About "energy" drinks
Sobre las bebidas energéticas

Sociedad Española de Medicina del Deporte (SEMED)

The media has recently reported that seven Spanish autonomous communities have plans to regulate the sale of what are known as "energy" drinks to under-18s. Galicia has taken the first steps to prohibit under-18s from buying them as of 2024, but does any legislation currently regulate the consumption of stimulant drinks? What medical risks does consuming them involve?

Almost all "energy" drinks contain different stimulant ingredients (high caffeine content, minimum amounts of taurine, ginseng, guarana and so on), but they do not all contain sugar. There are "sugar free" options which, seeing that they do not provide energy, should not be classed as "energy" drinks at all.

If the ingredient that defines the classification is caffeine, for example, and this is a stimulant, the name should reflect the composition and use given to these drinks, that is to say, they should be called stimulant drinks.

To date, the European Union (EU) has no regulations dealing with stimulant or ill-defined "energy" drinks. Some countries regulate their composition, as is the case with Austria, Lithuania, Latvia and Germany.

Spain has legislation on soft drinks (RD 650/2011), this being the classification in which they would be included, but it is not specific enough.

If the EU does not regulate, the Spanish Society of Sports Medicine (SEMED) believes that Spain should regulate the naming of these beverages at national level, even though some aspects are the competence of the EU,, such as warning labels:

- Composition: Beverages with a content of more than 15 mg of caffeine/100 ml, including energy shots in the regulation.
- Maximum size. "Energy" drinks should not exceed 250 ml.
- Regulate sale to under-18s.
- No free product samples at sports competitions, so as not to associate their consumption with physical activity, exercise and sport, or in school environments (primary, secondary and high school).
- Finally, as EU Regulation 1169/2011 governs labelling for products with high caffeine content other than coffee, tea or their derivatives, in which the name of the product includes the word "coffee" or "tea", Spain, as holder of the Presidency of the European Union, should ask the European Commission to initiate modification of the information given so that the warning reads: "High caffeine content. Not recommended for minors or pregnant or breastfeeding women" in the same visual field as the name of the drink, followed by a reference, in brackets, to the amount of caffeine per 100 ml.

The 2023 nutrient profiles of the WHO Regional Office for Europe classifies energy drinks in a subgroup within non-alcoholic beverages, as it does with juices and juices reconstituted from concentrate, dairy milk drinks, plant-based milks, water and flavoured soft drinks.

The recommendation of the European Food Safety Authority (EFSA) is not to exceed 400 mg of caffeine/person/day, but this should be understood as an amount to be spread out over 24 hours. Stimulant drinks are consumed in 10-30 minutes and so their physiological effect is completely different. The problem is not the amount of caffeine a person consumes per day, where the calculation is made for consumption distributed over 24 hours, but when it is consumed in concentrated form (160 mg) in a single act in a very short space of time.

High caffeine content per 100 ml is potentially the most dangerous factor for the health. To make matters worse, the containers used for these drinks are usually large, 500 ml, and the contents are drunk quickly.

The side effects can include: gastrointestinal discomfort, anxiety, restlessness, nervousness, tremor, headache, irritability, dependence, psychomotor agitation, peptic ulcer, epileptic seizure and the list goes on.

At the cardiological level, the increase in catecholamine levels facilitates cytoplasmic calcium overload, which can trigger atrial and ventricular arrhythmias. There is also a risk of coronary vasospasm, increased platelet aggregation and endothelial dysfunction, all of which are conducive to acute myocardial ischaemia, and ventricular arrhythmias as a result of that ischaemia.

On top of everything, stimulant drinks are often drunk in combination with alcohol, which favours dehydration by increasing diuresis, more so in conditions which induce sweating (outside and inside premises), and this can pave the way to arrhythmias.

These drinks can even mask hereditary channelopathies such as long QT syndrome through the release of catecholamines or Brugada syndrome through the sodium-channel-blocking effect of taurine.

For all these reasons, the Spanish Society of Sports Medicine (SEMED) calls on the competent authorities to regulate the supply and naming of drinks of this kind, with the ultimate aim of protecting the health of the population in general and under-18s in particular.

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