

## The Growing Threat of Steroid Abuse Among Youth Athletes

## **Introduction**

In 2013, surveys conducted by the Digital Citizens Alliance found that over 75% of young U.S. males felt pressured to use performance-enhancing drugs (PEDs) to stay competitive, and 40% believed PEDs were the only path to professional sports. Only 11.5% felt no pressure at all. Only one in five professional athletes, however, found steroid use to be a problem (Toporek). This data reveals a troubling disconnect between athletes' lived experiences and perceptions within professional sports, underscoring how vulnerable adolescents and college athletes are to performance pressures. Performance-enhancing drugs, or anabolic steroids, help build muscle and strength but come with serious risks like liver damage, high blood pressure, and depression ("Learn About the Risks of Performance-enhancing Drugs"). With rising mental health struggles and the increasingly competitive sports environment, many young athletes turn to PEDs under pressure to succeed. The adolescent brain's plasticity, outside influences, and the addictive nature of steroids further increase this risk.

## **Plasticity of the Adolescent Brain**

Many factors that can lead to steroid use, but adolescents' minds are especially vulnerable to pressure. The National Institute of Mental Health (NIMH) states the brain develops until the mid to late twenties and the maximum density of grey matter peaking in the primary sensorimotor cortex first and the prefrontal cortex last ("The Teen Brain: 7 Things to Know"). This means the subcortical brain areas, especially the limbic and reward system, develop earlier creating an imbalance. Konrad et al., researchers in adolescent psychiatry, neuropsychology, and cognitive neuroscience, corroborates the NIMH in this brain development which drives typical adolescent risk-taking (425-431). While the high plasticity of the brain permits intellectual and emotional development, it also opens the door to potentially harmful influences such as PEDs. A

2018 study in the *Journal of Sport & Exercise Psychology* found that athletes are highly susceptible to performance-related anxiety, which can have adverse effects on mental health (JSEP). This increased vulnerability to performance-related anxiety may lead some youth athletes to seek quick solutions, such as turning to PEDs, in an attempt to alleviate the pressure or gain a competitive edge. Though PEDs provide short-term results, they often exacerbate underlying mental health issues and introduce long-term physical and emotional risks. This highlights the importance of addressing mental health challenges and societal pressures that athletes face, rather than allowing harmful coping mechanisms to gain a foothold in their behavior and decision-making. Adam R. Nicholls, a professor of sport psychology at the University of Hull, along with his co-authors, takes this one step further. They state that PEDs can cause irreversible health consequences and even premature death (Frontiers). This review included 52 studies (covering 187,288 young people) found psychological factors were the biggest drivers of PED use, aside from age and gender. This reinforces how much mental health influences adolescent PED use.

### **Pressure From Peers, Professionals, and Incentives**

Jose Canesco, A former professional baseball player—stated, “I don’t recommend steroids for everyone...but for certain individuals, I truly believe, because I’ve experimented with it for so many years, that it can make an average athlete a super athlete. It can make a super athlete incredible (NW).” Youth athletes may hear this and believe steroids are necessary for success. Peers, coaches, or parents can also fuel these beliefs. Research from Smith et al. (2020) shows fear of judgment or rejection can lead to social anxiety and feelings of isolation. These consequences can have adverse effects on one’s mental health. These pressures can culminate and push athletes toward PED use. The lure of fame, fortune, and financial security also tempts

young athletes. If athletes believe PEDs are their only shot, then there is no risk in using them to get there. Some view steroids as a calculated risk, not a bad choice. In 2022, 46.3 million Americans 12 and older had a substance use disorder; 19.4 million also had a mental health condition (SAMHSA). This highlights the strong link between mental illness and substance abuse. Rather than one directly causing the other, the relationship is often cyclical—mental illness can contribute to substance abuse, just as substance abuse can exacerbate mental health issues.

### **Addictive Nature of Anabolic Steroids**

Joshua H. Whitman, an American university administrator, lawyer, and former professional football player believes that “success in athletics can provide a high just as potent and addictive as any achieved using narcotics (Illinois).” Sports are driven by the desire to win. Many young athletes tie their identity to their athletic success. Whitman noted that excelling in sports can become addictive. This addiction can lead to two paths. Athletes whose identity revolves around sports may turn to PEDs to improve. Athletes struggling to keep up may also resort to PEDs. Although these athletes take different paths, their motivations converge: the *need* to win and be better, regardless of the consequences. PED abuse causes many adverse side effects to one’s health and overall wellbeing. On the other hand, the greatest concern is those that are multifactorial. That is, posing a risk to those that abuse substances and loved ones dependent on them. In short, substance abuse not only exacerbates one’s health but everyone else around them. As with any drug, quitting is the hardest part. Anne Roberts, an expert in integrative medicine, often treats steroid abusers (Dr. Roberts). Her job is not to convince them to quit, but to safely help them to do so. The surplus hormonal imbalance created by steroid abuse reduces the bodies’ ability to produce testosterone on its own. The complete stoppage of using these

steroids results in pain, insomnia, weakness and most importantly, extremely low levels of testosterone. This translates directly to a lack of motivation and confidence, leading to depression and suicidal thoughts. Therefore, specialists such as Dr. Roberts need to gradually wean patients off of their unhealthy steroid usage to prevent any withdrawal effects.

## **Conclusion**

Although steroid abuse is widely recognized as harmful, its prevalence among youth athletes remains high. Schools may offer health classes covering the risks, but many adolescents still turn to steroids, showing that more preventative action is needed. Professional athletes should be barred from speaking positively about steroids, as their influence can normalize drug use. A study by Eliot D, a professor of Medicine, et. al compared athletes who were more likely to consider steroid use and those who weren't (NIH). Both groups had similar levels of knowledge about steroids, weight training, and sports nutrition, and they felt similar influences from coaches, the media, and how common they thought steroid use was. The key differences were psychological: steroid users had higher rates of substance abuse, impulsiveness, hostility, and a "win-at-all-costs" mindset, alongside lower self-esteem and greater peer acceptance of drug use, especially through a lack of parental disapproval. This highlights the importance of addressing influences from peers, parents, and coaches. Adam R. Nicholls et al. similarly recommend that anti-doping education should start in late childhood, years before most programs expose the youth to these problems (Frontiers). Parents, coaches, and friends must actively discourage steroid use and emphasize care for the athlete's well-being over performance. If peers, family, and coaches expressed their care about the kid themselves and their preferred "worse" performance over their counterfeit success through steroids, the majority of these cases could be mitigated. Coaches should also create safe environments for athletes to seek help

without fear of punishment. Lastly, youth sports should implement regular drug testing and clear consequences for steroid use. None of these solutions are difficult to implement, but youth steroid abuse is rarely discussed, leaving it overlooked. As Harrison G. Pope Jr., co-director of McLean's Biological Psychiatry Laboratory and a professor of psychiatry at Harvard Medical School and lead author of a paper published in the journal *Drug and Alcohol Dependence*, aptly states, "The thing that is remarkable about steroid dependence is that it afflicts hundreds of thousands of people, yet it remains the only major form of substance dependence that is almost completely unexplored (Harvard)."

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