



Hydration STATION

Electrolytes are having a moment, but do you need them?
We reveal everything you need to know

Words: Joanna Ebsworth

Once reserved for endurance athletes and those working at super-high intensities, it now seems everyone from your gym buddies to wellness gurus is supplementing with electrolytes. Indeed, the inaugural 2025 Hydration Report from electrolyte brand Humantra, shows 24 per cent of UK adults now take electrolytes regularly. Yet the same report reveals 55 per cent of UK adults still don't know what they are or what they do. So, just what are electrolytes? How do they work? And can they really benefit your training, recovery from exercise and overall health?

WHAT ARE ELECTROLYTES?

The simplest way to think about electrolytes is as a collection of electrically charged minerals that spark chemical reactions around the body when dissolved in water. 'The most important minerals are sodium, magnesium, potassium and calcium,' says performance nutritionist and Puresport scientific advisor Dr Sam Impey, 'and these are the four you'll find most often in electrolyte drinks because, by volume, they're the most commonly found electrolytes in the human body.'

'Each mineral plays a key role in our biochemistry because they are involved in hundreds of different chemical reactions that make us who we are,' continues Impey. 'Magnesium alone is involved in over 300 chemical reactions and processes in the human body, from your brain through to your muscles and the gut. Meanwhile, calcium is essential for bone health, and also causes muscle contraction through depolarisation, a process where a neural input runs along muscles, tells a certain set-up of the muscle to move some calcium in and out, and sparks an electrochemical gradient that causes a muscle to begin to contract. They do a lot!'

As the body's most abundant electrolyte, sodium is arguably the most important for hydration, playing a dominant role in helping the body regulate fluid balance outside of cells, aiding the absorption and

transportation of nutrients such as amino acids, glucose and water from the small intestine into the bloodstream, and maintaining proper nerve and muscle function. Potassium plays a complementary role by balancing fluid levels inside of our cells, helping to regulate heart function and blood pressure amongst other essential jobs.

'Ultimately, electrolytes are like anchors that pin water into your cells or tissues where it's needed,' explains Sophie Medlin, consultant dietician and head of nutrition at electrolytes brand, Heights. 'If you think back to GCSE science and osmosis, the simplest way to think about it is that salts hold water into a particular place. But if we're not getting enough sodium and if we drink lots of water, that water can't be held in that same place, so it gets lost through our urine, through our bowels and through sweat. That's why it's really worth thinking about how you can utilise electrolytes to pin that water in the right place to make sure that your tissues are properly hydrated, rather than just drinking lots of water which you can lose quite easily.'

ELECTROLYTES FOR TRAINING

Considering that water makes up to 60 per cent of an adult human's body weight, it doesn't take a scientist to understand the key role hydration has in the way we work and perform as a machine. However, things certainly get more scientific when our regular day-to-day loss of liquids and

electrolytes is amplified through sweating and exercise.

'A lot of sports science literature [on electrolytes] refers to a scenario where you are looking for a direct performance benefit,' says Impey. 'And as a general rule of thumb, many of the global guidelines from the American College of Sports Medicine [ACSM] and the International Olympic Committee [IOC] say there probably is a case for having electrolytes for exercise that's longer than an hour at a moderate-to-high intensity to help sustain performance and promote recovery, particularly if you are exercising in hot conditions, which are defined as around 25°C or above.'

'Of course, these recommendations relate to trying to beat your half-marathon PB, for example,' continues Impey. 'But the big differentiator here is that many people use electrolytes during their day-to-day training where the goal isn't necessarily to achieve a new personal best at every session, because that's ridiculous, but rather to help them enjoy a good quality of training while aiding their recovery process. So the recommendations of how you can use electrolytes for training are probably slightly different in that instance. Personally, I think

