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drinks:
The next
wave

ESSENTIAL TRENDS



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Natural ingredients aim to erase decades-old ‘party drink’ stigma

We’ve covered functional beverages a lot in 2025. More than usual, I might add, as it’s such an exciting category that’s constantly evolving.

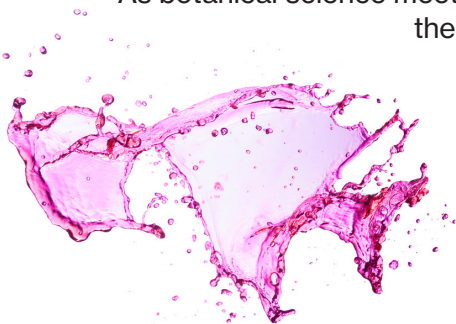
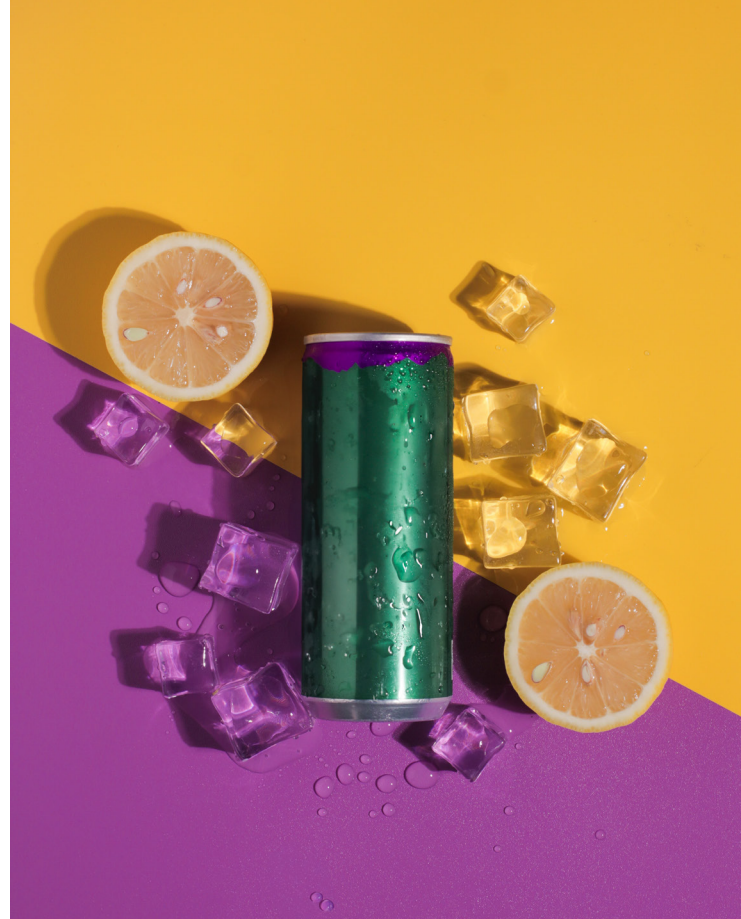
It’s especially true for energy drinks, as they’re rapidly shifting from heavily caffeinated and/or sugary offerings to versions with healthier halos. The category is moving away from its clubby reputation, according to Scott Dicker, market insights director of data analytics company SPINS.

“We’ve seen it disrupted so much over the past few years ... repositioning from a party drink to a health-focused drink,” Dicker said in this issue’s The Game Changers column on 10 top energy drinks, penned by senior staff writer Scott Miller.

That includes the clean label movement, which has catalyzed significant reformulation efforts in the energy beverage sector, with particular emphasis on ingredient transparency and natural alternatives. For example, natural caffeine sources such as green tea (*Camellia sinensis*) extract, guarana (*Paullinia cupana*) and yaupon (*Ilex vomitoria*) present viable alternatives to synthetic caffeine, though they introduce complex flavor profiles that may require additional formulation adjustments. Formulators must also navigate the technical complexities of ingredient interactions that can affect stability, shelf life and sensory characteristics.

In addition to The Game Changers column, this issue covers other aspects of energy drink innovation. Cindy Hazen focuses on formulating for the gaming and esports audience with ingredients that support cognitive performance. Kim Decker writes about “mood modulating” beverages and the rising interest in adding ingredients like ashwagandha (*Withania somnifera*), lemon balm (*Melissa officinalis*) and pomegranate (*Punica granatum*) to energy beverages. And Grant Gerke’s piece digs into how chronobiology updates this category for sustained focus without the caffeine crash.

As botanical science meets beverage innovation, energy drinks trade their nightlife rep for nuanced functionality.



Audarshia Townsend
CONTENT DIRECTOR
audarshia.townsend@informa.com



 [@iamaudarshia](https://www.instagram.com/iamaudarshia)

 [@audarshia](https://www.linkedin.com/in/audarshia)

Carefully crafted esports elixirs are packed with precision

by Cindy Hazen

When formulating an energy drink for the gaming and esports audience, precision ingredient selection is a must. Adam Johnson, associate principal scientist at beverage formulation consultancy Imbibe, explained. “It’s not just about adding caffeine to an eye-catching can. It’s about designing with intention,” he said.

Ingredients that support cognitive performance, rapid reaction time and long-lasting concentration are in demand by competitive gamers – and these ingredients must align with the expectations of a discerning, brand-conscious consumer base.

