AIS SPORTS SUPPLEMENT FRAMEWORK

ELECTROLYTES GROUP A

Electrolyte replacement products allow targeted replacement of electrolyte losses (particularly sodium and potassium), through sweat or gastro upset. They are beneficial for rapid and effective fluid retention in scenarios where replacement of moderate - large fluid losses is required for rehydration. You will find electrolyte replacement products in a range of different flavours and forms, with varying sodium content.

1 x Hydralyte ice block = 77mg sodium

1 x Hydralyte sachet (in 200mL water) = 206mg sodium

Hydralyte RTD (250mL) = 250mg sodium

2 x Hydralyte tablets (in 200mL water) = 275mg sodium

1 x Gastrolyte sachet (in 200ml water) = 278mg sodium

1 x KODA tablet (in 400mL water) = 400mg sodium

1 x Hydralyte Sports sachet (in 600ml water) = 690mg sodium

Hydralyte Sports RTD (600mL) = 700mg sodium

LOWER SODIUM PER SERVE ⟷ HIGHER SODIUM PER SERVE

SITUATIONS FOR USE

	Water	Sports drink	Electrolyte drink
> Before exercise in hot environments, where large sweat losses cannot be replaced practically e.g. hyperhydration	✗	✗	✓
> Targeted replacement of large sweat losses, long duration of sweating or evidence of salty sweat	✗	✗	✓
> Fluid and electrolyte needs are high, but fuel needs low e.g. 'train low' sessions, or when reducing energy intake	✗	✗	✓
> During exercise <60 min	✓	✗	✗
> During exercise <60-180 min	✓	✓	✗
> During continuous exercise >180 mins	✓	✓	?
> Rehydration when losses are low i.e. <2% body mass loss	✓	✓	✗
> Rehydration when losses are higher i.e. >2% body mass or short recovery time	✓*	✓*	✓

* assuming additional electrolytes are provided by food

Electrolyte replacement products contain

4x MORE SODIUM | **4x LESS SUGAR⁺** | **4x LESS ENERGY**

⁺*small amount of sugar helps absorption*

than sports drinks

POST EXERCISE REHYDRATION PLAN

Weigh in pre-exercise — PRE

Weigh out post-exercise — POST

= FLUID LOSS

e.g. pre (70kg) - post (68kg) = 2kg loss = 2 x 1.5 = drink 3L fluid in recovery

DRINK **1.5x#** FLUID LOSS over the **2-4hrs** post-exercise

#More fluid than lost to allow for ongoing fluid losses

Choose electrolyte drinks or salty foods plus water when rehydrating to optimise fluid retention

SIP vs. SKULL to maximise fluid rentention

Note: the carbohydrate content of electrolyte products are usually low

Carbohydrate refuelling goals should be considered separately

For exercise finishing late in the day, consider an amount of fluid that can be comfortably tolerated to minimise sleep disturbance from night time toilet waking

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ELECTROLYTES

FOOD FIRST PHILOSOPHY

> Water + salty food can be a suitable option for rehydration, particularly when there is adequate recovery time and food is able to be consumed soon after finishing exercise

> The carbohydrate and protein from food slows the rate of fluid absorption, promoting better fluid retention, plus the added benefit of contributing to other nutrient targets

> When fluid losses are significant, aim for a sodium intake approaching that of a typical electrolyte replacement drink (equivalent to ~1000-1400mg of sodium per litre of water)

Bacon & egg roll w. cheese & relish/sauce
= 1400mg sodium

Cheese (2 slices)
= 300mg sodium

1/4 tsp salt added to food
= 570mg sodium

1 mixed grain wrap
= 600mg sodium

Sliced ham (50g)
= 600mg sodium

Spaghetti bolognaise (2 cups)
= 1000mg sodium

Vegemite (1 tsp)
= 200mg sodium

Smoked salmon, 3 slices (75g)
= 1000mg sodium

Milk (600mL)
= 270mg sodium

Baked beans (130g)
= 200mg sodium

CONCERNS & CONSIDERATIONS

No consensus on optimal sodium replacement guidelines during exercise. General recommendation = ~500-700mg sodium/L fluid.

Cost of electrolyte products can be significant.

Cramping can be associated with multiple factors including fatigue, not specifically salt losses.

High sodium drinks don't taste great and may interfere with voluntary fluid consumption.

Hyponatraemia (low body sodium) usually results from drinking too much water, not a lack of electrolytes.

Consider high salt intakes and the impact on your health.

All supplements have a doping risk of some kind. Some supplements are riskier than others. Athletes should only use batch-tested supplements. The Sport Integrity Australia app provides a list of more than 400 batch-tested products. (www.sportintegrity.gov.au/what-we-do/supplements-sport).

Risk of peripheral neuropathy

Electrolyte supplements often have added Vitamin B6, which has been associated with peripheral neuropathy, a type of nerve damage that causes tingling, burning or numbness and the hands and feet. While the maximum permitted daily dose in individual supplements is 100mg, Vit. B6 is added to a large number of supplements, including multi-vitamin and mineral supplements, electrolytes, plus mineral complexes like magnesium and zinc. Peripheral neuropathy can occur at doses of Vit. B6 <50mg. Talk to your sports dietitian if you have any concerns about the supplements you are using and chat to your doctor if you have any questions about peripheral neuropathy.

While batch-tested products have the lowest risk of a product containing prohibited substances, they cannot offer you a guarantee. Before engaging in supplement use, you should refer to the specific supplement policies of your sport or institute and seek professional advice from an accredited sports dietitian (www.sportsdietitians.com.au). Athletes are reminded that they are responsible for all substances that enter their body under the 'strict liability' rules of the World Anti-Doping Code.