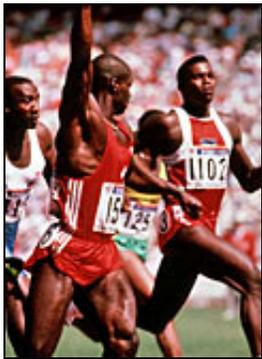


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Angella Taylor Issajenko had trained to be a sprinter. Jamaican born, but now a Canadian citizen, she was 20 years old and running on Canada's team in major international events. Her opponents, including the record-setting American, Florence Griffith Joyner, were among the best sprinters in track history. To compete with them she trained intensely. When her teammate and training partner Ben Johnson was disqualified for a positive drug test after winning the 100-meters at the 1988 Summer Olympics in Seoul, Issajenko was summoned as a witness in the investigation of Johnson's case. Her testimony was shocking. Between 1979 and 1988 she had regularly taken massive doses of 10 different anabolic steroids, three forms of human growth hormones (HGH), and numerous other substances, including anti-inflammatory drugs, diuretics, and mega-doses of B-12 and other vitamins. She was banned from competition, but returned to sprinting after being reinstated in the 1990s.



Performance-enhancing drugs have been used for centuries. Athletes in ancient Greece and Rome ingested various potions and substances, including hallucinogenic mushrooms, believed to improve physical performance. Strychnine and brandy was the substance of choice among European athletes in long distance events during the 1700s and 1800s (strychnine is a dangerous "upper" used to stimulate the nervous system). Heroin was used as a painkiller by boxers before 1900, and in 1886 a cyclist died after using a mixture of heroin and cocaine. The athletes who took this mixture called it a "speedball" because it boosted their energy and endurance. Other drugs, including opium, alcohol, caffeine, strychnine, ethyl ether, and nitroglycerine, also were used between 1880 and 1920. Cyclists in the 1930s and British soccer players in the 1950s used amphetamines in combination with cocaine to enhance their performance in grueling races and matches.

The availability and use of performance-enhancing drugs increased dramatically in the 1950s. The U.S. military experimented with amphetamines during World War II, and many young soldiers learned that the "uppers" that enhanced their performance on the battlefield could also be used on the playing field. Advances in biology and medicine during the 1950s allowed researchers to isolate human hormones and then develop synthetic versions of them that could be used to foster physical growth and development.

News about the availability of these new substances traveled fast among athletes in certain sports, especially those involving strength or endurance. As athletes across many sports began to use weight training and strength conditioning programs, they quickly learned from peers that they could build muscles and lean body mass through specialized weight training, planned diets, vitamin supplements, and a variety of newly developed chemical substances. Many of these substances enabled them to train harder and more effectively, increase strength and size, extend their endurance, and recover more quickly from fatigue and injuries, especially sore and torn muscles.



The market for performance enhancing substances has increased as there has been growth in the resources dedicated to sports by organizations and sponsors, the financial stakes associated with participation and success in sports, and the resources and knowledge available to athletes. This growing market has inspired

scientists and funded laboratories dedicated to "beating the system" of drug control by developing "designer drugs," undetectable substances, and new masking agents that cover certain molecules that drug tests are supposed to identify. For example, IGF-1 (Insulin-like growth factor-1) is a new muscle builder injected directly into the bloodstream. It significantly improves strength development and increases size, and it cannot be detected through current drug tests. In fact, drug tests cannot detect many of the newer performance enhancing substances, including human growth hormone (HGH) and dozens of expensive "designer substances" rumored to be available to athletes.

Many performance enhancing drugs have serious negative side effects. But athletes, even those in their teens, often think they can avoid those side effects by alternating drugs and taking them on scheduled intervals. The fear of negative side effects is also muted because most athletes, from youth leagues to professional sports, learn to dedicate themselves to their game above all other things, strive for achievement, accept risks and play through pain, and ignore all obstacles in their pursuit of athletic dreams. Therefore, they often are willing to pay the price and sacrifice their bodies to be accepted by fellow athletes and maintain their identities as athletes. They accept the risk of negative side effects just as they accept the risk of breaking bones, sustaining concussions, and blowing out knees during practices and competitions. In this sense, athletes using performance enhancing substances are different than people who use street drugs: most athletes use drugs to embrace and deal with the reality of their sports; most people who use street drugs do so to escape reality.

The dynamics associated with using performance enhancing drugs in sports is unique, and this makes it especially difficult to control drug use through testing or with arguments based on moral, safety, or fairness issues. Furthermore, if drug testing were really successful and widely used, many people would turn to forms of genetic engineering that could significantly enhance sport performance without being detectable except, in some cases, through very complex and expensive DNA tests. This makes performance-enhancing technologies the most serious issue faced in sports today.

Jay Coakley

Further Reading

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