

2:1 FRUCTOSE

PRODUCTS 2008/2009



2:1 high fructose and caffeine drinks
the World's fastest sports nutrition

RACE FASTER

HIGH5

MORE ENERGY AND BETTER HYDRATION

High5 drinks contain an advanced new carbohydrate called **Super Carbs**. In test after test Super Carbs outperformed the best sport drinks from around the World. High5 drinks have been shown to provide up to **50% more energy** and deliver **fluids 40% faster** than normal sport drinks. And all with less chance of stomach upset.

High levels of **fructose (a 2:1 ratio)** combined with moderate levels of **caffeine** and the expertise gained from

extensive real world testing are the key to Super Carbs stunning success. After **10 research studies and more than 2,000 hours** of independent testing, **the evidence is clear:** High5 are the World's fastest sports drinks.

If you follow the advice in this guide, **we are so confident that you will race faster over every distance, that we offer a full money back refund.** Visit www.highfive.co.uk for details.

High5 is a UK company

High5 EnergySource

60km time trial: 10% faster than SiS PSP-22 and SiS GO Electrolyte

Research Study 6: 2006 Hert's Uni & **Research Study 7:** 2007 Australia

... the research

The superiority of High5 drinks, over both short and long distance, has been proven by 10 independent studies and more than 2,000 hours of rigorous testing. Check out the 2:1 fructose and caffeine research at:

www.highfive.co.uk.



Some High5 products contain caffeine. EnergySource X'treme contains citrus aurantium. These are not on the WADA 2008 banned substance list but there may be special regulations for your sporting body.

Study 1 (2004) Oxidation of combined ingestion of glucose + fructose during exercise. **Result:** Peak exogenous carbohydrate oxidation rates were **55% higher with fructose + glucose (2:1 ratio)** as compared with glucose. J Appl Physiol 96: 1277-1284, 2004. Roy L. P. G. Jentjens, Luke Moseley, A. E. Jeukendrup, et al.

Study 2 (2004) High oxidation rates from combined carbohydrates ingested during exercise. **Result:** When **fructose + glucose** & sucrose are ingested simultaneously at high rates, estimated endogenous carbohydrate oxidation is reduced compared to glucose. Medicine & Science in Sports & Exercise.:1551-1558, Jentjens, Roy L. P. G.; Achten, Juul; Jeukendrup A, et al.

Study 3 (2005) Exogenous carbohydrate oxidation rates are elevated after combined ingestion of glucose + fructose during exercise in the heat. **Result:** Ingestion of **fructose + glucose (2:1 ratio)** during exercise in the heat resulted in **36% higher** exogenous **carbohydrate oxidation** rates and **greater fluid availability** compared with ingestion of glucose. Jpphysiol. 2005; doi: 8750-7587/06. Roy L. P. G. Jentjens, A. Jeukendrup et al.

Study 4 (2005) exogenous carbohydrate oxidation during ultra-endurance exercise. **Result:** With **fructose + glucose (2:1 ratio)** cadence (rpm) was maintained and there was a significantly **higher peak rate of exogenous carbohydrate oxidation** relative to glucose. J Appl Physiol 2005. Asker E. Jeukendrup1, Luke Moseley, Gareth I. Mainwaring, et al.

Study 5 (2005) Oxidation of combined ingestion of maltodextrin + fructose during exercise. **Result: Peak exogenous carbohydrate oxidation** was **40% higher** with ingestion of **fructose + glucose (2:1 ratio)** as compared to maltodextrin. Medicine & Science in Sports & Exercise: 426-432, 2005. Wallis, Gareth A, Jentjens, Roy L. P. G., Jeukendrup A. E, et al.

Study 6 (2006) Superior time trial performance with a fructose + maltodextrin drink (High5) compared to maltodextrin based drink (SiS). **Result:** Ingestion of a fructose + glucose (2:1 ratio) drink (**High5 EnergySource**) resulted in **25% greater** exogenous carbohydrate oxidation, **40% (peak) greater fluid uptake** and a **6.15 minute** (average overall) 60km **time trial improvement**, as **compared to** a calorie matched maltodextrin drink (**SiS PSP22**). Division of Exercise Sciences, Hertfordshire University. Dr. J Roberts, Dr. M Roberts, et al. Publication pending.