“What makes this category especially dynamic is the diversity of consumer expectations,” Johnson added. “Some gamers seek a rapid, intense energy boost, while others prefer more gradual, sustained focus without the crash or jittery side effects. That means formulations must be strategic and customizable.”

Kyle Krause, product manager for functional carbohydrates and fiber at ingredient provider BENEQ, commented, “The evolution of energy drinks has been quite dramatic, shifting from caffeine-based, synthetic formulations, to complex blends designed for specific needs. Trends such as clean labels, sustainability and better-for-you credentials nowadays also impact the energy drinks segment.”

To stand out in the energy beverage



market, Marc Metallo, independent beverage consultant, noted the importance of targeting the specific needs of gamers, such as enhanced focus and reduced fatigue. He stressed the importance of formulating with evidence-based ingredients, adding that brands should clearly communicate the unique benefits of the beverage.

Adding functional ingredients

Johnson has observed an increasing demand for novel bioactive compounds that can enhance cognitive performance and reaction time. “Ingredients like caffeine for alertness, [L-theanine](#) for balanced stimulation, choline derivatives such as [alpha-GPC](#) [glycerylphosphorylcholine] for cognitive

Trends such as **clean labels, sustainability and better-for-you credentials** nowadays also impact the energy drinks segment.

support, and B vitamins for energy metabolism are among the most commonly used – and many are supported by published research,” he said.

Metallo recommended utilizing synergistic stimulants. Combining caffeine with L-theanine can promote alertness while mitigating overstimulation. Incorporating natural caffeine sources such as [guayusa](#) (*Ilex guayusa*) or [coffeeberry](#) (*Frangula californica*) can provide prolonged energy without the typical crash associated with synthetic caffeine. Utilizing adaptogens is another strategy. He said integrating ingredients like ashwagandha (*Withania somnifera*) may [reduce cortisol levels](#), thereby enhancing focus and mental endurance during extended gaming sessions.

Some emerging ingredients also look promising for enhancing game performance. Metallo mentioned Neuravena (green oat extract, or *Avena sativa*) from ingredient innovator IFF Health Sciences, as it was shown to [improve](#) memory and executive functions. Ingredient supplier Microphyt offers GamePhyt, a microalgae extract (*Phaeodactylum tricornutum*) rich in the carotenoid fucoxanthin and combined with a low dose of guarana (*Paullinia cupana*). A study supported that the

proprietary ingredient [enhanced cognitive function](#), including memory, focus and learning ability. BacoMind, a *Bacopa monnieri* extract from ingredient supplier Natural Remedies, demonstrated to [support](#) memory acquisition and retention, which can be beneficial for complex gaming tasks.

When working with functional ingredients, it’s critical to keep an eye on flavor. Sometimes functional ingredients carry notes that might not align with the desired profile. Green oat extract, for example, has a mildly grassy, herbaceous flavor. Microalgae extracts can bring a briny taste to a beverage. If these notes aren’t in the developer’s game plan, a flavor company should be able to make suggestions to help bring balance into the mix.

Mind the basics

Sugar reduction is becoming increasingly important when formulating products for the competitive esports crowd. Sugar’s glucose energy becomes rapidly available, but it dissipates quickly. Krause suggested that formulating with smart carbohydrates can help gamers sustain intense focus without the crash associated with sugary beverages. His





Combining **caffeine with L-theanine** can promote alertness while mitigating overstimulation.

company's alternative carbohydrate, Palatinose (isomaltulose), is a slow-release carbohydrate that provides sustained energy for the body and brain.

"Derived from sugar beet, it can suit the nutritional requirements of esports athletes due to its positive effects on blood sugar management," he said. [Research](#) showed its slower digestion and absorption allow for a steady glucose release and an overall lower and more balanced blood glucose response.

"These benefits can be claimed on packaging because Palatinose is a scientifically proven ingredient – additionally, structure/function claims regarding a more balanced blood sugar curve are also possible," (for a minimum 10 g per serving) Krause added. A 2024 [study](#) indicated that isomaltulose stimulates a higher and longer lasting GLP-1 (glucagon-like peptide) response compared to other sugars.

Protein is important to a wide range of consumers, including gamers. Cido Silveira, South America marketing manager at supplier Arla Foods Ingredients, commented that a new nutrition-focused generation is emerging. Gamers want stable energy and concentration

levels, but they are also interested in the health benefits of protein-rich ingredients like whey.

"Whey protein is renowned for being one of the most high-quality proteins, thanks to its superior essential amino acids (EAAs) and branched-chain amino acids (BCAAs) composition," Silveira maintained. "It's also [easily and quickly absorbed](#) – delivering benefits fast when gamers need a boost to give them a competitive edge." A recent [study](#) focusing on esports athletes also associated sufficient protein intake with enhanced cognitive performance in gaming.