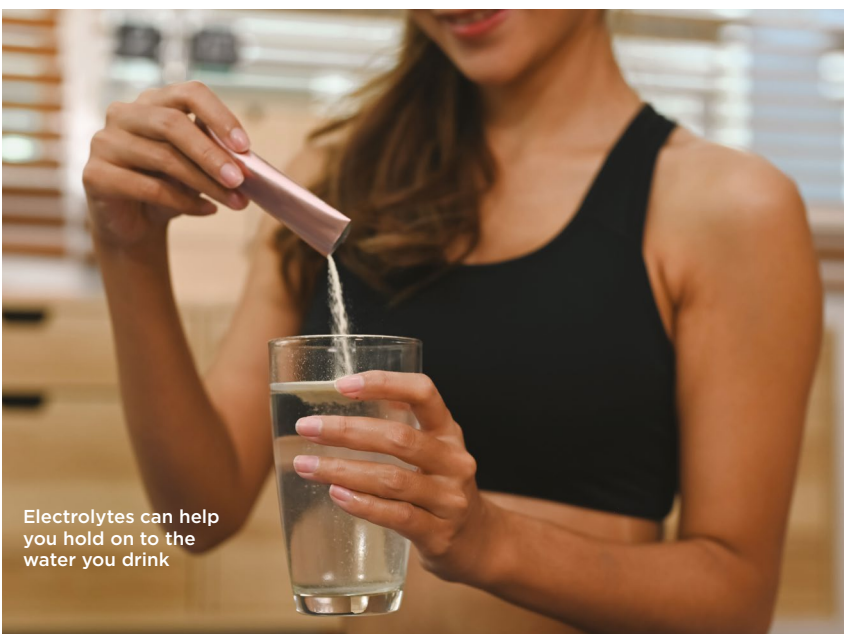
there's a real preference point.' Some people like to pre-hydrate with an electrolyte solution before a training session, says Impey, to drive fluid uptake into the body so that when you start sweating and begin to lose electrolytes, you're not losing them to the point where you become dehydrated. 'And if that works for you, and it makes you feel better during training, then that's fantastic,'

he adds. 'Personally, I prefer to have electrolytes afterwards because I'm quite a salty sweater – I know that for a fact as I've had it measured – and while a bit of it might be psychological, I find having them after a long exercise session over 50 minutes, or after some really sweaty high-intensity intervals, helps with my recovery process.'

As you might have realised, various factors can play a role in your need for electrolytes to support you before, during and after exercise, from the intensity of your workout and how sweaty you get, to the temperature, how salty your sweat is and the duration of your physical exertion. 'I'd say, if you're doing a 30-minute, low-intensity yoga class, you don't need electrolytes,' says Impey. 'But if you're doing a 45-minute Bikram yoga class or a HYROX session and you're caked in sweat, you might find them beneficial. Once you get into that 45- to 60-minute training zone, and you're sweating a lot, I think there's value in exploring electrolytes.'

ELECTROLYTES FOR COMPETITION

Someone who agrees with Impey on the use of electrolytes in competition is two-time Olympic triathlon champion Alistair Brownlee OBE who, after decades of testing electrolyte products to fuel his performance during elite endurance racing, has recently launched his own sports nutrition company called truefuels,



Electrolytes can help you hold on to the water you drink



Hydration is key to maintaining energy levels

and I personally think some products that you see offering 2.5g of salt to replace the electrolytes you might lose in a 5K or a gym session seem way over the top to me.'

ELECTROLYTES FOR WELLNESS

While Brownlee feels taking electrolytes to support high-intensity workouts over a prolonged duration is valid, another school of thought believes electrolytes play a vital role in supporting health and wellbeing, whether we're exercising or not.

'Performance people are usually the first group to pick up on the power of hydration because their bodies won't run that 10K as fast as they should or complete that triathlon if they're dehydrated,' says Oliver Patrick, world-leading physiologist and chief Wellbeing Officer at Heights. 'Therefore, athletes have a much clearer outcome metric of their physiology, and we can see that a one-to-two per cent drop in hydration status can have a meaningful impact on performance at an elite level, but also at a recreational level. And when we think about what's holding back those elite-level athletes, it's the same thing that's holding back the non-elite

featuring two energy gels containing 40g of carbs each: one with a low-salt content of 0.25g per sachet and one with a high-salt content of 1g.

'It's my belief that when the vast majority of people don't perform at their best during a sporting event or fitness challenge – whether that's competing against their friends at the local Spin class or doing an Ironman or marathon – it's probably because of nutrition,' says Brownlee. 'Nutrition is so important for maximising performance and helping the very best to win races. But when it comes to carbs and electrolytes, my thoughts are you don't need as much as you think you do until you do, and then you need more than you think you do. So, if you're doing a 5K run in cool conditions and you've got a normal diet, you don't really need any electrolytes. But if you're doing something sweaty, such as a gym session lasting over an hour, or multi-hour endurance races, electrolytes become really important.

'We know that people sweat between a range of about 200-1,500mg an hour depending on two factors,' continues Brownlee. 'One factor is the concentration of sodium in your sweat, and the other is how much you sweat. And if you sweat a lot, or you're a salty sweater (meaning your sweat tastes of salt or you can see salt on your clothes) it's worth replacing them with a higher salt version of electrolytes. So, if I was doing a relatively easy training ride, I'd use one low-salt version of my stackable performance gels per hour to keep me topped up enough to keep going. However, if I was doing a more intense effort, I might go up to two or

three an hour. And if I was doing a hard race in hot conditions, I might use up to three of the high-salt gels to replace all the salts I was using.'