Study 7 (2007) Large 800 hour performance study comparing a 2:1 high fructose drink (High5) to 4 other

“traditional” sports drinks over a 60km time trial. **Result:** Ingestion of a fructose + glucose (2:1 ratio) drink (**High5 EnergySource**) resulted in: **8:40 faster** time trial and 39% better hydration **compared to PSP-22 (SiS)**. **7.39 faster** time trial and 17% better hydration when **compared to SiS Go**. **5:25 faster** time trial and 43% better hydration **compared to Maxim**. **5:47 faster** time trial and 34% better hydration compared to Endura (Australia). Study by High5 with full independent scrutiny of data collection and statistical analysis.

Study 8 (2007) The effect of consuming a 4:1 protein drink (High5 EnergySource 4:1) during the 8-day Trans Alp MTB race compared to a carbohydrate only beverage (SiS Go). **Result:** consumption of a protein drink **EnergySource 4:1** enhanced fluid retention in race temps of 38°C, reduced thermal strain and **improved race performance by 10% overall as compared to SiS Go Electrolyte**. Andrew J. Cathcart, Scott R. Murgatroyd et.al. University of Glasgow, ICEARS, Institute of Membrane & Systems Biology, University of Leeds. Publication pending.

Study 9 (2008) Superior endurance performance with ingestion of multiple transportable carbohydrates. **Result:** Ingestion of **fructose + glucose (2:1 ratio)** resulted in an **8% quicker time to completion a time trial** (aprox. 1 hour at the end of test) compared with Glucose. Sci Sports Exerc, 2008; 40(2): 275-8. K Currell and AE Jeukendrup Med.

FOR MAXIMUM POSSIBLE ENERGY & FLUIDS



EnergySource contains high fructose Super Carbs. In **side by side tests** against the best normal sports drinks, sports scientists have proven that High5 Super Carbs drinks deliver **50% more energy and 39% better hydration.**

EnergySource is exceptionally easy on the stomach and real fruit flavours give a light fresh taste. It contains a high level of electrolytes and it's perfect for racing in the heat. **EnergySource PLUS also contains a moderate dose of caffeine** and a unique anti cramp high electrolyte formulation with magnesium.

High5 EnergySource

60km time trial: 8:40 mins faster & 39% better hydrated than SiS PSP-22

Research Study 7: 2007 Australia (for details see High5 product guide or web site)

INTENSITY, AGGRESSION & FATIGUE RECOVERY



High5 X'treme

pre-loading before 25mile (40km) time trial: **1-minute faster on average**

EnergySource X'treme contains one of the most potent stimulant formulations available. In a large study involving 28 club and elite **time trialists**: when pre loading with X'treme 60 minutes before the start, subjects rode on average **one minute faster over a 40km (25 mile)** time trial. Use X'treme:

- ✓ As a pre training energizer (for those times when you just don't feel like a hard session).
- ✓ To maximize intensity and aggression in power and speed workouts.
- ✓ To improve race day performance.
- ✓ To get you back in the pack when you badly fatigue, bonk or hit the wall.

Research Study 11: 2007 Australia (for details see web site)

FOR ENDURANCE TRAINING & RACING



EnergySource 4:1 is Europe's first energy and hydration drink with protein for use during and after exercise. It contains **4-parts Super Carbs** to **1-part Whey Protein** Isolate combined with a high level of electrolytes. This is a state-of-the-art drink for endurance training and racing that hydrates better than normal sports drinks.

The 4:1 protein advantage: athletes taking part in the 8-day Trans Alp MTB race and using EnergySource 4:1 raced **10% faster** and were **significantly better hydrated** (in temperatures exceeding 38 °C) **compared** to using an ordinary sports drink (**SiS Go Electrolyte**).

High5 4:1

8-day Trans Alp MTB race: 10% faster & better hydrated than SiS Go

Research Study 8: 2007 University of Glasgow (for details see High5 product guide or web site)

ENERGY GEL - ENERGY ON THE GO



Iso Gel is a concentrated sports fuel for instant energy. **It has a lighter consistency – more like a drink than a gel.** Real fruit juice flavours for a great taste. Iso Gel X'treme contains a potent stimulant formulation and it can be used in the same way as EnergySource X'treme.

no need to drink additional water with IsoGel



EnergyGel is a **ultra concentrated sports fuel** for instant energy. Real fruit juice flavours with a light consistency make it easy to swallow and it's **easy on the stomach.** Available with and without caffeine (30mg gel). Highly concentrated, so it's easy to carry the carbs you need.

