

# Paper 2: Performance enhancing drugs

## Performance enhancing drugs

### Level playing field

If every athlete were to take them it would make things equal when competing

### Advantages to the performer from taking PED's

### Fame

The more successful you are the more famous you can become owing to more publicity

### Wealth

If you are successful you are more likely to win more prize money and attract sponsorship deals

### Increase chance of success

An archer taking beta blockers to reduce anxiety may be more accurate and have a greater chance of winning

### Cheating/immoral

If caught everyone will know you cheated

### Disadvantages to the performer from taking PED's

### Fines

If caught you may have to pay an expensive fine

### Damage to reputation

If caught you will not be able to compete, when the ban is over you may be past your peak fitness

### Associated health risks

Many performance enhancing drugs have health risks. Taking diuretics can cause kidney damage

### Bans

If caught you will not be able to compete, when the ban is over you may be past your peak fitness

### Disadvantages to the Sport when performers take PED's

### A Bad reputation

If a performer takes drugs the sport may not get the respect it deserves

### Poor credibility

If a performer takes drugs the sport may be seen as untrustworthy or unreliable

Drug	Effect on Performance	Health Risks	Which Sports
<b>Anabolic Agents</b>	allows performers to train longer and harder It increases protein synthesis helping develop lean muscle mass and speeds up recovery time	<ul style="list-style-type: none"> <li>Liver damage/CHD</li> <li>Testicular atrophy</li> <li>Infertility</li> <li>Skin problems</li> <li>Mood swings</li> <li>Aggression</li> <li>Baldness</li> </ul>	Activities that require power: <ul style="list-style-type: none"> <li>Sprinters</li> <li>Rugby players</li> <li>Weightlifting</li> <li>Boxers</li> <li>Baseball</li> </ul>
<b>Beta Blockers</b>	Beta blockers improve fine motor control by slowing heart rate and reducing anxiety which allow the performer to remain calm and controlled	<ul style="list-style-type: none"> <li>Nausea</li> <li>Sleep disturbance</li> <li>Tiredness/weakness</li> <li>Lower blood pressure</li> <li>Slow heart rate</li> </ul>	Activities that require precision: <ul style="list-style-type: none"> <li>Archery/shooting</li> <li>Snooker</li> <li>Gymnastics</li> </ul>
<b>Diuretics</b>	Diuretics achieve quick weight loss (fluids). They also mask other drugs making them harder to detect	<ul style="list-style-type: none"> <li>Dehydration</li> <li>Nausea</li> <li>headaches</li> <li>Heart/kidney failure</li> </ul>	Drug cheats and sports with weight categories: <ul style="list-style-type: none"> <li>Boxing</li> <li>Jockey</li> </ul>
<b>Narcotic Analgesics</b>	Narcotic analgesics increases the performers pain threshold so can mask injuries, also give a feeling of invincibility	<ul style="list-style-type: none"> <li>Nausea/vomiting</li> <li>Anxiety/depression</li> <li>Kidney/liver damage</li> <li>Addiction</li> <li>Risk further injury</li> </ul>	Any sport that a performer is injured: <ul style="list-style-type: none"> <li>Boxers</li> <li>Sprinters</li> <li>Football</li> </ul>
<b>Peptide Hormones</b>	<b>EPO</b> Erythropoietin (EPO) Can increase red blood cell production increasing O <sub>2</sub> delivery	<ul style="list-style-type: none"> <li>Thickening of blood</li> <li>Blood clots</li> <li>Strokes</li> <li>Heart attack</li> </ul>	Aerobic events e.g. long distance: <ul style="list-style-type: none"> <li>Running</li> <li>Cycling</li> </ul>
	<b>HGH</b> Human Growth Hormone Helps muscle mass and burns fat	<ul style="list-style-type: none"> <li>Arthritis</li> <li>Heart failure</li> <li>Abnormal feet/hands</li> </ul>	Strength events: <ul style="list-style-type: none"> <li>Weightlifting</li> <li>Sprinting</li> <li>Rugby</li> </ul>
<b>Stimulants</b>	Stimulants increase alertness, reduce tiredness and increase heart rate (therefore oxygen delivery)	<ul style="list-style-type: none"> <li>Insomnia</li> <li>Anxiety</li> <li>Aggression</li> <li>Irregular heart rate</li> </ul>	Alert/aggressive sports: <ul style="list-style-type: none"> <li>Rugby</li> <li>Boxing</li> <li>Ice hockey</li> </ul>
<b>Blood Doping</b>	Blood doping involves the removal of blood a few weeks prior to competition. The blood is frozen and re-injected just before competition. (increase red blood cells)	<ul style="list-style-type: none"> <li>Infection</li> <li>Thickening of blood (viscosity)</li> <li>Heart attack</li> <li>Embolism (blockage of vessel)</li> </ul>	Aerobic events e.g. long distance: <ul style="list-style-type: none"> <li>Running/cycling</li> <li>Cycling</li> <li>Swimming</li> <li>Games players</li> </ul>