

## Lesson plan: Performance enhancing drugs

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This sample lesson plan supports GCSE Physical Education (8582). We have designed it to help teachers structure a one hour lesson on which type of performers may use different types of performance enhancing drugs (PEDs), with sporting examples. This forms part of the ethical and socio-cultural issues in physical activity and sport topic as part of the sociocultural influences topic on paper 2 (week 25, year 2 scheme of work, 2 year plan). We have suggested it as a guide only and you can adapt it to suit teachers and their students' needs.

### Learning objectives

Develop knowledge and understanding of what is gained from taking the different categories of PEDs in terms of improving sporting performance.

Develop knowledge of named athletes who have been tested positive for the different PEDs and the sports in which they compete.

Develop the ability to apply knowledge of requirements of activities and events, and link these with the relevant category of PEDs.

### Learning outcomes

- All students should be able to describe the expected effects on performance of each category of PED.
- All students should be able to describe a sport, event and athlete who may use each type of PED.
- Some students should be able to explain the positive and negative impacts the sports performer could experience as a result of taking PEDs.

### Prior knowledge needed

Students should have learned the different categories of PEDs and their impact on a performer in the previous lesson and know some advantages and disadvantages of taking PEDs.

### Lesson preparation

Handouts containing the following:

- matching task – match the PED to the performance enhancing impact (Handout 1)

- picture board of athletes found guilty of taking the 7 PEDs. Print on A3 paper or select three athletes per group and then hand out the full grid after discussion to complete (Handout 2)
- Is it always the athlete's fault? (Handout 3)

## Activity

Durati on	Activity	Group size	Learning outcomes
5 minutes	<p>Watch the video clip (2 mins) on You Tube of Oprah Winfrey's yes and no questions to Lance Armstrong.</p> <p><a href="#">Oprah Winfrey interviews Lance Armstrong</a></p>	(Group size)	All students should be able to link a PED with an event and a named athlete.
10 minutes	<p>Students to complete recap task.</p> <p><b>Handout 1</b> Match the category of PED to the effect of this drug type.</p> <p>Discuss the demands of the Tour de France and why Lance Armstrong took the drugs named by Oprah.</p> <p>Each group to feedback. Discussion.</p>	<p>Individually</p> <p>Small groups/ pairs</p> <p>Whole class</p>	
10 minutes	<p>Introduction to elite athletes who have tested positive for PEDs via a picture board.</p> <p><b>Handout 2</b> distributed/displayed on board</p> <p>To be completed in pencil first prior to discussion. Complete Lance Armstrong's as the example.</p> <p>Students given the athlete's sport. Could show clips of the athletes in action.</p> <p>Discuss/state which group(s) of PEDs each athlete would have taken and why? Link to performance in that sport, not just the effect on the body.</p>	<p>Whole class</p> <p>Individual/ pairs</p>	<p>All students should be able to list the categories of PEDs.</p> <p>All students should be able to describe the impact of a</p>

	<p><a href="http://beep.ac.uk">beep.ac.uk</a> website - <a href="#">Performance enhancing drugs in sport</a></p> <p>This is a good resource that could be used to support pupils with this task or as an extension for those that complete quickly.</p> <p><a href="http://theguardian.com/sport/2016/mar/08/meldonium-maria-sharapova-failed-drugs-test">theguardian.com/sport/2016/mar/08/meldonium-maria-sharapova-failed-drugs-test</a></p>		<p>specific PED and how that would improve a performance in a specific sport.</p> <p>All students should be able to give named examples of drug cheats in at least 3 different activities, together with the drug type taken.</p>
<p>15 minutes</p>	<p><b>Handout 3</b> Is it always the athlete's fault?</p> <p>Introduction to the fact that in the past, athletes were 'forced' to take drugs under a political regime.</p> <p>Read handout and debate/discuss.</p> <p><b>Word tennis</b></p> <p>Played before the introduction to stimulate thought/debate or following introduction to reinforce knowledge and examples.</p> <p>How to play:</p> <p>Teacher makes a statement with 2 answers eg agree/disagree or two types of PED. Students stand on the side they agree with. From the group with the most, one student offers a reason/justification for standing there and if they can, one from</p>	<p>Whole class</p>	<p>Students should give examples of PEDs being taken by athletes under a political regime and the impact of these PEDs.</p>

	<p>the other group provides a counter argument. Teacher decides on who gets the point.</p> <p>Examples to discuss:</p> <ul style="list-style-type: none"> <li>• Lionel Messi – HGH – drugs for medical reasons</li> <li>• Race horses being given PEDs.</li> </ul>		
15 minutes	<p><b>Plenary</b></p> <p>Role play</p> <p>Act out a scenario of playing a sport and being offered/given a drug that would improve that performance. Try and use a sporting example that hasn't been discussed yet.</p> <p>Peer assesses performances to see whether correct examples have been given.</p>	Work in small groups	All students should be able to know which drug type will improve performance in a named sport and explain why.
5 minutes	<p>Recap of key sporting examples of drugs cheats.</p> <p><b>Homework task</b></p> <p>Pupils to find two other examples of sportsmen or women that have been banned from sport for taking PEDs.</p>	Students work on their own	Students should be able to apply knowledge gained in the lesson to research athletes, the PED(s) taken and the reason(s) why.

