

# *Research on the Effects of Doping*

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**Abstract:** The background of this essay is that many athletes start to use illegal drugs to increase their physical ability. Many athletes tend to take a lot of drugs in order to enhance their physical performance, so the main topic that this essay wants to focus on is the pros and cons of using some drugs. Especially the positive or negative effects on athletes' physical health. This research mainly includes several pieces of information from academic websites, books, and newspapers. The research data is collected from academic websites. The five important words of this essay are "athletics, pros, cons, medicine or drug, effect of drug." The conclusion of this research is that medication can have irreversible effects on athletes, especially with huge pressure on the heart, and excessive medication can also mitigate the age of athletes, leading to early retirement. What athletes really need to do is improve their skills rather than using fraudulent means to improve their performance, which also leads to unfair competition for other athletes who have not taken medication.

**Keywords:** Doping, effect, athletes

## **1. Introduction**

Nowadays, many athletes tend to use illegal drugs, which can increase their physical ability, because most serious athletes feel a strong drive to win. [1] They often dream big, too. Some athletes want to play for professional sports teams. Others want to win medals for their countries. The pressure to win leads some athletes to use drugs that might give them an edge. These are called performance-enhancing drugs. The use of these drugs is known as doping. The drugs can have some positive and negative effects on athletes. The main topic that this paper wants to present is the pros and cons of drugs on athletes, whether they have a positive or negative impact. The main problem this paper wants to discuss is the overdosing of the athletes. So why do successful athletes use illegal drugs to enhance their abilities? During this research, this paper includes some documents and making some documents analysis in order me to understand this topic. The goal that the study wants to achieve in this essay is to accumulate more knowledge about kinesiology. This topic may also let me better understand the pros and cons of athletes who use some drugs to increase their muscle behavior [2].

## **2. Analysis of Positive Effects**

The drugs can have some positive effects on athletes. It is known that the Olympic competition is the most professional competition in the world. Each country will let its best athletes join this game. Those athletes represent their personal honor and their countries, so they need to try their best in order to gain the medals. However, only the best player in the world can win the gold medal, so the

competition among all athletes really intensifies. Then, some athletes can use drugs in order to gain this prize. The first benefit that drugs can bring to athletes is a decrease in muscle damage. To be more specific, most athletes have high strength in training; otherwise, they do not have a chance to win the competition. Elite athletes tend to work harder than others, so they spend much more time training, so their energy will decrease sharply compared to other players. Thus, it can bring some risks to athletes' lives, such as muscle sprains, cramps, and aches. How can they solve this problem? Those athletes may use some erythropoietin to stimulate their muscles in order to increase their strength, which means the muscles can withstand more work and the risks decrease. Then, athletes do not have accidents that might appear in their training. The athletes who do not have the same level of training might improve dramatically, because their muscles can work more effectively. They can compete against with same level of athletes who do not use drugs. The second benefit is that drugs can bring to athletes is that they allow them to work harder and longer than before. Unlike previous benefits, the drugs can increase the strength of the muscles. Here, we focus on continuity and stability. The useful drugs allow athletes to work longer than in the past, which means they can do more work in the same period of time without a break. Some marathon runners will tend to use drugs to help their muscles work longer. The marathon runner always needs to run a relatively longer distance than other track men, so they have better stamina than track men. Even though the training is different, the competition also creates a huge challenge to athletes' physical ability. Then, the drugs allow marathon players to maintain high levels of locomotor performance, which means their bodies can withstand the effects of exhaustion. In contrast, if marathon runners do not use those drugs, they may lose the ability to compete with other runners or have some serious physical problems. Therefore, some drugs are mandatory to allow marathon runners to show their abilities. The third benefit that drugs can bring to athletes is their beautiful body shape or appearance. To illustrate, some athletes like to show their body shape to other people. There will be a lot of bodybuilding competitions every year. Many competitors want to show off their best performances to their audiences and judges in order to get some rewards. Based on the reports, most bodybuilders will prefer to use drugs to make their bodies more attractive. One famous example is Arnold Schwarzenegger; many researchers mention that his body is a perfect example of someone using drugs because it is impossible to have the same quality of muscles without the assistance of drugs. Many bodybuilders' body fat percentages keep within four to five percent, which is impossible for common people. After using the drugs, their muscles will show clear muscle definitions, which are really amazing compared to people who do not use drugs.[3] Their shoulders will also become broad, so they can present a really well-organized body to audiences and judges. All of these are positive effects that drugs can have on athletes' muscle performance.

