

The Hidden Dangers of Fizzy Drinks, Energy Drinks, and Energy Bars: Long-Term Health Risks One Must Know

Enoch S



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Enoch S

Institution

*Professor of Higher
Surgical Studies and
Director of Advanced
Surgical Education
Doctors Academy Group
of Educational
Establishments (Intl),
Cardiff, United Kingdom*

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Abstract:

Fizzy drinks, energy drinks, and processed energy bars are widely consumed and aggressively marketed as convenient, performance-enhancing products. However, growing evidence highlights their harmful effects on long-term health. These items often contain high levels of sugar, artificial sweeteners, caffeine, preservatives, and chemical additives that disrupt normal metabolic function, appetite regulation, and gut health. Regular intake is associated with serious conditions including obesity, type 2 diabetes, hypertension, cardiovascular disease, non-alcoholic fatty liver disease, poor bone density, and dental erosion. Energy drinks in particular may cause immediate side effects such as palpitations, anxiety, and gastrointestinal upset. Despite being promoted by fitness influencers and commercial advertising, these products offer no real nutritional value and may worsen public health outcomes. This Q&A document explores their contents, health impacts, and misleading marketing strategies, while offering practical guidance on reducing consumption and choosing healthier alternatives. Awareness and informed decision-making are essential to prevent long-term harm and support better health.

Key Words:

Ultra-processed Foods, Energy Drinks, Artificial Sweeteners, Metabolic Health, Chronic Diseases, Public Health Risks

Corresponding Author:

Professor S Enoch; E-mail: s.enoch@doctorsacademy.org.uk

Introduction

Fizzy drinks, energy drinks, and processed energy bars have become common features of modern diets, often promoted as harmless, energising, or even essential to a healthy lifestyle. However, these products pose serious and often overlooked risks to long-term health. Whether high in sugar or marketed as “zero calorie” or “sugar-free,” these drinks and snacks contain artificial sweeteners, stimulants, preservatives, and chemical additives that can disrupt normal body functions.

Scientific research has linked regular consumption of these products to a range of health problems, including obesity, type 2 diabetes, high blood pressure, heart disease, stroke, liver disease, poor bone health, and dental damage. Many of these effects are not immediately noticeable but develop gradually with continued use. Energy drinks, in particular, can also cause short-term symptoms such as palpitations, insomnia, anxiety, and gastrointestinal upset.

This Q&A document aims to explain what these products are, why they are harmful, and how their marketing misleads consumers. It also offers

practical advice on healthier alternatives. By understanding the hidden risks and making informed choices, individuals can protect their long-term health and reduce their risk of serious chronic conditions.

1. What are carbonated soft drinks, energy drinks, and energy bars?

These are highly processed, mass-marketed products designed for taste, convenience, and profit rather than health.

- Carbonated soft drinks (e.g., Coca-Cola, Pepsi, Fanta, Sprite) are sugary or artificially sweetened beverages with fizz from carbon dioxide.
- Energy drinks (e.g., Red Bull, Monster, Relentless) contain caffeine, sugar, sweeteners, and stimulants like taurine or guarana.
- Energy bars (e.g., Grenade Carb Killa, Clif Bars, Trek Protein Flapjacks) are ultra-processed snacks marketed as health foods, often with added sugar, fats, and synthetic protein blends.

2. How are these products aggressively marketed to the public?

These items are relentlessly promoted through

social media, fitness influencers, celebrity endorsements, and sports sponsorships. They are portrayed as harmless, performance-boosting, and even essential to an active lifestyle. This marketing creates a false association between health and consumption of unhealthy, ultra-processed products.

3. Why should we be sceptical of claims like "Coke Zero" and "zero calorie"?

There is no such thing as a truly "zero calorie" or "zero sugar" drink. These terms are marketing myths. "Coke Zero" and similar products contain artificial sweeteners (e.g., aspartame, sucralose) and chemical additives that alter your metabolism, disrupt your gut microbiota, and condition your brain to crave sweetness. They do not nourish your body; they deceive your physiology, trick your appetite, and drive long-term health problems. Don't be fooled: "zero" doesn't mean safe, natural, or healthy.

