

By **CAROLINE JONES**

**It's said to help sleep and ease anxiety and achy muscles, but...**

**M**AGNESIUM has become the supplement of the moment, with celebrities and health influencers extolling its use, particularly for sleep and mood.

No surprise then that magnesium is now one of the top five of the UK's most popular UK supplements – but do we really need to take extra?

'Magnesium has become hugely popular as a sleep-promoting nutrient, but it's vital for the whole body – essential for bone and muscle health, it can help with muscle cramps and regulate blood pressure,' says Dr Lindsay Kass, a sports and nutrition scientist at the University of Hertfordshire, who has conducted studies into magnesium.

'But the current weight of evidence for its sleep benefits is fairly weak: some studies have shown it improves quality of sleep rather than duration as it is a relaxant.'

Although it's often claimed that magnesium works quickly (so should be taken just before bed), there's 'simply no evidence for this', says Dr Kass. It's more likely to have a slower, cumulative effect that's more noticeable for those whose magnesium levels are already low.

In theory it should be easy to get our recommended daily amount (300mg) from food. This equates to around a portion of cooked spinach, a handful of pumpkin seeds and a banana, for instance.

Low levels are unlikely to produce noticeable symptoms beyond tiredness. 'The prevalence of low magnesium in the general population is 2.5 per cent to 15 per cent so magnesium-related tiredness is fairly common,' says Dr Kass.

If you want extra magnesium, the choice of products, from pills to creams, is overwhelming. Here, Dr Kass gives her opinion on the options, which we then rated.

## TABLETS

**Boots Magnesium 375mg, £6.50 for 60, boots.com**



**CLAIM:** A two-a-day magnesium pill (providing 375mg in total) 'reduces tiredness and fatigue'.

**EXPERT VERDICT:** This no-frills pill contains the most common and cheapest form of magnesium – magnesium oxide.

There is a common misconception that this isn't the fastest absorbed form – it has a lower bioavailability, which means it's less soluble than some forms and more slowly absorbed into the bloodstream, so is somehow less effective.

However, slower absorption means more can be absorbed overall as it takes longer to move along the gastrointestinal tract.

Magnesium oxide is also by far the most researched form and taking it as a supplement has been proven to improve blood levels of magnesium. All of which makes these tablets – at around 10p each – pretty good value, and 375mg should provide enough for most people.

But some find magnesium oxide a bit harsh on their stomach, as it draws water into the gut which can trigger diarrhoea or cramps. If this happens to you, try a different type of magnesium (such as an ionic liquid or skin cream, see below). **7/10**

## OIL SPRAY

**Kiki Health's Magnesium Oil, £12.50 for 125ml, amazon.co.uk**

**CLAIM:** An oil spray to 'help sleep and ease sore muscles after

exercise', providing 212mg of topical magnesium oxide per ten sprays.

**EXPERT VERDICT:** This product has clear instructions on how much magnesium it contains but this is the total amount of magnesium available, and without seeing independent research on this product, we can't know how much of that the body will absorb.

Magnesium helps muscles to relax and some studies have found it can help ease sore muscles after exercise, so this could be useful after a workout.

Research has shown that rubbing a magnesium cream into the affected area can shorten the duration of a muscle cramp. **5/10**

## GUMMIES

**Nobi Nutrition Magnesium Citrate Gummies, £14.95 for 60, amazon.co.uk**

**CLAIM:** 'Supports regular, healthy digestion'. Two of these raspberry-flavoured gummies provide 170mg of magnesium.

**EXPERT VERDICT:** As well as the other recognised magnesium health benefits, magnesium citrate is often used as a laxative. But you'd need more than 500mg for this effect, which would get expensive with these gummies.

It's also worth noting that magnesium citrate isn't superior to other types of magnesium when it comes to absorption. And as with many gummies, the top two ingredients are glucose syrup and sugar, making this high sugar – one to miss, I'd say. **1/10**

## BODY BUTTER

**Sweet Bee Organics Sweet Sleep Magnesium Butter, £26.99 for 120ml, sweetbeeorganics.co.uk**



**CLAIM:** This body cream promises 'restful sleep'. Apply 20 minutes before bed.

**EXPERT VERDICT:** Studies – including ones I've led at the University of Hertfordshire –

have shown that magnesium is well absorbed through the skin.

In one 2017 study I conducted, applying a magnesium chloride cream containing 56mg to the skin daily for two weeks improved blood levels of the mineral by more than 22 per cent – more than double the amount participants got from a magnesium tablet. (I use a cream if my muscles are sore after exercise.)