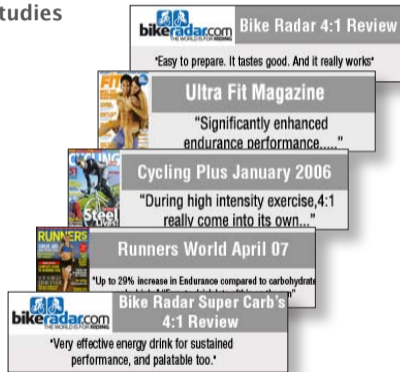
High5 EnergySource

60km time trial: 7:39 mins faster & 17% better hydrated than SiS Go

Research Study 7: 2007 Australia (for details see High5 product guide or web site)

GREAT TASTING PRODUCTS PROVEN TO LET YOU RACE FASTER

- ✓ Superior drinks – research proven by 10 studies
- ✓ 50% more energy to the working muscles
- ✓ 40% faster fluid delivery
- ✓ Minimal stomach problems
- ✓ Moderate caffeine (in selected products)
- ✓ Voted best tasting drinks
- ✓ Expert race faster guides
- ✓ Money back guarantee



High5 EnergySource

research proven: **easily outperformed SiS PSP-22, Go, Maxim and Endura**

Research Study 6 / 7 / 8 : 2006 Hert's Uni / 2007 Glasgow Uni Trans Alp / High5 2007 Australia

FOR TOTAL RECOVERY AFTER EXERCISE



High5 EnergySource

60km time trial: **5:25 mins faster & 43% better hydrated than Maxim**

Research Study 7: 2007 Australia (for details see High5 product guide or web site)

Protein Recovery is an advanced **carbohydrate & protein drink** for total recovery after exercise. It contains rapidly absorbed carbohydrate to re-energise tired muscle and highest quality **CFM whey protein isolate** to build lean muscle mass.

Protein Recovery is easy on the stomach and has a great light taste, so it's easy to drink after exercise. It can be **mixed with skimmed milk or water** (lactose free). Mixed with water it's the ultimate fast release protein source. Mixed with milk it's a slower release protein source (eg. for overnight feeding).

HIGH CARBOHYDRATE ENERGY BARS



HIGH FRUCTOSE

EnergyBar is a high fructose carbohydrate energy bar. It can be used as part of the Super Carbs nutrition strategy. **EnergyBar contains fruit & grains and it's easy on the stomach.** It does not melt in the heat and it remains soft enough to chew in the cold. 98% fat free.



SportsBar is a high carbohydrate energy bar. Available with a light milk chocolate or yoghurt coating, but still 92% fat free. **It's the World's best tasting energy bar for sport use.**

High5 EnergySource

60km time trial: 5:47 mins faster and 34% better hydrated than Endura

Research Study 7: 2007 Australia (for details see High5 product guide or web site)

RECOVERY BAR & HIGH PROTEIN BAR



ProteinBar is designed to maximize recovery after exercise. It has a proven balance of rapidly absorbed carbohydrate and protein to **refuel tired muscle** and **help develop lean muscle after exercise**. With a light chocolate coating, ProteinBar is one of the World's best tasting recovery bars. 92% fat free.

High Protein Bar is a nutritious high protein snack. It contains **25g of high quality protein (68g bar)** and it's still 90% fat free. Light chocolate coating, great taste and a smooth easy chew texture.

High5 EnergySource

research proven: **least stomach problems & voted best tasting drink**

Research Study 6 / 7: 2006 Hert's Uni / High5 2007 Australia

ADVANCED HIGH QUALITY SUPPLEMENTS



Joint Protect (Ache Free) – Twin pack of high strength micronutrients for **ache free joints** and **connective tissue**. It contains Glucosamine, Chondroitin and MSM, combined with natural anti-inflammatories and anti-oxidants. Joint Protect **is completely different** to the low cost supplements found on the web and high street. It works so well, that it comes with a **money back guarantee**.

Creatine is high purity creatine monohydrate (there is no higher quality). Pack contains 500g creatine in **167 x 3g single serving sachets**.

High5 EnergySource

60km time trial: 25% more energy and 40% faster fluids than SiS PSP-22

Research Study 6: 2006 Hertfordshire University (for details see High5 product guide or web site)

NEW

EXPERT RACE FASTER GUIDES

High5 make the World's fastest sports drinks. To get full benefit **you must use them correctly.**

To help you, High5 have produced a **5-minute** easy to follow **Race Faster Guide** for your sport.



The Race Faster Guides are based on **tried and proven gains and the nutrition strategies** followed by **pro athletes** in competition.

If you would like to understand **the basic science** behind high fructose drinks and moderate caffeine intake, then ask for a copy of our guide **Super Carbs - How It Works.** All guides are available from your local stockist or download from the High5 web site.