Ultimately, Brownlee says it's important to tailor electrolytes to your individual needs, and the sporting legend also answers with a 'no' when we ask him if electrolytes are necessary for people who don't exercise. 'Electrolytes are having a moment for sure, and I think that's for a lot of reasons,' he says. 'But the science isn't cut and dry on this, because we have to ask ourselves: "How much electrolytes do we actually need to replace? And how much of what we lose do we actually need to maintain performance?" Scientists definitely disagree on this,

TOP 5 BEST ELECTROLYTES



Truefuels Energy Gel 40/1.0g Salt (£59.94 for 20 servings, truefuels.com) Our tester said: 'Built for endurance athletes, this easily digestible energy gel with 40g of carbs and 1g of salt is convenient and yummy to sup straight from the sachet – it tastes like salted caramel – and is also very drinkable when mixed with water. Easily digestible, it won't cause GI distress either.'



Humantra Himalayan Lime (£28 for 20 servings, humantra.co.uk) Our tester said: 'Zesty and zingy with a zero-salty aftertaste, this highly refreshing antioxidant drink contains six essential electrolytes – sodium, potassium, magnesium, calcium, chloride and phosphate – plus vitamins C and B12 to support your immune system and fight fatigue.'

performers, which is the manufacture of energy.'

'If you're trying to achieve a performance target, having more energy will hopefully allow you to achieve that target. And if you're just interested in general wellness, having more energy mid-afternoon and more brain clarity will also help you perform better,' says Patrick. 'People will come to see me for an energy consultation and ask if they can get in the hyperbaric oxygen chamber or have red light therapy, but I'll always check their urine first, and if it's a little dark and dense, I'll tell them they're a bit dehydrated. If they want to change their energy between today and tomorrow, telling them they need to rehydrate is the most effective lever I can pull. Because we lose an awful lot of fluid daily, but if you don't consume adequate water, and that water isn't in a format that is going to actually hydrate you cellularly, then you can't expect to

combust energy or expect a good result down the line.'

According to the Humantra Hydration Report, dehydration is a serious issue in the UK, with 79 per cent of UK adults regularly experiencing physical symptoms of this condition. And while inadequate water consumption is likely to be a contributing factor – almost a third of UK adults drink less than a litre of water each day, or don't drink any at all – many experts now believe using electrolytes daily can help your body to hold onto the water when you do drink it.

'Often seen as only for athletes or the unwell, electrolytes are essential for everyone', says registered nutritionist Clarissa Lenherr. 'Even mild dehydration can lead to symptoms like fatigue, headaches, low mood and dizziness, and that 3pm energy dip could be down to your fluid balance, not just your sleep or stress levels.' However, Lenherr and others are keen to point out not all electrolytes are suitable for everyday

consumption – especially those that prioritise a high sodium content for rapid rehydration during and after intense physical exertion. And it's this differentiator that has led to the creation of a new wave of electrolytes with lower salt content that are designed to improve hydration while being suitable for everyday use.

'We carefully formulated our new Hydrate+ electrolyte product for the everyday person dealing with endless deadlines, school runs and unexpected late nights, while squeezing in a gym or Pilates session,' says Dan Murray-Serter, co-founder of Heights. 'The formula contains sodium, potassium and magnesium in the proportions that naturally occur in the body. There are some great sports-specific electrolyte brands with high salt contents if you're running a marathon and sweating a lot. However, we created our product to support people with busy lifestyles who aren't running marathons but want to stay sharp and optimise their wellbeing. The question you need to ask yourself is, "Which type of electrolyte product do I need for my lifestyle?" and choose one accordingly.'

'A third of adults drink less than a litre of water a day'

Photography: Shutterstock, various brands



Heights Hydrate+ Peach Spritz (£29 for 24 servings, heights.com) Our tester said: 'A smart electrolyte formula for your brain and body, this delicious zero-sugar peach-flavoured drink contains Cognizin citicoline to help support mental performance and focus, as well as naturally sourced electrolytes including magnesium from sea minerals and Himalayan salt.'



Puresport Ultra Electrolytes Watermelon Salt (£33 for 30 servings, puresport.co) Our tester said: 'Designed for optimal hydration during physically demanding activities, this sugar-free formula has a subtly salty yet refreshing taste. It delivers a science-backed ratio of electrolytes, including 1,000mg of sodium, plus potassium, magnesium and tri-calcium.'



Ancient + Brave True Hydration (£19.20 for 15 servings, ancientandbrave.earth) Our tester said: 'This refreshing formula is inspired by the natural electrolytes found in coconut water for rapid rehydration. Added chromium contributes to the normal maintenance of blood glucose levels, while prebiotic fibre helps to nourish a healthy gut microbiome.'