## Further work and reading

### Plenary

Describe any plenary activities or discussions held to conclude the lesson.

### Extension

Extension work (differentiation task): some students can explore the drugs in more detail or produce a presentation on the topic, linking to positive and negative impacts of PEDs.

### Preparation for next lesson

To complete homework and read over notes written in the lesson, considering the advantages and disadvantages of taking PEDs.

### Homework

Students should add their own examples of sports performers who have been found guilty of taking PEDs.

## Handout 1 – PEDs

Performance enhancing drugs recap task.

Match the PED with a positive effect it has on the body for an athlete.

Stimulants

Increased weight loss

Narcotic analgesics

Increased muscle mass

Anabolic agents

Increased alertness

Diuretics

Increased oxygen carrying capacity

Peptide hormones (EPO)

Pain killers for overtraining

Blood doping

Improved fine motor control

Beta blockers

Increased oxygen carrying capacity

## Handout 2 – Drugs cheats

Picture board of athletes found guilty of taking PEDs		
Lance Armstrong	Shane Warne	Randy Grimes
		
PED(s) taken:	PED(s) taken:	PED(s) taken:
Performance enhancing effects:	Performance enhancing effects:	Performance enhancing effects:
Ben Johnson	Kim Jong Su	Maria Sharapova
		
PED(s) taken:	PED(s) taken:	PED(s) taken:
Performance enhancing effects:	Performance enhancing effects:	Performance enhancing effects:

## Handout 3 – Is it always the athlete's fault?

In the 1960s, EAST GERMANY (GDR) were seen as the poor relation to West Germany. So, to increase its international status, it used sport.

The GDR won 22 medals, including 10 golds at the 1983 World Athletic Championships in Helsinki, topping the medals table for the first time.

From 1976, across a period of just over a decade, East Germany won more medals than any other nation at three Olympic Games and two World Championships.

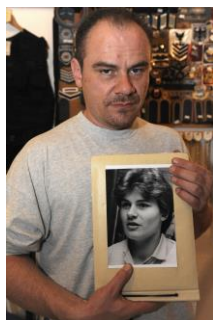
The East German track program began in 1968 where male hormones were given to top female athletes, often without the knowledge or consent of those taking them. By the mid-1970s, they were giving them to girls as young as 12. The pills, which athletes were told were vitamins, turned out to be steroids, banned under international competition rules.

The program was officially supported by the Stasi (Ministry for State Security) and the results were glorious, with champions and world records galore. Promising sprinters, shot putters, swimmers, jumpers and other athletes were all given the blue “vitamins” and in return brought glory to a struggling government.

The most famous example is Heidi Krieger, a former Olympic shot putter whose hormone routine changed her body severely. This caused a problem in her body chemistry and promoted the development of masculine physical characteristics. Heidi underwent gender reassignment surgery in 1997 and is now Andreas Krieger, a man.

Steroids were administered to Heidi in huge doses, often in conjunction with birth-control medication. In 1986, the year she won her European gold medal, she received 2,590 micrograms of steroids, 1,000 more than Ben Johnson took in 1988, when he was stripped of the Olympic title in Seoul after testing positive.

1	 East Germany	10	7	5	22
2	 United States	8	9	7	24
3	 Soviet Union	6	6	11	23
4	 Czechoslovakia	4	3	2	9
5	 West Germany	2	5	1	8
6	 Great Britain	2	2	3	7
7	 Poland	2	1	1	4
8 <sup>th</sup>	 Finland	1	1	1	3
8 <sup>th</sup>	 Italy	1	1	1	3
8 <sup>th</sup>	 Jamaica	1	1	1	3
11 <sup>th</sup>	 Australia	1	0	0	1
11 <sup>th</sup>	 Ireland	1	0	0	1
11 <sup>th</sup>	 Mexico	1	0	0	1
11 <sup>th</sup>	 Norway	1	0	0	1
15 <sup>th</sup>	 Cuba	0	1	0	1
15 <sup>th</sup>	 Ethiopia	0	1	0	1
15 <sup>th</sup>	 Netherlands	0	1	0	1
15 <sup>th</sup>	 Romania	0	1	0	1
15 <sup>th</sup>	 Spain	0	1	0	1
20	 Bulgaria	0	0	3	3
21 <sup>st</sup>	 Brazil	0	0	1	1
21 <sup>st</sup>	 China	0	0	1	1
21 <sup>st</sup>	 Greece	0	0	1	1
21 <sup>st</sup>	 Morocco	0	0	1	1
21 <sup>st</sup>	 Nigeria	0	0	1	1