Silveira said Arla's Lacprodan SP-9213 whey protein isolate contains at least 90% protein and is high in EAAs and BCAAs. "It's clear in solution with extremely low viscosity, making it ideal for clear, ready-to-drink (RTD) esports beverages with a clean, refreshing taste," he offered. The company featured the ingredient in its PROGAMER RTD concept, which he said provides 15 g of protein – including 3,737 mg of BCAAs – per 310 ml can. "It also contains a range of ingredients to support essential gamer needs such as energy, concentration and vision, including taurine, magnesium, zinc, caffeine

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A formulation checklist for *gaming performance beverages*

by Cindy Hazen

Gamer-specific energy beverages are not traditional buzz-boosters like coffee. They're complex creations that build on a foundation of sustainable energy. Esports athletes can't afford the jitters that come from too much caffeine or sugar. Acute focus and precise motor skills are critical for peak performance in an intense gaming scenario. Evidence-based dietary supplement ingredients that focus on brain health are key to the success of these products. Then it comes down to flavor and label appeal. Marc Metallo, an independent beverage consultant, offered these guidelines as a starting point:

Cognitive enhancers give players the edge they are looking for.

- [Citicoline](#) showed to support brain health and improve attention and psychomotor speed.
- [NooLVL](#) (an inositol-stabilized arginine silicate, from ingredient supplier Nutrition21) was tied to enhancing mental acuity and focus during gameplay.

Energy sources deliver fuel for competitive play.

- Natural caffeine from sources like guayusa or coffeeberry extract may provide sustained energy release.
- [Methyliberine](#) (as Dynamine, from ingredient supplier Compound Solutions) was correlated with providing quick onset of energy and focus without the crash.

Include ingredients that manage stress.

- [L-theanine](#) (as Suntheanine, made by Taiyo International and distributed in North America by NutriScience Innovations) has been indicated in promoting relaxation and reducing anxiety, thereby balancing the effects of stimulants.
- [Ashwagandha](#) showed to aid in stress management by reducing cortisol levels.

Support hydration.

- Taurine was associated with helping regulate the body's fluid balance.

Appeal to taste.

- Gamers are largely a younger audience, typically in their tweens or 20s. Sweet-and-sour flavors appeal to them. Think of fruit like berries, citrus and sour apples. Bubble gum and colas are on-trend flavors, too.

Balance the flavor.

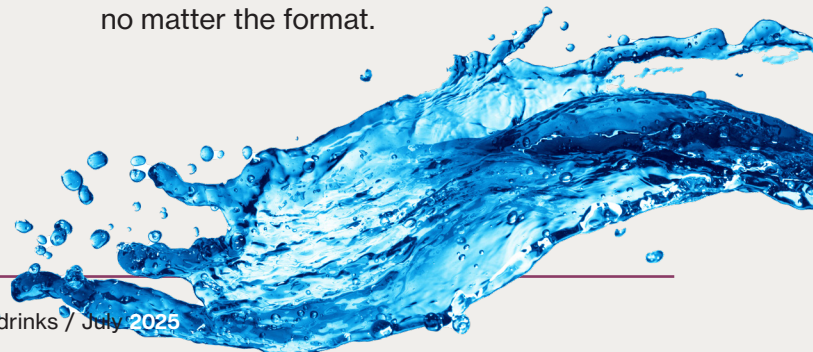
- Sweet notes often clash with functional ingredients like nootropics and vitamins. Consider a masking flavor to bring harmony to the mix.

Keep the label clean.

- Formulate with plant-based extracts. Avoid artificial additives.
- Be transparent. Clearly list all ingredients and their dosages.

Ensure stability.

- Perform shelf-life testing under different storage scenarios to be sure the product delivers first-day quality. Liquid beverages can separate. Unwanted flavor notes can develop as ingredients degrade. Powdered drink mixes can harden. In the end, the beverage should flow freely and deliciously, no matter the format.



Category focus

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and vitamins A, B3, B6 and B12.” Additionally, Silveira noted the protein levels can be adjusted to a higher or lower dosage, according to brand position and consumer target needs.

Checking important parameters

Both performance and sensory goals are important for formulators to consider. Johnson noted, “We evaluate each ingredient not just for its functional benefits, but for solubility, pH stability, flavor impact and long-term shelf performance. Compounds like B vitamins, while beneficial, can degrade over time or interact with other ingredients, making it essential to ensure their performance throughout shelf life. Even subtle off-notes or slight color changes can influence consumer perception and product success.”

While energy drinks can be consumed safely in moderation, it’s also important to be mindful of the potential dark side of beverages, which might be consumed in excess. In a 2023 [review](#), the authors noted,

“In recent years, the consumption of energy drinks by young adults and athletes has risen significantly, but concerns have been raised about the potential health risks associated with excessive consumption.” The authors studied reports of adverse events, including 35 papers that focused on cardiac effects, 18 papers on neurological effects and 12 papers on gastrointestinal (GI) effects. Based on their observations and those found in the literature, the researchers suggested that the daily intake of energy drinks should be lower than safety limits for caffeine established by European and American regulatory authorities.

“These drinks also contain other neurostimulants, the effects of which are not fully understood,” they concluded. “In addition, the sale and consumption of these drinks in minors should be regulated, as, although they are legal substances, their long-term effects are not yet known.”

Another [study](#), published in May 2025, focused on taurine, a common ingredient in energy drinks. It found that in mice, taurine supplements could significantly accelerate leukemia progression in immunocompromised mice.

Despite these outlying concerns, many esports athletes are looking for innovative beverages to enhance their gaming performance. Johnson emphasized these consumers expect transparency and clean formulations – with no artificial preservatives, minimal processing and recognizable ingredients.

