

Can snacks help you sleep?

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Charlotte Cruze (left) with her co-founder of Alice Mushrooms, Lindsay Goodstein

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Mushroom-infused chocolate brand Alice Mushrooms has built a cult following since it launched three years ago.

Its original chocolate product, Nightcap, is now available in 2,000 stores across the US, and boasts a list of ingredients that claim to help improve your sleep quality.

Developed by Alice Mushrooms co-founders Charlotte Cruze and Lindsay Goodstein, Nightcap features reishi mushrooms and chamomile, known for their calming effects; plus magnesium and zinc, which are said to increase the body's natural levels of melatonin, a hormone which triggers sleepiness.

It also includes L-theanine, an amino acid that naturally occurs in green tea, which is also understood to have a relaxing effect on the body to aid sleep.

"We probably took the longest time to formulate our sleep chocolate, of any of our products, because sleep is so tough. There's a million different reasons that people can struggle with sleep," says New York City-based Cruze.

"We worked with homeopathic doctors, PhD researchers and professional product formulators, to get something that could help with every part of the sleep cycle that could be getting disrupted."

Cruze and Goodstein's growing business is playing into the rising demand for products promising better sleep.

Some 47% of 1,003 Americans surveyed by mattress company Sleepopolis currently take a sleep aid, with natural supplements like melatonin proving the most popular, in favour of prescription and over the counter medications.

Meanwhile in the UK, pharmaceutical products remain the largest sleep aid category, but natural remedies is the fastest growing segment.

The US and UK also both ranked in the bottom 10 for countries with good "sleep scores", as analysed in IKEA's 2025 Sleep Report.

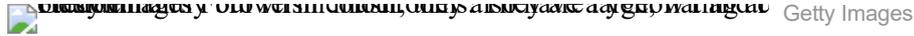
Sleep enhancing snack foods like Alice Mushrooms' Nightcap chocolate are part of a new category of products that combine the wellness claims of health supplements, with the format of a treat.

As Cruze notes, eating a chocolate to help you sleep feels more like a reward, whereas taking a capsule can feel more medicinal, and less enjoyable.

That explains why the "sleep treats" category is becoming more competitive. Other options include Goodnite dark chocolate sleep bites, containing L-theanine and melatonin; Lagoon's Night Bites, which feature L-theanine and

magnesium; and Good Day Chocolate's "Calm" range, infused with magnesium, L-theanine and chamomile.

Reishi mushrooms are also the active ingredient in a number of chocolates, gummies and beverages, all promoting relaxation.



Reishi mushrooms have been used in medicine in Asia for thousands of years

Is there any sound science behind these trendy products?

The long-term sleep benefits of **magnesium** and **melatonin** have been scientifically proven, yet for ingredients like chamomile, any documented positive sleep impacts appear to be short-term, with placebo effects commonly occurring.

In the UK, melatonin is **available on prescription only**. Synthetic version of melatonin are prescribed for short periods to help with sleep problems.

Studies on reishi mushrooms are currently too small and short-term to be statistically significant, despite them being used medicinally in Asian cultures for thousands of years.

And as for L-theanine, the jury is out. As a food additive, L-theanine has been slowly growing in popularity since Japan approved it for use in food in the 1960s, thanks to a cultural association with green tea and matcha dating back thousands of years.

The US Food and Drug Administration approved L-theanine for use in food and beverages in 2005, but Europe and the UK, it's more complicated.

L-theanine is approved if it's been naturally extracted from green tea, but if it's been synthetically made, it's not allowed.

So far, **research has found** the impact of L-theanine on sleep to be modest, and academics the BBC spoke to advised treading with caution.

Melanie Stearns, assistant professor at the University of South Florida, notes that the dosage of L-theanine tested in studies has often been greater than the amount included in food.

"Because of this, the sleep benefits of L-theanine when consumed in products like chocolate or snack bars are not well studied, and their effects should not be expected to be dramatic," says Stearns, who's the director of the university's Family, Adolescent, Child, and Caregiver Translational Sleep (FACCTS) Lab.

Meanwhile, Lina Begdache is a research assistant professor at Binghamton University in New York who studies the interaction between food, mood and sleep.

She warns that "dose stacking" could become a problem with people consuming sleep-enhancing products, as more active ingredients like L-theanine and others appear in more products.

"Evidence on chronic high consumption from fortified foods and long-term neurobehavioral outcomes is still sparse. Moderation, clear labelling, and attention to total daily exposure remain prudent," advises Begdache.

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Kat Lederle says more research is needed on sleep-enhancing ingredients

They are points that sleep counsellor Dr Kat Lederle is also concerned about. One issue is the different timing of different ingredients for them to take effect - melatonin, for example, should be taken two hours before bed, yet Alice Mushrooms, for example, claims the effect of its Nightcap chocolate can be felt 15 to 45 minutes after eating it.

Lederle is also skeptical about how active ingredients like L-theanine may be impacted by being combined in a food product, and other substances, like fat, sugar and protein.

"I'm wondering whether some of these claims are just too early. I think there's still more research needed as to when and how much, in what composition [is most effective], and the effect on different demographics," says London-based Lederle.

She also raises the point that a sleep aid in the form of a chocolate, gummy, bar or drink may cause some people to avoid looking at what's actually causing their sleep issues.

That's something Cruze at Alice Mushrooms agrees on.

"You could take four of our Nightcap chocolates, but if you're staring at your phone and scrolling TikTok late at night, there's no point," she says.

Amir Mousavi is a chef turned food consultant at Good Food Studio, which helps entrepreneurs develop new food products.

Mousavi is one of the brains behind fitness coach Joe Wickes' Killer protein bar, designed as a marketing stunt to draw attention to the ultra-processed nature of so-called health products.

Mousavi is working on a number of new "functional food" brands, which he can't reveal, but says the demand comes from the trend of "biohacking" - people turning to scientific ways of improving their physical and mental performance.

Mousavi himself has a thorough list of supplements he takes each day: creatine for muscle building, lion's mane mushrooms to help focus, ashwagandha for stress reduction, and reishi mushrooms in the evening for relaxation.

During a stressful period last year, he took a sleep aid that contained L-theanine. He's also invested in an AI-powered electrical bed cover that cools down or heats up based on your body temperature, that he swears by for improving sleep.

"We're all bio-hacking like nobody's business," reports London-based Mousavi. "It's always been human nature - you want the cheat, you want the shortcuts."

"People are very happy to experiment, even with just early stage scientific or proprietary evidence."

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