



High School Athletes and Coaches Social Drug Use and Performance

PROACTIVE APPROACH to a great threat...

In the interest of sport, we feel compelled to spend some effort in the area of educating young, aspiring athletes, concerning the use of recreational drugs. The magnitude of this problem is even more alarming, because we know that these behaviors begin during the high school career. The combination of use for both of these substances has ruined many careers. It is our hope that your generation of athletes begins to change this self destructive culture.

The American Athletic Institute has made a commitment to facilitate on-going programs in the area of athlete chemical health.

The American Athletic Institute has conducted studies in the area of recreational drug use and athlete performance. Here are some of the findings:

ALCOHOL

TRAINING EFFECT

Every time you get drunk, you lose approximately 14 days of training effect. You lose all you have worked to gain. One night of drinking and two weeks of training effect is erased. You are wasting your time and your career.

TRAINING HORMONES

Alcohol suppresses your training hormones for up to 96 hours (four days) Basically you are at practice but the hormones you need to gain training effect and condition are not. You practice but no improvement comes.

PERFORMANCE POTENTIAL

The effect of recent heavy drinking lowers your performance potential by 11.4% before you even step on the field. This study was on National Team level athletes. It would be a far great effect on a college or high school athlete. Perhaps as much as 20-30% decreases in performance potential.

The best you can be is some % of your best (100%). Imagine playing at 80% of where you could be. Imagine scoring 20% more points or winning 20% more games...

MUSCLES

Your muscles will become fatigued quicker

Lactic acid levels which fatigue your muscles, increases much earlier and primary muscles that you depend on shut down or are slower and weaker.

LUNGS

Your breathing will be much heavier and you will hyperventilate much earlier in practice or a game.

You will not be able to catch your breath during breaks in activity. Your breathing rate will be very high and you will hyperventilate or lose control of your breathing. Your lungs are trying to get oxygen to your working muscles and clear carbon dioxide (CO₂) from your system but they cannot. Your muscles begin to suffocate

HEART

Your heart rate will be much higher and over time your cardiac output will decrease.

The oxygen rich blood will not reach your working muscles. The lactic acid will build up in the muscles and you will slow down and be weaker.

MUSCLE FUELS

It will take you longer to reload muscle fuels (glycogen).

Normally we can reload our muscles with fuels in 8-12 hours, but after drinking it can be 16-24 hours.

RECOVERY

You will take much longer to recover from the stress of training.

Normal recovery from maximal stress is 24 hours but after drinking, it can be 48-96 hours.

DEHYDRATION

Alcohol is a diuretic, which means it makes you urinate.

You lose lots of body fluids and all your physiological functions decrease.

HORMONE CONVERSION

You cannot turn pre-hormones into training hormones.

Out with all your urine go most of your water soluble vitamins, including the B vitamins, some of which are responsible for converting pre-hormones into training hormones. Until these levels are back you cannot make hormones for training.

MUSCLE REPAIR

Your ability to repair damaged muscle is reduced.

When we train muscle is damaged. We repair it by making protein into new fibers. Drinking slows down this repair process. It is in your speed muscles that this process is most reduced.

REFLEX

Alcohol slows down the reflex in regard to reaction time.

Alcohol affects reaction time and hand eye coordination which are two of the most important functions in most sport.

CONCLUSIONS

Alcohol is a metabolic poison, clear and simple. It affects the entire body and all body systems, especially those that control high performance. No serious athlete should use alcohol.

MARIJUANA

Marijuana negatively affects the CNS (Central Nervous System). In the sport of lacrosse your CNS must be at optimal levels in order to be at your best. When you smoke pot, it is in your CNS for thirty days. It also accumulates over time. This means if you smoke it daily, it is building up in increasing levels. Marijuana is every bit as damaging to your brain and CNS as alcohol is to your muscles, lungs and heart. Combine both and you are nowhere near the athlete you could be. Listed below are the most serious effects on athlete performance, from marijuana use.

MOTIVATION FOCUS

Most athletes who are marijuana users have motivational problems. It is hard enough to maintain focus day after day and game after game when we are healthy and rested. If you use drugs it creates additional distractions in these areas. The ability to be highly focused and motivated is jeopardized by marijuana use.

PROCESSING MULTITASKING CONFUSION

In sport many things happen continuously and simultaneously. To function effectively our CNS (central nervous system) must make quick, responsive decisions and also sort out situational priorities, strategies as well as the order in which we must determine the importance of options as well as responses. We also must have the ability to take in all outside input and establish which of those signals are most important. If we cannot multi task or do many dozens of things at once our effectiveness decreases. Marijuana affects the brains complex ability to do many things at once and to sort out that inflowing input, establish priorities for action and response.

VISUAL TRACKING DEPTH PERCEPTION

Marijuana use also affects the visual system. Recent studies have shown that losses occur in the ability to visually track or follow moving objects. It also decreases the ability to determine accurate visual depth, or for example in sport, to tell how far or near an incoming object is or to determine at the same time, the velocity or speed at which it is traveling. This would be critical in making pre-movements, for instance, to catch an incoming pass or block a shot.

REFLEX REACTION PRECISION ACCURACY

Marijuana reduces our reflex or reaction time. You are slower at reacting to outside stimulus. Precision and accuracy are also affected.

MYOGRAPHIC IMPULSES BIOMECHANICS

Even the electrical impulses that our brain sends to our muscles to make them react or even contract and relax are affected. This has an affect on the exactness of our movements or biomechanics. This means our skill level is decreased.

MOVEMENT MEMORY COORDINATION

One of the main sites in the brain affected by marijuana is the area which is responsible for movement memory, or the ability to remember the exact way to create skilled movements over and over.

Missed movements or uncoordinated skills make you less effective.

CONFUSION CRITICAL EVALUATION OF SELF

The cumulative or collective build up of chemicals in your brain and CNS creates many negative impacts on your ability to be a good athlete. Unfortunately it also affects a part of the brain that has to do with our critical evaluation of self. This is very dangerous for any athlete at any age or level, because it allows you to somehow rationalize that using marijuana is o.k. or that it has no affect on your performance. Nothing could be father from the truth. Marijuana use will prevent you from reaching your full potential.

REROUTING FUNCTIONAL USERS

Many players use marijuana. That is no reason to join them. If you want to be a great player and reach your full potential, you must be focused. Players, who use marijuana regularly, become functional users. Some are still very good players, but nowhere near the players they could be. The human brain is so amazing that it basically learns how to reroute these functions and abilities that are affected by the chemicals to other parts of the brain, which have no ability to do those tasks. They take over and learn how to function as best they can, however it is far from optimal.

Social Drug Use and YOU

One thing is for sure, athletes are concerned with performance. Our goal is to train with the best methods possible and to get rid of as many negative factors as possible. Alcohol and Marijuana have ruined many careers. If you use them, you will never be as good as you could have been.

TRAINING

***Remember when you are not training,
That somewhere, someone is training...
And when you meet them,
They will beat you...***

Matveyev USSR

PARTYING
Remember when you are partying,
That somewhere, someone is not partying...
And when you meet them,
They will beat you...
Underwood USA

Nothing in the sports world is truer.

On behalf of the American Athletic Institute we hope you will consider these issues and think very seriously about the things you do off the field, that ruin the things you do on the field...

John Greig Underwood, Director

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