Meeting those demands adds complexity, requiring natural alternatives and advanced processing methods to maintain product integrity without sacrificing safety or efficacy. ■



[Cindy Hazen](#) is a food industry professional with decades of experience in food formulation and food safety. She is PCQI, HACCP and ISO 22000 trained.



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The Game Changers

Here's a spotlight on 10 top brands leading the industry with successful concepts, mindful execution.



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Aldae Superfruit Soda



Melting Forest



Wild Era

Projo Power Coffee



YATÉ

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Update



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10 brands use **functional ingredients** to fuel the next generation of **energy drinks**



These innovative performance drinks are shedding their party-hard reputation for health-focused modernization.

by Scott Miller

Energy – everyone, everywhere, wants it. The energy drink sector is up 15% year to date in conventional channels, just over 7% in the natural channel and almost 6.5% in the convenience channel, Scott Dicker, market insights director of data analytics company SPINS, reported. “We’ve seen it disrupted so much over the past few years ... repositioning from a party drink to a health-focused drink,” he said about the category.

Overshadowing the category disruption are health concerns with some common

ingredients. A [study](#) in the New England Journal of Medicine suggested that caffeine overconsumption could be connected to premature atrial contractions, a precursor of heart failure. Researchers also recently discovered a link between taurine, a popular amino acid in energy drinks, and [cancer cell growth](#).

So, what’s a beverage formulator to do?

The answer is to innovate, and these 10 brands are prime examples – reducing sugar, sidestepping synthetic caffeine and delivering biological energy in all-new ways.



Holy! Water – Ketone-enhanced hydration

Founders: BJ McCaslin, Jasmine Mooney and Jeremy Widmann

The story: Holy! Water started with a fascination for functional mushrooms, yet co-founder McCaslin knew an energy beverage needed more than fungi to replace caffeine. That led him to the ketone ester (R)-1,3-butanediol.

Why it's a game changer: Ketone esters, which are compounds that induce ketosis, usually have a very unpleasant flavor. Holy! Water, however, overcame those taste challenges with a barely-there astringency that belies its 1 g of sugar and alleged 13,000 mg of active ingredients.

Otherwise, “The ketone tastes like jet fuel, the functional mushrooms taste like dirt, and the nootropics and adaptogens taste like metal,” McCaslin explained, highlighting his beverage’s all-star flavor-masking combo of allulose, monk fruit and stevia.



Warrior Kombucha – Kombucha infused with Yaupon tea

Founder: Basant Khanna

The story: Khanna launched Warrior Kombucha to celebrate indigenous heritage through yaupon (*Ilex vomitoria*) tea, the only caffeinated plant native to North America.

“The tea is loaded with polyphenols and theobromine, a mood enhancer,” she explained. “But the purpose for adding yaupon tea is not only its benefits, but also to honor our ancestors because it’s an indigenous tea.”

Why it's a game changer: Yaupon is a sustainable crop, but challenges persist in learning to prepare a “forgotten” tea.

Abianne Falla, founder of supplier CatSpring Yaupon, shared, “We had to really play around with preparation methods. We landed on a green roast, a medium roast and a dark roast. A lot of people ... notice that they don’t have to sweeten it as much [as other teas] because yaupon doesn’t have tannins, which give tea its ‘bite.’”



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Alldae Superfruit Soda – Beverages made from upcycled cascara

Founder: Ryan McDonnell

The story: “Our product is a lightly caffeinated pick-me-up made from upcycled coffee fruit and tropical fruit juice,” McDonnell stated. “Coffee fruit is super high in antioxidants, has this nice mild caffeine, but sadly, a lot of it goes to waste.”

The upcycled fruit he’s referring to is a type of “tea” called cascara, brewed from the upcycled husk of the coffee cherry and containing about 30 mg of caffeine per serving.

Why it’s a game changer: For McDonnell, the biggest formulation challenge was sourcing enough high-quality coffee cherry. “There’s no standardizations for how to process coffee fruit or what the goals should be for flavor,” he explained. “So, we had to build our own system.”



YATÉ – Sparkling yerba mate

Founder: Eric Hoang

The story: In Europe, yerba mate (*Ilex paraguariensis*) RTD (ready-to-drink) teas have been fueling late-night adventures for years, according to Hoang. He saw an opportunity.

“If you go out in Europe ... people have been clubbing, drinking yerba mate for quite some time,” Hoang maintained. “We thought that was a fun cultural niche to bring to the U.S.”

Why it’s a game changer: “The hardest challenge for us was getting a true yerba mate taste that was earthy, well-rounded and not too bitter,” Hoang explained. “We take pride in having a formula that is 100% pure yerba mate with no added caffeine.”



read

Caffeine derivative paraxanthine promises energy without the side effects

Paraxanthine is considered GRAS (generally recognized as safe), and research suggests it offers possible health benefits.



Wild Era – Sparkling energy tea

Founder: Jamison Levin

The story: Wild Era’s sparkling energy teas were designed around Levin’s caffeine sensitivities.

“I’m somebody who loves caffeine and is also very sensitive to it,” he described. “I can tell the difference between if I drink a matcha [*Camellia sinensis*, or green tea], Diet Pepsi or a traditional energy drink.”