But it's not clear from the label how much magnesium you're getting here (though in the frequently asked questions on the website, it states there's 350mg per grape-sized amount of cream, which is generous). It also contains relaxing lavender oil. **6/10**

## LIQUID

**Viridian Ionic Magnesium Liquid, £24.70 for 100ml, viridian-nutrition.com**

**CLAIM:** Made from magnesium-rich water from the Great Salt

Lake in Utah, US, the magnesium is 'ionic', which the maker says means it's faster absorbed. 1ml provides 200mg of magnesium.

**EXPERT VERDICT:** Ionic magnesium is 'unbound', which means it's not attached to anything else such as oxygen – so the stomach doesn't have to break it down to release the magnesium ions (particles), making it easy for the body to absorb it immediately.

The daily dose (2ml) works out at 49p per day – not the cheapest option, but is a good choice for those who like the idea of no fillers or additives.

Another bonus is people often experience less bloating or laxative effect with ionic magnesium, as it's gentler on the gut. **8/10**

## POWDER

**Seeking Health's Magnesium Malate Powder, £19.49 for 250g, healf.com**

**CLAIM:** Magnesium malate is a 'well-tolerated form of magnesium with superior absorption to support sleep, muscle recovery and mood'. Provides 500mg per 2.5g daily scoop.

**EXPERT VERDICT:** Magnesium malate contains malic acid, which is what gives many fruit their tart taste. It has high bioavailability so should be easily absorbed.

There's no advantage in having magnesium in powder form, though it means it can be sprinkled on to yoghurt or added to smoothies – useful if you struggle with swallowing pills.

Like magnesium oxide it can



Picture: GETTY IMAGES

cause stomach cramps and diarrhoea in some, especially in doses of 500mg or more as here.

Although this dose is higher than the RDA, this won't do any harm as the body can easily remove excess in pee – but it would be a waste of money.

More than 1,000mg can cause an upset stomach or cramps and doses over 5,000mg could lead to heart palpitations.

Will magnesium help with mood? There is evidence linking low magnesium with anxiety, so broadly, yes. **5/10**

## BATH SALTS

**BetterYou Magnesium Sleep Bath Flakes, now £8.99 for 1kg, betteryou.com**

**CLAIM:** Pure magnesium bath flakes to 'aid muscle recovery and relaxation in preparation for sleep'.

**EXPERT VERDICT:** This isn't a cheap way of getting your magnesium as the dose for one bath (250g) is a quarter of the whole bag (£2.25 per bath).

But for a therapeutic bath soak it makes sense as studies suggest it's possible to absorb a little magnesium from bath water through the skin (traditional Epsom bath salts contain similar levels) though it's certainly not going to be close to your RDA.

Some research has found salt baths can help with muscle pain and recovery but this could just be the placebo effect of the relaxing warm water – so see it more as a once-a-week soak than a reliable way to improve your magnesium levels. **5/10**

## FIZZY TABLETS

**Tonic Health Rest and Recovery, £9 for 20 tablets, morrisons.com**

**CLAIM:** A blend of 300mg of magnesium glycinate, citrate, carbonate and oxide to 'soothe you into the land of zzzs'.

**EXPERT VERDICT:** These tablets contain four types of magnesium, but I'm not convinced they do more together than just one – your body can only absorb a certain amount of magnesium.

They also have plant extracts, lemon balm and ashwagandha – both calming herbs – so this may help some people sleep. But there's no evidence taking magnesium 30 minutes before bed, as they advise, will actually impact sleep.

Fizzy tablets contain sodium carbonate, a form of salt, so people trying to lower their salt intake should avoid them. **4/10**

## DRINK

**OHMG Peach sparkling magnesium water, now £5 for four 330ml cans, ocado.com**



**CLAIM:** Promises to 'support relaxation, balance and mental wellbeing', with 60mg magnesium per can.

**EXPERT VERDICT:** This drink will only provide a fifth of your RDA, so you'd still need to eat magnesium-rich foods to stay fit and well – or take a supplement. It doesn't contain any

added sugar or artificial sweeteners, which is a good thing in a fizzy drink.

But note that magnesium is found in tap water – and while levels aren't as high as in mineral water, at an average 20-30mg of magnesium per litre, it does still provide a significant amount. So drinking more tap water will help increase your magnesium intake a bit for free. **5/10**