

KEY STAGE 3:

Session Two – Energy Drinks and Sports Drinks

Learning objectives:

- To differentiate between product categories of sugary soft drinks with a particular focus on sports and energy drinks
- To understand the contents of these drinks and the negative short and long-term effects they can have
- To discuss the effects of hydration on educational attainment and sporting performance and the benefits of drinking water

Resources:

- **PowerPoint Presentation:** to be delivered alongside the online resources including information covering;
 - How energy drinks and sports drinks can be defined and categorised
 - Short and long term impacts of energy drinks consumption
 - Calorie contribution from energy and sports drink consumption
 - Healthy diets and hydration to promote performance
- Scenario cards

LESSON PLAN

PART ONE: INTRODUCTION [5 MIN]

- **Introduction to the lesson and recap of previous session**
 - Recap of the ground rules
 - Recap of knowledge gained in lesson one: What have you learnt so far about sugary soft drinks? In pairs, talk about the facts you remember about sugary drinks, how to read a drinks label and what drinks are a healthier choice.
 - Introduce learning objectives for the lesson.

PART TWO: POWERPOINT PRESENTATION [40 MIN]

Slide	Information
1	• Explain that today you will be looking at sports and energy drinks. Ask the students who likes energy/sports drinks and why do they drink them? What are the perceived benefits of drinking them?
2-4	• List the types of sports and energy drinks available. Ask the students if they can add in any other brands they know.
5-8	• Explain how energy drinks and sports drinks can be differentiated and check that students are able to differentiate: • Key ingredients found in energy drinks and possible side effects; sugar, taurine, caffeine, niacin, ginseng, ephedrine.
9	• Explain that the popularity of energy drinks continues to grow in the UK.

	Ask the students whether any of these facts surprise them and do you agree with why young people drink energy drinks?
10	Ask the pupils what do the students think of this statement? What do they think this aggressive marketing is? Where have they seen adverts and what are their favourite adverts? What would make them buy a particular brand?
11	Run through with the students the different types of ingredients found within energy drinks
12-14	Run through with the students the caffeine content of energy drinks and compare with drinks such as tea and coffee.
15-16	- Run through the risks of consuming too many energy drinks with the students. - Ask the pupils whether any have ever experienced any of these symptoms after consuming an energy drink.
17	- Run through the sales and labelling restrictions on energy drinks. - Ask if any pupils have been asked for ID when buying energy drinks in supermarkets – explain that this was a voluntary measure that major supermarkets decided to impose in 2017 following concerns around the impacts they are having on children’s health. Note that this was voluntary and not all shops decided to impose it, such as corner shops and convenience stores.
18	- Let the pupils know that in 2019, the Government officially announced that sales of energy drinks to under 16s across all types of shops will be banned in England. - Ask the pupils what they think about that. Do they agree or disagree with this and why?
19-20	- Ask the pupils why they think companies sponsor sports events. - Who watches these sports and through what means (YouTube rather than terrestrial television).
21-22	- Introduce sports drinks - Question and discussion session: - Which drinks do you think are the best for keeping you hydrated during sports and physical activity? - Suggest tips for healthy hydration and improving performance during physical activity and concentration whilst studying: drinking water regularly, carrying a water bottle with you to school or sports, eating a snack containing slow release energy such as a banana, sandwich, trail mix, bowl of porridge. - Did you know? Elite athletes like Premier league footballers who need to maintain high energy over 90+ minutes have their drinks specially formulated for them by sports scientists and dieticians. The drinks are calculated for their height, weight, muscle mass and how much they sweat and are taken as part of a carefully-planned diet. They also drink plenty of water. Sports drinks we buy are one size fits all.
23-27	Allow students to read the slides then move onto the problems activity to see how much they have taken in.

PART THREE: PROBLEMS ACTIVITY [10 MIN]

Step 1: Give each student a scenario card (its ok to double up) and ask them to walk around when you say go.

Step 2: When you say stop they must find a partner and tell them their problem. The partner offers a solution. The partner then tells their problem and listens to a solution. Ask the students with the problems to listen to the solution without comment. Give the pairs one and a half minutes to share their problems and ask them to move on.

Step 3: Do this several times so each student has several goes at sharing their problem, listening to various solutions and offering various solutions.

The idea is to encourage students to think of alternatives to sports and energy drinks, to offer solutions to common problems and to make considered decisions based on knowledge and understanding.

PART FOUR: CONCLUSION [5 MIN]

On the final slides of the presentation (28-30), summarise the session. Ask students whether they would now reconsider drinking energy/sports drinks? Has the session changed their knowledge and views on these categories of drinks?