4. What artificial additives are commonly found in these products?

Many fizzy drinks and bars contain:

- Sweeteners: aspartame, sucralose, saccharin
- Preservatives: sodium benzoate, potassium sorbate
- Acids: citric acid, phosphoric acid
- Caffeine and stimulants: guarana, taurine, synthetic caffeine
- Synthetic flavours and colours

These ingredients can have adverse physiological effects when consumed regularly.

5. What are the immediate health effects of consuming these products?

In the short term, consumption may lead to:

- caffeine-related symptoms: jitteriness, insomnia, palpitations
- sugar spikes: rapid energy followed by fatigue
- gastrointestinal upset: bloating, acid reflux, cramps
- dental erosion from acids and sugars

6. What are the intermediate risks from regular consumption?

With frequent use, people may experience:

- weight gain due to increased calorie intake or compensatory eating
- elevated blood sugar and insulin resistance
- habit formation and dependence (particularly with caffeine)
- mood fluctuations and poor sleep

7. What are the long-term health consequences?

Chronic consumption is associated with serious and

often irreversible health problems, including:

- increased risk of stroke due to vascular inflammation, elevated blood pressure, and metabolic disruption
- greater likelihood of heart attack and cardiovascular disease, particularly in regular consumers of artificially sweetened and high-sugar drinks
- Type 2 diabetes from repeated blood sugar spikes and insulin dysregulation
- obesity driven by liquid calorie overconsumption and metabolic disruption
- hypertension and cardiovascular disease from excessive caffeine, sugar, and sodium
- non-alcoholic fatty liver disease due to fructose and artificial sweeteners
- metabolic syndrome (a cluster of deadly risk factors for heart attack and stroke)
- increased risk of depression, anxiety, and cognitive decline
- poor bone mineral density from phosphoric acid leaching calcium from bones
- increased risk of dental caries, gastrointestinal disease, and chronic inflammation

8. How do gym culture and fitness influencers contribute to the problem?

Many personal trainers, gym instructors, and fitness influencers promote energy drinks and bars as part of a fitness routine. These recommendations are often uninformed and driven by sponsorships or gym vending contracts. This creates a false narrative that these products are necessary or beneficial for performance, which is misleading and dangerous.

9. What are healthier alternatives?

- Drinks: water, herbal teas, coconut water, diluted fruit juice (in moderation)
- Energy boosts: a banana, a handful of nuts, natural yoghurt, boiled eggs, oats
- Post-exercise snacks: fresh fruit, hummus with vegetable sticks, Greek yoghurt with berries

10. What practical steps can people take to reduce intake?

- Read labels critically: beware of health claims on packaging.
- Avoid keeping fizzy drinks or energy bars at home.
- Replace one sugary drink per day with water or tea.
- Don't shop hungry; it increases impulse purchases.
- Be aware of the marketing tactics used by companies and promoters.



Figure 1: A Collection of Industrially Produced Protein Bars Promoted Falsely as a Healthy Option in a Gymnasium



Figure 2: A Collection of Energy Drinks, Protein Shakes and Sports Water Promoted Falsely as a Healthy Option in a Gymnasium

Conclusion

Regular consumption of fizzy drinks, energy drinks, and processed energy bars carries significant health risks. These products are linked to obesity, type 2 diabetes, cardiovascular disease, liver dysfunction, dental erosion, and poor bone health. Artificial sweeteners and stimulants can disrupt metabolism, appetite control, and sleep, while promoting

dependence and long-term harm. Despite their widespread promotion as lifestyle or fitness aids, they offer no genuine health benefit and may contribute to serious chronic conditions. Reducing intake and choosing natural, whole-food alternatives is a vital step towards safeguarding physical and mental well-being across all stages of life.

Key Take-Home Messages

- There is no such thing as a safe or healthy fizzy or energy drink. Every sip harms your health.
- Zero sugar and zero calorie labels are marketing lies. They contain chemicals that deceive your body.
- Fitness influencers and gym instructors are not qualified to give nutritional advice. Don't trust their endorsements.
- Long-term consumption of fizzy and energy drinks contributes to obesity, diabetes, liver disease, and early death.
- Choose water and real food over chemicals, hype, and hidden harm.

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