He realized this variability was largely thanks to synthetic caffeine isolates, which are sometimes added to beverages that already contain natural caffeine.

Why it’s a game changer: After multiple reformulations, Levin found guayusa (*Ilex guayusa*), a South American “super leaf” that energizes through antioxidants and natural caffeine. Wild Era’s proprietary guayusa extract comes from a controlled alcohol extraction process, which the company claimed allows for ingredient standardization while keeping sweeteners to a minimum.

Check out the rest of the list of game-changing brands, on page 25.



read

Survey: 92% of Americans clueless about safe caffeine limits

Despite caffeine’s widespread popularity, recent research reveals the vast majority of Americans are in the dark about safety.

Lifting the senses: Optimizing mood-modulating beverages with flavor and color

by Kimberly J. Decker

When humans crave a change of emotional scenery, they often count on a strong cup of joe – or a stiff shot of something even stronger – to lift them up or calm them down, situation depending.

Now a sophisticated class of beverages is altering moods with greater precision, leaning not only on ingredients scientifically shown to affect mental and emotional states, but on tools far more familiar to beverage developers: colors and flavors.

Working in concert, all three can turn a simple beverage into a sensational experience.

Raising spirits

The rise of the mood-modulating beverage doesn't surprise Emily Berg, marketing manager for beverages at food ingredient giant Cargill. "What I find particularly compelling about this segment," she said, "is its intersection with cultural and generational trends."

Consider, for example, its fit with the "sober curious" movement that's helped consumers across age groups "reevaluate their relationships with alcohol," she offered.

"At the same time," Berg continued, "there's increased focus on holistic health. Mood beverages feel like a natural outcome of



these converging shifts, offering a functional, nonalcoholic way to support everything from relaxation and energy to mental clarity."

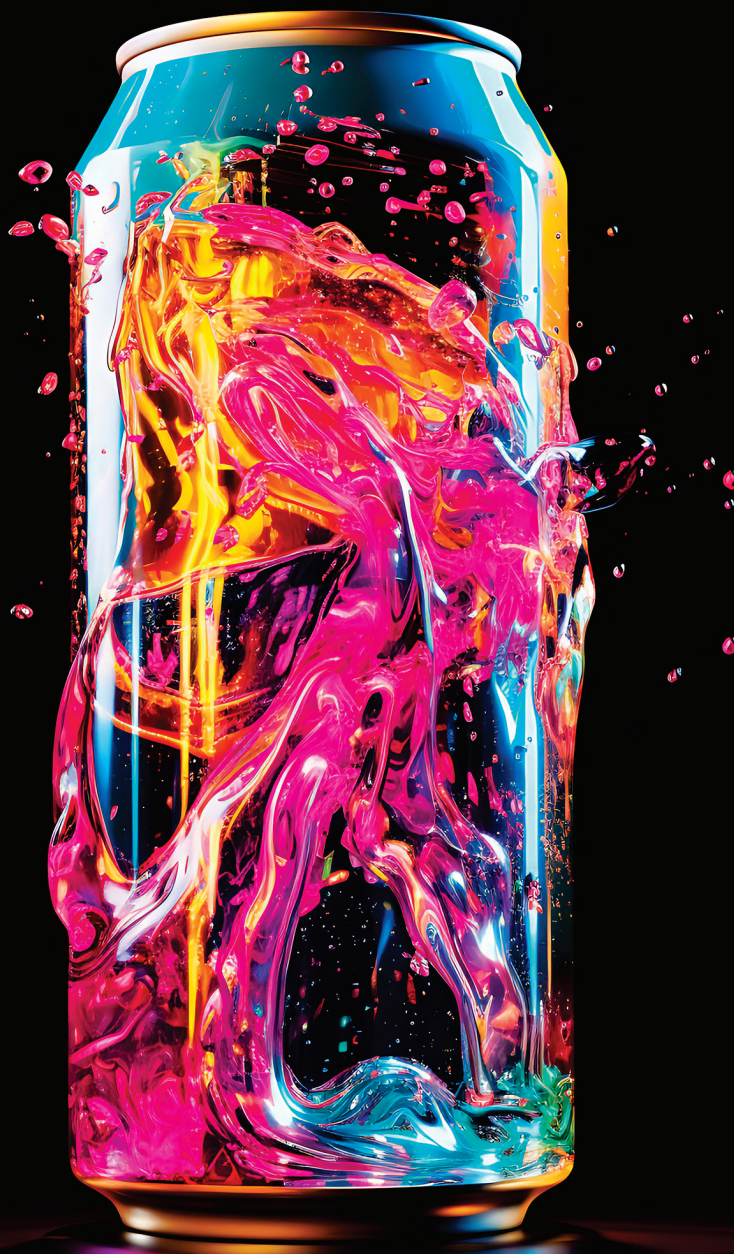
Moving the needle

These products do so thanks to functional actives that, research suggests, can genuinely move the needle on such concerns.

Examples include B vitamins and natural sources of caffeine like guarana (*Paullinia cupana*) and green tea (*Camellia sinensis*), noted Melike Yavuz, a senior director focused on beverage taste at multinational ingredient provider dsm-firmenich. She claimed these ingredients are "ideal for consumers seeking a clean, functional boost without the crash associated with synthetic stimulants."

