



A QUICK GUIDE TO ENERGY DRINKS

Around **one in three young people** – particularly boys – say they regularly consume energy drinks, with under 18s in the UK consuming more than their peers in other European countries. This quick guide, developed in conjunction with [Tooled Up Education](#), covers information that parents and carers need to know about energy drinks, as well as signposting to additional resources.



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WHAT ARE ENERGY DRINKS?

Energy drinks – those products people reach for when they feel they need a boost – are usually based around two ingredients: caffeine and sugar. They are generally regarded as different to “sports drinks” which are also usually high in sugar, but also contain electrolytes to replace those lost during exercise. However the term “energy drink” is not protected, and such products may contain other ingredients, such as vitamins, herbal components such as ginseng and guarana, and amino acids such as taurine. It is worth noting that [taurine](#) in particular is sometimes heralded as having a wide range of benefits. Claims have been made about positive effects on the heart, brain, nervous system and muscles. However, research is not only scant, but mostly involves studies of mice!

This Quick Guide will focus on caffeine, arguably [the most commonly used drug in the world](#), due to its presence in everyday drinks and food such as tea, coffee and even chocolate. This means that it often isn't regarded as a drug at all. However, if thought is given to just why people often turn to caffeine-containing products – wanting to feel more awake being a common motivation – it illustrates its psychoactive properties. In fact, caffeine falls into the stimulant class, alongside drugs more widely associated with this group such as cocaine and amphetamines, though it is much milder in its effects and is therefore considered much safer and more manageable.



THERE ARE **TWO** WAYS IN WHICH CAFFEINE WORKS.



The first is scientific.

Caffeine inhibits the action of adenosine, a neurotransmitter which suppresses brain activity. Getting in the way of this chemical means that the brain is more active and alert.

The second is psychological.

There is a very strong placebo effect which means someone who believes that it will wake them up is likely to experience just that.



A wide range of energy drinks can be found on retailers' shelves, and there are equally wide variations in flavours, ingredient lists and caffeine content (which will be linked to volume of liquid in the container as well). Some of the more [common brands](#) include Red Bull, Monster and Lucozade Energy (and many of these products will feature the word “energy” in their branding), but one that has really hit the headlines in recent months is [Prime](#), mainly because it went [viral on YouTube](#). It is worth knowing that Prime has two different product lines: Prime Hydration which contains coconut water, electrolytes, amino acids, vitamins and minerals, and Prime Energy which is similar but with a significant amount of caffeine added.

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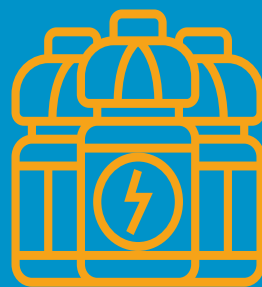
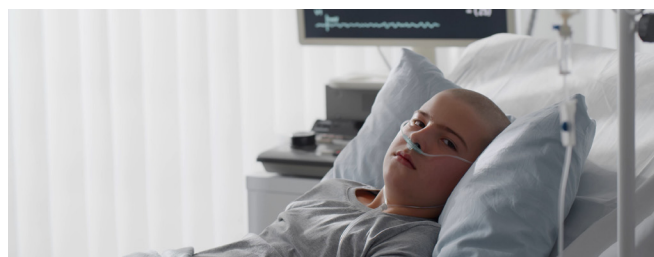
WHAT'S THE PROBLEM?

Despite being in such widespread use, caffeine isn't without its issues. It can cause anxiety and jitteriness, making it difficult to focus, which is somewhat at odds with the widely held belief that it improves mental performance. It can also cause [physical symptoms](#) such as sweating, headaches and increased urination. Dental health can also be impacted, due to many energy drinks being very high in sugar, and the increased calorie intake has been linked to obesity.

There can be effects on mental health too, such as a negative impact on mood and sleep, and [behavioural effects](#) including emotional dysregulation and poor lifestyle choices, notably around food. All of these are possible at what would be regarded as "normal" doses (see later), and can be more pronounced in young people, which can translate into [low academic performance](#).