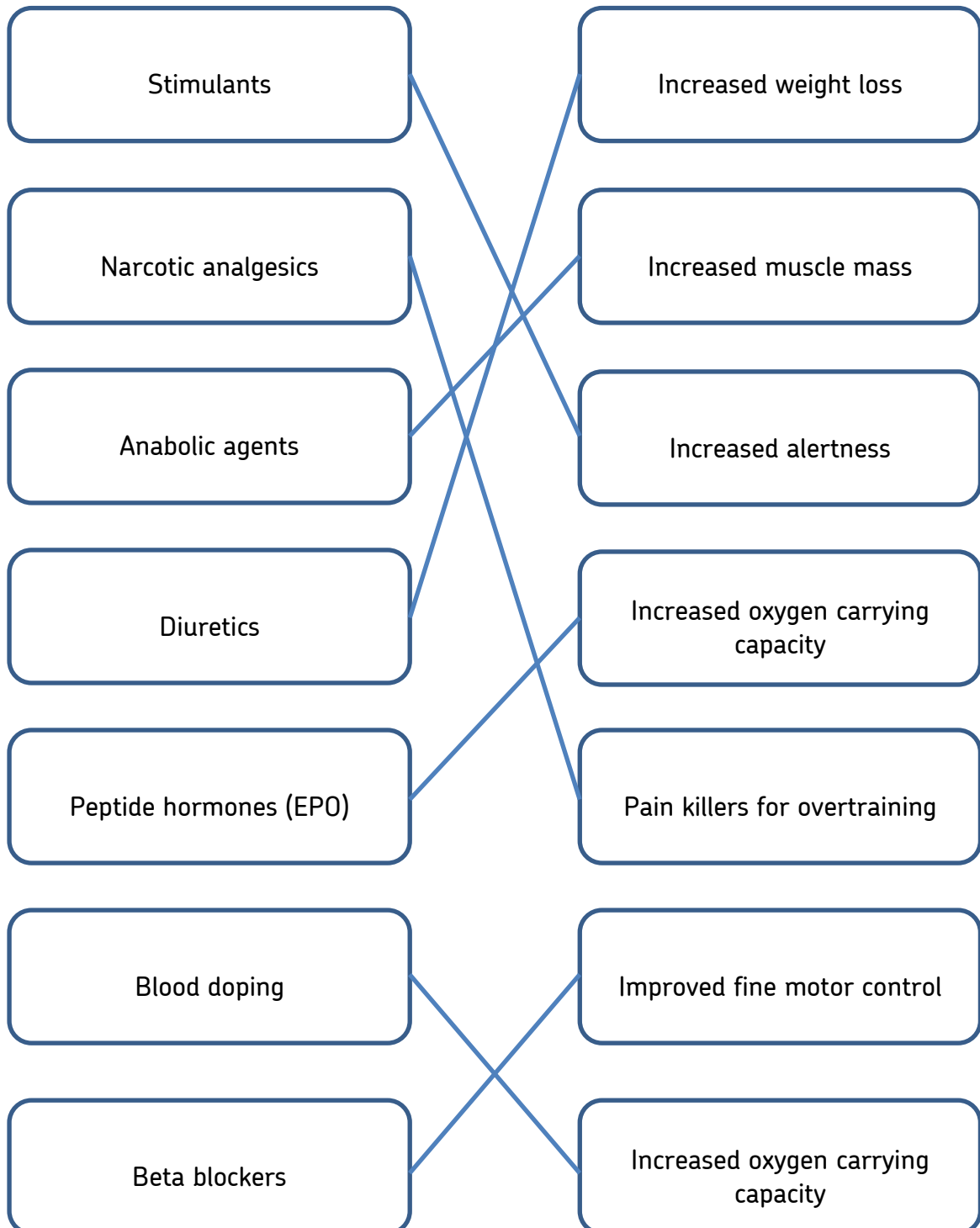




## Handout 4 – PEDs answer sheet

Performance enhancing drugs recap task.

Match the PED with a positive effect it has on body for an athlete.



## Handout 5 – Drugs cheats answers

Picture board of athletes found guilty of taking PEDs		
Lance Armstrong	Shane Warne	Randy Grimes
		
PED(s) taken: EPO, blood doping	PED(s) taken: Diuretics	PED(s) taken: Narcotic analgesics
Performance enhancing effects: Increased oxygen carrying capacity due to increased red blood cells.	Performance enhancing effects: Weight loss.	Performance enhancing effects: Masks pain caused by injury or fatigue.
Ben Johnson	Kim Jong Su	Maria Sharapova
		
PED(s) taken: Anabolic agents/steroids	PED(s) taken: Beta blockers	PED(s) taken: Meldonium
Performance enhancing effects: Can train harder, builds up muscle, speeds up recovery, builds strength.	Performance enhancing effects: Prevents trembling, can keep arm steady.	Performance enhancing effects: Increased oxygen carrying capacity.