Beyond energy, Yavuz pointed out, "There's rising interest in adaptogens and nootropics

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There's rising interest in adaptogens and nootropics that support stress resilience, cognitive performance and emotional equilibrium.

that support stress resilience, cognitive performance and emotional equilibrium,” with ashwagandha (*Withania somnifera*), ginseng (*Panax ginseng*), lemon balm (*Melissa officinalis*) and pomegranate (*Punica granatum*) leading her short list.

Magnesium also attracts attention for its purported mood and mental wellness [benefits](#). According to Dena Strehlow, Ph.D., senior director of business development at ThreoTech, the company's magnesium-L-threonate form of the mineral – branded Magtein – may deliver those benefits more effectively than traditional forms.

The secret lies in the threonate, which [showed](#) to cross the blood-brain barrier via glucose transporters to shuttle magnesium directly into neurons, where it works its magic. “Magtein has multiple clinical [studies](#) supporting mental clarity, balanced mood and

quality sleep,” Strehlow said, adding that the ingredient is primed for beverage use thanks to its stability, minimal sensory impact and solubility across a wide pH range.

These powerful ingredients may even better boost mood when delivered with the right sensory experience, paving the way for the strategic use of colors and flavors.

Emotional power

Philip Caputo, marketing and consumer insights manager at flavor-focused Virginia Dare, noted, “Flavors themselves don't directly alter mood states the way functional ingredients might, but they play a powerful role shaping perception and emotional response – making them effective tools for signaling a beverage's intended effect.”

Berg agreed, suggesting that in calming beverages, formulators leverage botanicals like lavender (*Lavandula*), chamomile (*Matricaria chamomilla*) and lemon balm – “flavors with a longstanding association with relaxation and self-care,” she said. Alternately, they can use bright citrus notes from orange, lime or grapefruit to convey alertness and vibrancy.

“For moods like ‘focus’ or ‘intensity,’” she continued, “a profile might become more nuanced. Think sharp flavors like rosemary [*Salvia rosmarinus*], peppermint [*Mentha piperita*] or matcha, which can feel crisp and mentally invigorating. But ultimately, pairing flavor with mood is about creating a sensory shortcut that helps consumers feel the effect you're aiming to deliver even before they take a sip.”

Seeing is feeling

The same holds for color.

Yavuz explained that in beverages, color is important to shaping perception, communicating function and inspiring emotion. “Color also plays a vital role in first impressions, especially on socially driven platforms like Instagram or TikTok,” she added.

Formulation

She maintained these color-emotion associations cross cultures and geographies, noting that yellows and oranges from “natural” sources like beta-carotene and turmeric (*Curcuma longa*) almost universally evoke happiness and excitement, while the pale greens and soft blues of matcha and spirulina (*Arthrospira plantensis*), respectively, signal calm, wellness and clarity.

To create a feeling of focus and enhanced cognition, she encouraged formulators to tap into “richer hues” like the deep red of hibiscus, or an elderberry (*Sambucus*)-based purple.

Only natural

“It’s not enough to match color to mood,” Yavuz emphasized. “In functional beverages, natural colors are preferred over artificial variants,” with proprietary dsm-firmenich research indicating that more than two-thirds of consumers actively avoid the latter.

When natural colors meet complicated beverage formulations and processing protocols, though, challenges may emerge.

Carol Sinople, senior food scientist at Cargill, explained, “Consumers expect visual cues that align with taste. Unfortunately, technical constraints – pH especially – can complicate this relationship. For example, a refreshing cucumber-water profile might suggest a green hue, but if the beverage’s pH is too low, that color won’t hold up over time.”

Flavor alignment

The hurdles mount when matching a beverage’s flavor to its mood-boosting effects.

“For example,” Sinople proposed, “L-theanine is gaining popularity thanks to its association with mental clarity, but it brings bitterness and

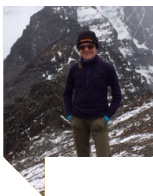
astringency. Similar issues arise with caffeine – which can have lingering bitterness and astringency – and mushroom extracts, which may introduce significant challenges around taste and aroma.”

Flavor maskers have worked heroically to correct these flaws; however, they may also introduce their own drawbacks, including a tendency to mute a beverage’s characterizing profile.

Sinople thinks this is an example that Cargill’s EverSweet stevia sweetener + ClearFlo natural flavor may help. The combination generates an up-front sweetness and reduced linger that resemble sugar’s, while simultaneously managing the bitterness of caffeine, L-theanine’s astringency, metallic notes from minerals and the off-note flavors of ashwagandha, she claimed.

Unlike traditional flavor-muting maskers, the proprietary duo is thought to enhance characterizing flavors like light fruity notes and rich chocolatey ones, “opening the door to cost savings by letting us deliver the same flavor intensity with less flavor,” Sinople held.

In an environment of rising prices and increased pressure to innovate, that should boost anyone’s mood. ■



Kimberly J. Decker is a Bay Area food writer who has worked in product development for the frozen sector and written about food, nutrition and the culinary arts. Reach her at kim@decker.net.



Drinks that dance to consumers' daily rhythms

by Grant Gerke

Chronobiology is updating energy drinks in 2025, syncing sips with the body's natural rhythms – for sustained focus without the caffeine crash.