Tolerance develops quite quickly, but this means that people may be inclined to use more caffeine, which increases the risk of side effects, and there can also be withdrawal or rebound symptoms if someone stops using it abruptly. The [World Health Organization](#) regards caffeine as being addictive, and has recognized caffeine addiction as a clinical condition for over a decade.

Taking too much caffeine can result in symptoms similar to those experienced from other stimulant drugs, for example, vomiting, diarrhoea, abdominal pain, agitation and tremors, as well as potentially more dangerous effects such as accelerated heart rate, hallucinations and convulsions. There have been [deaths](#) as a result of caffeine overdose, including [some associated with energy drinks](#), and – though this is rare – the popularity of such products, particularly among young people, has raised concerns that use of energy drinks could be a [significant public health issue](#).



A significant issue is a lack of understanding of how much caffeine is in products. Drinks that contain more than 150mg/l caffeine are required to bear the label "High caffeine content. Not recommended for children or pregnant or breastfeeding women." [This warning](#) must be in the same vision as the name of the product, alongside the caffeine concentration. In response to a 2018 Jamie Oliver campaign, [some retailers have banned sales to under 16s](#), but this is a voluntary scheme mostly amongst supermarkets and not widespread.

WARNING

CONTAINS HIGH LEVELS OF CAFFEINE. MAY CAUSE HIGH BLOOD PRESSURE, HEART ATTACK, CONVULSIONS OR DEATH

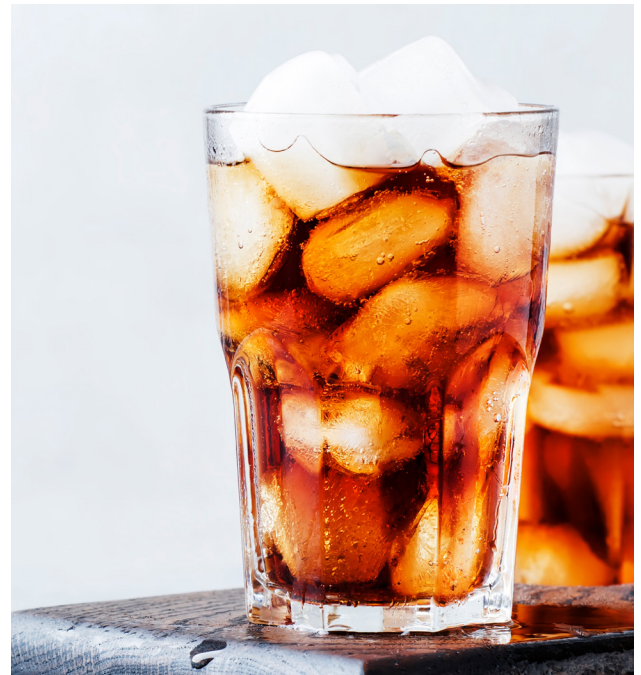


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WHAT IS THE IMPACT?

As well as the risks already described, there are some additional factors to take into consideration:

- **Energy drinks are much easier to consume quickly**, compared to beverages such as coffee, simply because they are cold. This means it is easy to take in a lot of caffeine in a short space of time.
- **Some individuals seem [more sensitive](#) to the effects of caffeine**, meaning what seems normal for one person can leave another feeling quite unwell.
- **Those with [heart problems](#) may put themselves at risk** if they ingest a lot of caffeine, especially if they are exercising as well.
- **[Mental health conditions](#) may be exacerbated by caffeine use**, notably any that include anxiety, suicidality or psychosis as potential symptoms.
- **Using caffeine alongside other stimulants** can increase harmful effects, primarily through raising body temperature and heart rate, and lowering seizure threshold. As it is so cheap, it is also a [common ingredient](#) in illegal drug manufacturing.
- **Combining alcohol with caffeine** seems to be associated with an [increase in risky behaviours](#), such as unprotected sex, drink driving or having an accident, as it can make people perceive that their coordination or judgement is better than it is.
- **There is [emerging evidence](#) that energy drinks could be a gateway to alcohol** for children as young as nine, and that it negatively impacts working memory while increasing impulsivity.
- **Some medicines**, such as over-the-counter headache pills or cold remedies, contain caffeine, which increases the amount that someone is taking – and also the risk of interactions, tolerance and dependence developing.



