN YOU TRUST?

Look for the BSCG Certified Drug Free gold seal on products to identify products you can trust. It requires every lot to be tested for more than 500 banned substances in sport, prescription, OTC and illicit drugs. It also represents that audits have been done to ensure compliance with GMP and that proper testing has been conducted to verify label claims and check for contaminants like heavy metals, pesticides, solvents, or microbiological agents. The BSCG Certified CBD program applies a similar process to CBD products increasing consumer confidence by ensuring products meet specifications and will not put users at risk of psychoactive effects or positive drug tests from THC. If you see the BSCG Certified Drug Free or Certified CBD seal rest assured that the product has been tested for banned substances and product quality reviewed to ensure you get the best supplement possible.

CLICK HERE TO CHECK OUT ALL OF OUR CERTIFIED CLIENTS



FIVE SUPPLEMENT ACTIONS POINTS FOR COLLEGAITE ATHLETES

As a reminder these are five critical things you should do when evaluating your supplements

- 1 Optimize your nutrition then consider supplements
- 2 **Choose supplement quality above all else**
- 3 Make sure the supplement is backed by reputable science
- 4 **Review your supplements before you use them**
- 5 Banned substance certification maximizes your protection



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ramping them up, shutting them down, or mimicking them.

For as long as men and women have competed for anything – prizes, honor or even food and shelter – the search for ways to latch onto an edge on the opposition has been, if anything, more aggressive than the physical battle. If you can drink, eat, or inject it – chances are someone, somewhere has considered using it to get a sporting advantage. The modern era's no different. We've never lived in a more exciting time for developments relating to health, sports performance, and the human body. As we understand more and more about what makes us tick – and how to regulate it, via science or our own efforts, we're approaching an era where every limitation we thought we had might be cast aside. Running faster and lifting harder? Compared with ending disease and reversing ageing, they're small fry. And, some day, you might be able to buy both in pill form. For now, it's wise to supplement the smart way so your health and performance is always on the front foot. This is the secret to becoming the most bad-ass collegiate athlete you can unleash on the sporting world.

SUPPLEMENT YOUR FUTURE

To start wrapping your head around how to use supplements, it's best to understand what modern companies are trying to achieve. The easy wins are gone. The human body, and how to fuel it, are now well understood. This means supplements that simply mimic a macronutrient the body uses for growth (like protein) or compound it can use for energy (caffeine) are almost comprehensively well developed. The next steps are going to evolve as scientists' understanding of the way the body's chemical and biological processes improves, by