Like a metronome for metabolism, the body's circadian rhythms set the tempo for energy, mood and focus ... biological beats that dictate when the body soars and when it slumps.

Chronobiology – or the study of biological rhythms and their impact on physiological processes – is tapping into this primal beat, remixing energy drinks for 2025 to align with the body's natural daily cycles, often offering a smooth, sustained lift that keeps jittery caffeine chords at bay.

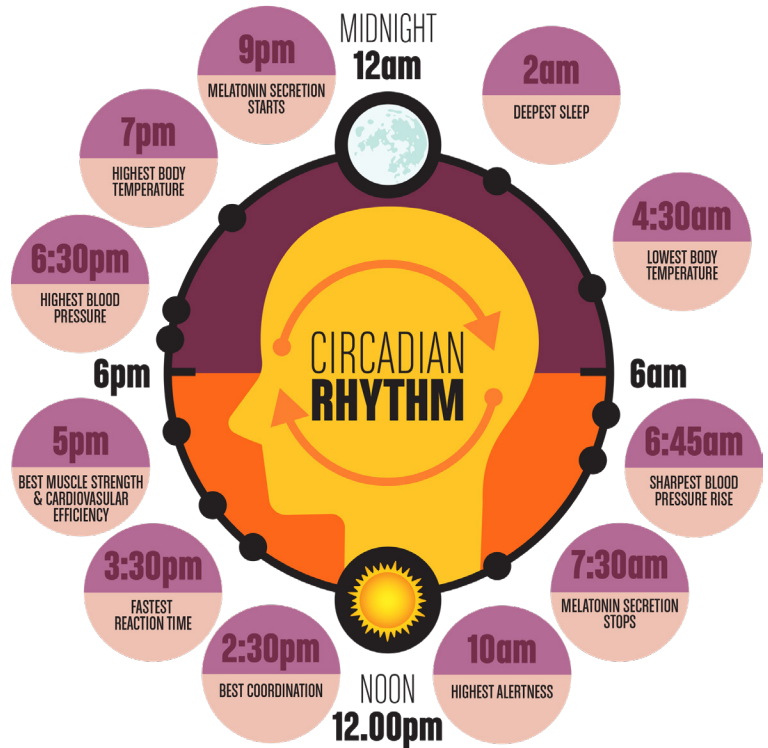
Rhianna Smith, senior product manager of premix food and beverage at ingredient supplier Glanbia Nutritionals, took note of

all the biological changes that happen in the body throughout the day. "These physiological changes – in addition to need states like hunger, stress and sleep – can greatly affect the response that a person feels when consuming energy drinks," she contended.

Formulators are leveraging chronobiology to develop beverages that support mental clarity and focus at specific times of day, such as the post-lunch dip or in the morning when alertness is often elusive.

Israel-based food tech company InnoBev Ltd. is at the forefront with its BioLift WakeUp beverage, designed to combat the cognitive slump after lunch. Eli Faraggi, co-founder

Beverage producers are evaluating how cognitive nutrients like **nootropics** can combine with **circadian rhythms** to create ‘personal’ beverages for consumers.



Source: InnoBev Ltd.

and CEO at co-packer InnoBev, explained, “At noon, oxygen levels in the blood drop, body temperature decreases slightly and hormonal shifts – particularly in cortisol and insulin – occur.” Backed by three clinical trials conducted over 16 years by Giora Pillar, M.D., Ph.D., of the Israeli Sleep Institute, BioLift’s formula uses carob (*Ceratonia siliqua*), *Ginkgo biloba*, elderberry (*Sambucus*) and guarana (*Paullinia cupana*). Carob, combined with apple extract, serves as a low-glycemic sweetening agent with D-pinitol (a type of inositol found in the outer casing of carob seeds), addressing sugar-related energy crashes.

Clinical trials conducted with employees at Google and eBay showed that BioLift outperformed caffeine for morning and evening use, highlighting its chronobiological alignment. InnoBev is now partnering with seven New York school districts to provide BioLift to students, targeting post-lunch cognitive dips.

Smith added, “Engineered solutions that support the body’s biological rhythms can consistently deliver the desired effect.”

Formulations get precise

Beyond chronobiology, precision wellness incorporates trends like nootropics and microbiome personalization. Maria Stanieich, senior marketing manager at ingredient supplier

Kyowa Hakko USA, noted, “We’re seeing more interest in formulations that avoid extremes. Ingredients that support mental energy without overstimulation are getting more attention, not just for late-day use, but for anyone looking for more balanced, sustained focus throughout the day.”

She continued, “We see a lot of potential in solutions that can be flexibly applied across different dayparts.” Kyowa Hakko offers the nonstimulant nootropic ingredient Cognizin Citicoline, positioned as a potential foundational ingredient for an afternoon drink or a caffeine-free morning-based product.

Other nootropics, like L-theanine, vitamins B6 and B12, *Bacopa monnieri*, and 5-HTP (hydroxytryptophan) from *Griffonia simplicifolia* seed, are gaining traction with formulators in the development of clean-label beverages.

Modulating the microbiome

In a recent [webinar](#), Tom Vierhile, VP of strategic insights for North America at data and intelligence firm Innova Market Insights,



Source: InnoBev Ltd.

