

# High achievers

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## History of biohacking and performance enhancement

From the ancient Greek Olympians to modern technopreneurs, human beings have always looked to outperform each other. This is rather unsurprising: Competition is central to life, even at its lowest levels (see, for example, this article on “microbial wars”). The drive to compete is stronger in some than it is in others, and while it brings benefits both for the individual and the species as a whole, it can also be taken to harmful extremes. The “zero-sum” nature of competition implies that there always must be a loser, and while some of us sweat bullets over the idea of losing, others have sought silver bullets to give them that winning edge.

Charles Brown-Sequard’s “Elixir of Life”, for example, called for the key ingredient of dog testicles. The eating of animal-, and in some cases, human flesh is not an uncommon phenomenon in the history of performance-enhancing substances. The earliest documentation of this are the ancient Greek Olympians who, in order to avoid injuries and overcome fatigue, often consumed organ tissue, the most common of which was—you guessed it—testicles. They also consumed stimulants including alcohol and sesame seeds. Not surprisingly, taking these substances was not considered cheating. However, since modern medicine has developed substantially more effective performance-enhancing substances, society is now collectively more disgusted at doping in sport, at any level, and considers it a disgrace.

## Getting Blitzed

Competitive sport has often been alluded to as symbolic of warfare. It is on the battlefield, then, that performance-enhancing substances can really flex their muscles. In the high-stress context of war, a soldier’s number one enemy has always been fatigue; other foes include injuries, pain, boredom and stress. Substances including alcohol, marijuana, hallucinogens, and especially amphetamines have been the weapon of choice in many an arsenal.

Less than a century ago, German soldiers undertook what could be considered today as the most famous of all battle tactics. German panzers and infantry surged into France via the Ardennes and outflanked the allies who, not anticipating this to be the point of attack, were concentrated in Belgium. The element of surprise, however, would not have been enough: had the Germans moved at the expected pace of an army of that time, the allies would have been able to circle round and meet them. It was in this instance that the German’s aptitude for chemical engineering—for once outperforming their advanced mechanical engineering—made the Blitzkrieg so menacing. The soldiers had been supplied with a pill called Pervitin. Whilst on this drug, soldiers were able to fight and forgo sleep for up to three days and nights, without showing the slightest sign of fatigue. One soldier writing home mentioned that, not only was he suddenly relieved from the sheer emotional weight of fighting a war but was actually “happy!” while on Pervitin.

However, by the late 1940s, it was discovered that, following a Pervitin binge, soldiers were so ineffectual that they were all but walking dead. Some even turned extremely violent and committed war crimes against civilians, while yet others were recorded as attacking their own officers. It wouldn’t surprise you to hear, then, that what we today call crystal meth was first called Pervitin. Before Pervitin was discontinued from use in the Third Reich’s armed forces, however, it made such an impact on Nazi high command that they went on to invest in additional performance-enhancement research, producing the likes of cocaine chewing gum that was supplied to one-man submarine pilots. Grinding away upstream, the pilots were able to navigate the depths of the ocean non-stop for nearly seven days.

## The bleeding edge

In present-day Silicon Valley, believe it or not, things aren’t that different from ancient Greece or the world of doping in professional sport. In the talent-saturated industry of market disruption and venture capital, many are looking for any edge

that they can get. Like the stereotypical cokehead bankers and advertising executives of the 1980s and 1990s, ‘tech-bros’ are making it a habit of micro dosing LSD and psilocybin (magic) mushrooms. By taking only about a tenth of the normal dose of LSD, micro dosers forgo the more severe symptoms of intoxication, and rather experience subtler, more “industry-appropriate” cognitive alterations such as heightened alertness, energy and creativity. Although the phenomenon is far more widespread today, this little bump of efficiency was already recognised decades ago by a small circle of San Franciscans (whose honours roll famously includes the likes of Steve Jobs and Bill Gates). Yet, there remains a shortage of scientific rigour to support claims that there is little downside to micro dosing, and that it can improve general wellbeing., In spite of this, the notion of using illicit drugs for their output-enhancing effects has spread far beyond San Francisco and the tech industry. In fact, it is only one of the many chemical, biological and dietary tricks and tweaks that—under the broad term ‘biohacking’—are pursued in the name of greater productivity and endurance. Whilst a significant amount of DIY biology remains low-key (e.g. sleeping aka “brain cleansing” and intermittent fasting, the benefits of which there is substantial scientific evidence), the true obsessives are far less casual in their exploits. For example, there are those who attempt to fight aging through pumping a young person’s blood into their veins and bathing in infrared light, whilst so-called ‘grinders’ argue that technology can be used elevate and evolve the species; or simply to remove the inconvenience of carrying keys around using subcutaneous chips.

### Playing fair

So why, then, are we so much more tolerant of performance enhancement in industry, when one group in particular, arguably the best of us, would suffer severe sanction if found guilty of altering their natural ability: sportspeople? There is a powerful, almost tribesque sense of community that comes with supporting our national, and even local teams. We collectively idolise the discipline, skill, devotion and self-sacrifice displayed. In fact, sport could well be “The Moral Equivalent of War” that psychologist William James argued was crucial for human beings to find—all the positive social effects without the devastation. Following this reasoning, why is biohacking considered cheating in sport, but not in industry? It is probably a case of representation and identity enhancement. We’re not willing to excuse bad behaviour in those who represent us, but as long as you are only representing yourself, anything goes.