HOW MUCH CAFFEINE IS RECOMMENDED FOR SAFE CONSUMPTION?

- Research on the safety of caffeine has led to [recommendations](#) that children should only consume caffeine in moderation, at a level not more than 3mg/kg body weight. As an example, a typical 10 year old weighing 30kg should have no more than 90mg caffeine per day. **A small can of energy drink may contain more than this.**
- Women who are pregnant or breastfeeding are advised to have no more than 200mg over the course of a day. This is roughly equivalent to two mugs of instant coffee or one mug of filter coffee, and takeaway coffees such as lattes typically exceed this in one drink.
- **For adults**, single doses of caffeine up to 200mg and no more than 400mg in a day are not considered unsafe, but it can be difficult to track caffeine intake.
- The amount of sugar in energy drinks can be startling and even sugar-free variants contain artificial sweeteners, which have been linked to [health issues](#) such as diarrhoea.
- **Many energy drinks contain other stimulant ingredients**, which have a poorly understood evidence base and therefore effects can be unpredictable.

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WHAT CAN PARENTS DO?

Parents and carers have a significant role to play in helping their children stay safe, including when using energy drinks. Here are some tips:



Look at ingredients.

Shining a light on sugar and caffeine content can be eye-opening.



Role model.

Caffeine is ever-present, so think about your own habits. For example, do you drink too much coffee? How could this influence your child? What about external influences such as the sponsorship of extreme sports?



Use caffeine as a talking point.

Tolerance to caffeine can develop, as can dependence, so be open with your child about any issues you've experienced along these lines. You could even use this as a jumping off point into a wider conversation about coping strategies or even addiction.



What goes up, must come down.

Energy drinks may make people feel more alert and invigorated, but there can be a cost in terms of feeling more tired than ever when the effects wear off.



Focus on sleep.

Energy drinks can be the thief of sleep, which can cause physical and psychological damage.



Be alert for accumulation and mixing.

Caffeine is such a common ingredient, it is easy to inadvertently double up – for example by having an energy drink plus a caffeine-containing cold remedy – and it is a common, and potentially problematic, mixer for alcohol for many young people.

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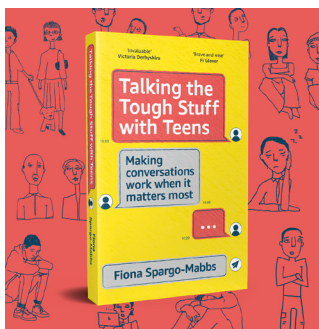
WHERE CAN I GO FOR MORE INFORMATION?

Healthy, open, non-judgemental conversations with young people can be – literally – life-saving.

Fiona Spargo Mabbs OBE, founder and director of the **DSM Foundation** has written two books that are packed with advice and information.

Award-winner, ***I Wish I'd Known***

interweaves the story of one family's terrible loss with calm, measured and practical suggestions for parents about young people, drugs and decisions.



Talking the Tough Stuff with Teens

draws extensively on hundreds of conversations with young people and parents in focus groups and

school and college workshops, to give a warm and compassionate framework for tackling tough conversations about difficult things, without judgement or anger. It covers everything from curfews and screen time, to sex, self-harm and suicide.



Resources to check out

The DSM Foundation, our drugs education charity, has a number of resources to support parents and carers in their conversations with young people including [videos](#) on healthy coping strategies and teenage decision making by DSMF founder and director Fiona Spargo-Mabbs.

Drug Science has useful [information on caffeine](#) as does [Drug Wise](#), and general wellbeing information can be found on the [Crew website](#).

Remember that none of the resources listed here are a substitute for clinical advice and if you are worried about your child, your first port of call should always be your GP (or other relevant medical professional).

Tooled Up Education is thrilled to be collaborating with the DSM Foundation. Tooled Up brings evidence-based resources to school communities and enjoys strong relationships with some of the most respected researchers and organisations in the world. The Tooled Up Team dedicates its time to studying thousands of hours of research evidence and turning this into easy to use resources, in the form of videos, articles, podcasts, activities and tips to try.