End the session with a quick reflection. Hand out post it notes and ask students to write I know..., I think..., I can... and post their answers on a large piece of flipchart paper. You can take a photo of the flipchart paper as a record.

FURTHER INFORMATION

Energy drink consumption in the UK

- In food labelling law there is no legal definition of an 'energy' drink—as use of the term 'energy' would imply a nutrition / health claim.
- Sales of energy drinks in the UK increased by 185% between 2006 and 2015, this equates to 672 million litres consumed in 2015 and a total market value of over £2 billion.
- A 2011 survey conducted across 16 European Union (EU) countries found that prevalence of ED consumption was highest amongst 10 to 18-year-olds (68%, compared with 30% of adults and 18% of younger children). This age group in the UK consumed more EDs on average than their counterparts in other EU countries (3.1 litres per month, compared with 2 litres)
- 69% of adolescents drink energy drinks in the UK, with the main reasons for consumption being taste (40%), energy (21%) and the need to stay awake (17%).
- Many supermarkets currently operate a voluntary ban on the sale of energy drinks to under 16s, however this is not legally binding and there have been several reports of minors still being able to purchase energy drinks without being challenged. In addition, the majority of corner shops and convenience stores do not enforce any sales restriction.
- In 2018 the Government consulted on a ban on the sale of energy drinks to under 16s or under 18s. It was announced as part of the Department for Health and Social Care's Prevention Green Paper in July 2019 that the sales of energy drinks to under 16s will be banned in England.
- There are currently no recommended intakes for caffeine in the UK (except during pregnancy).
- Drinks with more than 150mg of caffeine/litre must be labelled "not recommended for children and pregnant women", however this is not enforced and can be freely purchased by both.

Energy and sports drinks and their role in physical activity

- Contrary to how the products are marketed, energy and sports drinks don't help you to re-hydrate, they actually make you de-hydrated as caffeine causes your body to lose fluid.
- The sugar content initially provides a boost of energy or 'sugar spike', but is shortly followed by a crash in energy leaving you feeling tired and irritable.
- Excessive caffeine consumption combined with strenuous physical activity is dangerous – and there are some cases which proved fatal in this incidence.
- Water is the best thirst quencher and should be promoted as the best way of keeping alert and hydrated during physical activity.

Ingredients found in energy and sports drinks

Ingredients	Function	Side Effect
Sugar	Provides a source of energy	Erosion of teeth, addiction, weight gain
Caffeine	Central nervous system stimulant (world's most consumed psychoactive drug)	Increased risk of heart attack, anxiety issues and headaches
Taurine	Linked to improved physical and mental performance	Counteracts its benefits when mixed with caffeine
Niacin	Improve mental energy, alertness and focus. Recommended intake 14-18mg; one can of energy drink can contain up to and over 35mg, causing niacin overdose	Itching, dizziness, skin flushing and rapid heart rates
Ginseng	Energy stimulant	May cause severe allergic reaction, rashes and itching
Ephedrine	Surge of energy	Induce headaches, insomnia, nerve damage

Impact of the consumption on energy and sports drinks

Short-term impacts	Long-term impacts
• Dehydration • Stomach upsets • Irritability • Restlessness • Poor sleeping patterns • Twitching muscles • Fatigue • Caffeine overdose; heart palpitations, nausea, vomiting. • In adolescents, links to sensation seeking; increased risk of drug and alcohol abuse. • Problems with behaviour	• Links to effects on cholesterol • High blood pressure • Increased heart rates • Inflammation • Insomnia • Pro-longed caffeine intake; linked to metabolic diseases such as type 2 diabetes, cardiovascular disease and coronary heart disease. • Excessive sugar intake linked to weight gain and poor dental health • Addiction and dependence • Anxiety

Additional notes

- The British Soft Drinks Association published a voluntary code suggesting that energy drinks are not promoted or marketed to under 16's
- However there are blatant similarities between big tobacco and the strategies used to market energy drinks and sports drinks
- A high proportion of young people also mix energy drinks with alcohol, which is associated with risk taking behaviour
- Healthy hydration and a healthy balanced diet will aid sleep, physical activity performance and study.

References and further reading

- [Health effects of energy drinks in adolescents](#)
- [Healthy Hydration](#)
- Give Up Loving Pop Briefing Papers; Sports Drinks & Energy Drinks
<http://www.foodactive.org.uk/sugary-drinks-briefing-documents/>
- Mentor – adepis: Alcohol and Drug Education and Prevention Information Service Caffeine and Energy Drinks briefing
<http://mentor-adepis.org/caffeine-and-energy-drinks/>
- Energy drinks are #NotForChildren
<https://www.jamieoliver.com/news-and-features/features/energy-drinks-are-not-for-children/>