



LUCOZADE SPORT SCIENCE TEAM

LUCOZADE SPORT SCIENCE TEAM (LSST)

- The LSST work across a wide range of sports from grassroots up to elite level. Lucozade are the Official Sports Nutrition Provider of UKA and as part of this relationship, your club was chosen to receive the support of a Lucozade Sport Scientist this season, Thomas Barnden.
- Look out for Tom around the club if you have any sport science and nutrition questions. As well as regular visits delivering sports nutrition education and fitness testing, Tom will also be offering you discounts on all Lucozade products and bringing you a number of nutrition-based articles. Today we start with the importance of hydration.



HYDRATION



HYDRATION

- Dehydration by as little as 2% can negatively affect both mental and physical performance. To prepare perform and recover, it is important to provide the body with fluid and electrolytes before, during and after exercise.
- When you train hard, sweating is non-negotiable. Your muscles contract and the production of energy produces heat as a by-product. When we exercise, the production of heat starts to make our core body temperature rise above a natural 37 Celsius. One of the main mechanisms by which our body aims to lose this heat is through sweating.

HYDRATION

- The physical process of sweat evaporating from the skin's surface causes heat to be lost to the surrounding environment. There is nothing you can or should do to stop yourself sweating, especially during warmer conditions when sweating is the first line of defence against overheating.
- This amazing process allows the body to cool itself during exercise but unfortunately it occurs at the expense of fluids. Dehydration can lead to reductions in performance and will present as symptoms such as dizziness, nausea and muscle cramps.
- With sweat rates as high as 3 litres per hour (l/h) seen in endurance events, and as little as a 2% body mass loss leading to drops in performance, fluid replacement during exercise becomes extremely important.

HYDRATION

- Sweat rates are very individual and are dependent on numerous factors including body mass, exercise intensity, training status and environmental conditions. However, you can monitor your own hydration status during training.
- An easy method of hydration assessment is to weigh yourself immediately prior to and immediately post-exercise. For accuracy, weigh yourself wearing minimal clothing so that you do not include any sweat trapped in the material, keep an eye on the amount of fluid you drink and monitor how much you urinate during the training session. Then use the following formula:

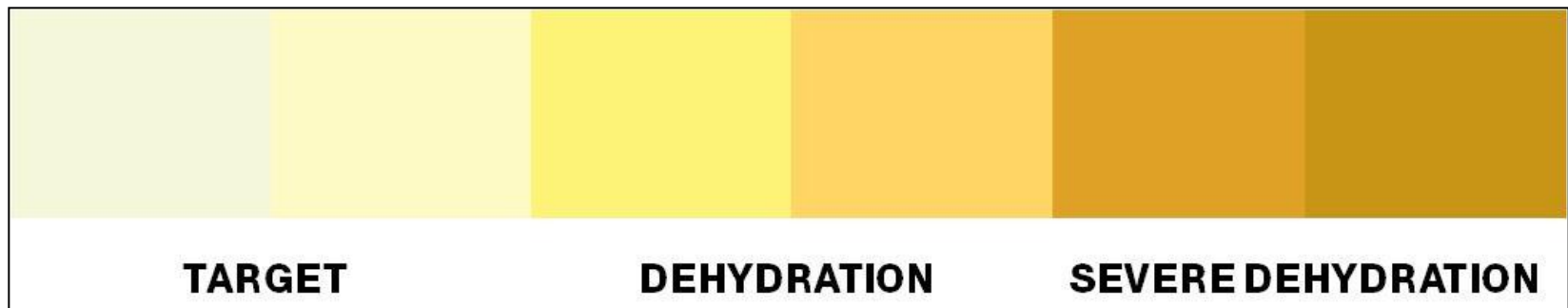
Sweat Loss

(Body weight before - Body weight after) + Amount of fluid intake – Urine output



HYDRATION

- An alternative is to check your urine colour each time you go to the toilet. You are aiming for a pale, straw-like colour (colour 1 or 2 on the urine chart below) and are trying to avoid producing dark, concentrated urine (colours 4-6). The only exception to this is your first urination of the day, which will likely be dark in colour because you will not have drunk for 8-10 hours. This highlights the importance of starting your hydration strategy as soon as possible upon waking.



HYDRATION

- During exercise you should aim to limit fluid losses to less than 2% of your body mass (1.4 kg for a 70 kg person). On the other hand you should never gain weight during a session – this is a clear indication that you are drinking too much and can also cause reductions in performance.
- During endurance events this is to up to 100-150 ml of fluid every 15-20 min (3 mouthfuls) but will be less for shorter duration events and field athletes. During exercise lasting longer than 60 minutes, include a source of electrolytes, particularly sodium, which will help to retain fluid, stimulate thirst and enhance the absorption of carbohydrate.
- Following exercise, aim to replace 150% of fluid losses (using the pre/post weighing method). If time is of the essence and you are training again within 4-8 hours, consume fluids as soon as possible but if you have longer to recover then speed is not as important. Ensure you consume a sodium-containing drink or a salted snack to ensure full rehydration.

HYDRATION

In addition to providing fluid, an isotonic sports drink such as Lucozade Sport Body Fuel will provide electrolytes for hydration and carbohydrate to top up energy levels for when performance really matters.



A hypotonic drink is ideal for shorter duration or lower intensity exercise. With only 50 calories, new Lucozade Sport Lite Cherry will help keep you hydrated without the added carbohydrates

HYDRATION TIPS

- Drink at least 2 litres of fluid each day. Remember that food provides plenty of fluids too!
- To ensure you are hydrated, drink 5-7 ml per kg of Body Mass (ml/kgBM) (~350-500 ml) of fluid 4 hours before exercise
- If your urine is still dark and concentrated 2 hours before exercise, sip 3-5 ml/kgBM of additional fluid
- During exercise, sip fluids to remain hydrated (~100-150 ml of fluid every 15-20 min)
- Replace 150% of fluid losses post-exercise
- Include electrolytes in your beverage/snack for full hydration/rehydration
- Taste is important – the more you enjoy it, the more you will drink!



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