Biolift’s 12-oz. beverage product, which promotes a cognitive boost on its label, contains four main ingredients: **carob (St. James fruit), Ginkgo biloba, elderberry and guarana.**

mentioned, “The word ‘microbiome’ is something that’s exploded in usage. We’re just beginning to understand (it). Everyone has their own microbiome, and yours may react differently.”

Personal microbiomes influence how individuals respond to ingredients, complementing chronobiology in tailored formulations. Over the past five to seven years,

personalization has surged, with companies exploring solutions for consumer-specific needs across multiple parts of the day.

By addressing physiological changes with chronobiology, beverage formulators are redefining energy for today’s wellness-conscious consumers – and doing it with drinks aimed at the physiological ebbs and flows to which everyone can relate. ■



[Grant Gerke](#) is a seasoned industry 4.0 (digital transformation) editor reporting on manufacturing developments in the food and beverage industry. His career includes stops at Automation World magazine as a digital managing editor and freelance writer for Food Engineering and ProFood World magazines.



Melting Forest – Adaptogenic sparkling drinks

Founder: Sean McDonald

The story: Melting Forest started with what McDonald calls the 3 F's – fun branding, functional ingredients and flavorful product.

“We use organic lion’s mane [*Hericium erinaceus*] and cordyceps [*Cordyceps sinensis*] mushrooms and natural caffeine from green coffee beans to support [mental clarity](#) and [physical stamina](#),” McDonald said. “Clinically studied quality ingredients like Senactiv enhance cellular performance, while AlphaWave L-theanine helps deliver smooth, focused energy – no jitters, no crash.”

Why it’s a game changer: Melting Forest sources exclusively from U.S. vendors with high-efficacy ingredients. It all comes down to flavor, though, and at only 5 calories per serving, “tasty” was no easy task.

“Flavor is everything to us,” McDonald shared. “Depending on the SKU, we use a combination of stevia and monk fruit, along with small amounts of erythritol for mouthfeel and body.”

GORGIE – Energy drinks with benefits

Founder: Michelle Cordeiro Grant

The story: GORGIE started as a fitness performance product – albeit one designed for women, by women – to provide energy but also support health and wellness.

Grant explained, “[It’s] a drink that tastes good, feels good and actually looks good with you. We are ... creating energy your way – for Monday motivation, 3 p.m. pick-me-ups, late-night dance parties and everything in between.”

Why it’s a game changer: GORGIE incorporates 150 mg of caffeine from green tea but also biotin, B vitamins and L-theanine, all with zero sugar and only five calories. Grant vowed never to use aspartame, instead choosing Reb (Rebaudioside) M, a steviol glycoside known for its sugarlike sweetness and less bitter aftertaste.



Ofi's KOFEFRUT RTD – Energy and antioxidant beverage

Founder: Sunny Verghese

The story: To make an energy drink from upcycled cascara superfruit, ofi extensively researched the ingredient, down to the antioxidant content. Siva Subramanian, global head of innovation for coffee at ofi, explained, “Cascara contains phenolic acids and flavonoids. Epidemiological studies have revealed that polyphenols may help [provide protection](#) against development of certain diseases.”

Why it's a game changer: As a raw material, coffee fruit cascara is highly variable based on the variety of coffee cherries and [where they were grown](#). “To retain and stabilize polyphenols and flavonoids in cascara, we have to carefully handle the coffee pulp,” Subramanian acknowledged. “We have developed a proprietary extraction process ... to maximize extraction of the polyphenols and stabilize them in a spray-dried format.”



Projo Power Coffee – Collagen-infused instant coffee

Founder: Charbel Mawad

The story: Projo is an instant coffee stick pack, but with up to 12 g of protein per serving and no added sugar, it may appeal to a slice of the energy drink demographic: fit people.

Mawad noted, “I started adding protein into my cup of coffee, and I felt great. We learned that protein [counterbalances the spike in cortisol](#) that you get from just caffeine alone.”

Why it's a game changer: Projo was designed as a functional beverage in every sense, providing more than just caffeine. “We use a hydrolyzed collagen [for protein], and we mixed that with real milk,” Mawad stated. “We also added a digestive enzyme blend to make the product lactose-free but also more [bioavailable](#).”



Update – Energy with paraxanthine

Founder: Daniel Solomons

The story: When Update launched, Solomons wrote: “Energy drinks needed an update, and so we created a new caffeine-free formula. Update and our team of biochemists have worked tirelessly on formulating our energy drink with paraxanthine, the key metabolite in caffeine responsible for energy and focus.”

Why it’s a game changer: Isolating and integrating a single metabolite is no easy feat. Update uses the branded version of paraxanthine, enfinity, but developing the beverage still required 87 iterations. The company settled on a formula including nootropics like N-acetyl L-tyrosine and alpha-GPC (alpha-glycerolphosphorylcholine). ■



read

TikTok, nostalgia, sustainability shape consumer preferences for F&B products

Younger consumers prioritize sustainability and transparency in ingredient sourcing. That was a major takeaway from a recent SupplySide session in Las Vegas.



Drawing from two decades of experience as a writer, editor and communications specialist, [Scott Miller](#) is the senior staff writer for SupplySide Food & Beverage Journal. His broad portfolio spans a quick-witted beer blog to insightful articles on everything from ingredient science to greenwashing.


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