### 3. Analysis of Negative Effects

However, overdosing may have some negative effects on athletes' physical health. Based on the reports, each year there will be some accidents and retirements because athletes tend to use some medicine to maximize their potential. Many athletes are relying on illegal drugs, which can have a huge effect on their physical health. Even though some athletes know the dangers of overdosing, they still prefer to use some drugs. Illegal drugs will be unfair to athletes who do not use them. Olympic judgments tend to give harsh punishments to those athletes who try to challenge this basic rule. For instance, Justin Gatlin, who was an American athlete who used some illegal drugs, received an eight-year ban (reduced to four) when he failed a test for the banned steroid testosterone. [3] Thus, the Olympic judgment really focuses on the use of illegal drugs. So, what exact problems can drugs bring to athletes? The first negative effect that illegal drugs have on athletes is an increase in cholesterol levels. What is a cholesterol level? And what are the effects of a high cholesterol level? The cholesterol level is a waxy substance found in your blood that is really crucial to a human's physical

health because a high level of cholesterol may make it difficult for the blood to flow through the arteries in order to support the working of the heart. The heart is really important for athletes because their hearts need to withstand the pressure and intensity created by lots of training and competition. The heart needs to work well before athletes have a chance to win the competition. So, athletes need to make sure the blood can flow through their arteries before the beginning of the competitions. Otherwise, athletes may suffer from a heart attack or cardiac arrest. This study will explain some classic examples later. Thus, high cholesterol levels are really dangerous to athletes' physical health. The second negative effect that illegal drugs can have on athletes is liver damage. The liver also plays an important role in athletes' physical health. It is really important because a healthy liver can prevent athletes from developing some syndromes. A syndrome is a disease caused by a sequence of diseases. The liver damage, particularly, will cause athletes to have jaundice. Jaundice is a type of disease that can make people's skin and eyes appear yellowish. If athletes have this type of disease, they might lose the ability to look around them, and their eyes will appear yellow. [4] Overdosing is the main cause of jaundice because the drug leads to hepatocellular damage and subsequent decreased bilirubin conjugation by the liver. During this process, the liver will be largely affected, and athletes will get jaundice. Furthermore, the jaundice might also cause abdominal pain and swelling, so athletes cannot have a really good condition if they have this pain. Athletes need to spend a long time in the hospital or take some medicines. Their ankles and legs will also suffer a lot when their liver is not good. The ankles and legs are really important to the athletes because the ankles and legs can help them do some fundamental sports, so they cannot do any intense work when their ankles and legs are not working. As a result, liver damage can cause athletes to retire at an early age. The third negative effect that illegal drugs can create in athletes is mood swings and aggressive behaviors. Some athletes are relying too much on illegal drugs; they might easily lose their temper because some drugs contain ingredients that can raise people's levels of excitement. If athletes use those drugs really often, the consequences are really severe. The athletes will engage in some unconscious behaviors that might affect their family members or friends, such as fighting, mocking, and kicking. Those athletes' behavior is really aggressive and violent. They need other people to have some mandatory regulations in order to control their behavior. Nevertheless, elite athletes should not have this personality; their careers will be largely affected, and their lives will also decline sharply. So, illegal drugs affect the athlete's mood a lot. The fourth negative effect that illegal drugs can have on athletes is irregular heartbeats and other heart problems. Heartbeats happen when an event, usually an electrical disturbance, quickly and unexpectedly causes your heart to stop working. To illustrate, when athletes are doing some intense work, their hearts may suddenly feel attacked by a rock, and some of them will directly lose consciousness. Heart arrest is a really serious problem for everyone, especially athletes because their bodies need to withstand more work than those of common people, so they need a healthy heart in order to do those kinds of things. [5] Three weeks ago, a really famous example happened in Los Angeles. On Monday, University of Southern California freshman basketball player Bronny James, the 18-year-old son of NBA star LeBron James, suffered a cardiac arrest while training in the gym on the USC campus. This news was surprising because Bronny's father was one of the greatest basketball players of all time, so Bronny's accident is highly focused on by the media. Some of the researchers believe that Bronny's accident was caused by overdosing because there are no records indicating that Bronny James has any cardiac problems. This paper argues that Bronny may use some medicine to stimulate his muscle strength because he tends to join the 2024 NBA draft, so he needs to keep his muscle strength in order to get a high pick. However, this accident may have some negative effects on his future career. Bronny's talent is not as high as his father's, so he may use those medicines to increase his physical behavior. Thus, he can present a really good performance to all of the NBA teams. Nevertheless, NBA teams may not tend to choose a player who has a risk of cardiac arrest because NBA competitions are becoming more intense, so Bronny's body may not withstand

the NBA. Therefore, his pick will move down. The illegal drugs greatly affected Bronny's athletic career. The last negative effect that illegal drugs can have on athletes is hypertension, also known as high blood pressure.[6] High blood pressure is a really serious disease that may have a lot of negative effects on humans' physical health. The force of the blood will try to push against the artery walls. Then, the heart needs to work harder in order to pump the blood. Athletes will suffer a lot if they have hypertension because they cannot practice any weight training because this training depends on the athlete's power, and power is the basis of the training. Athletes who have hypertension have a lot of risks in doing this training, so it is impossible for them to achieve success. Most athletes who have hypertension do so because of overdosing.

#### 4. Conclusion

In conclusion, the research topic is the effects of doping. Especially, this paper focuses on the negative and positive effects. The positive effect of dosing is increasing body strength, which allows athletes to have a good performance. Such a basketball player can jump higher and run faster than normal athletes. The negative effect is causing some damage to athletes' organs and blood vessels. Especially to the weightlifters who already have intense exercises. In the future study, the research will mainly focus on the solutions to overdosing. Plus, personal perspective about drug regulation

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