

IWC
PARIS
2008



5th International Whey Conference

WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION

Sports Recovery Gels



Dr. Paul Bouchier
Glanbia Nutritional

IWC
PARIS
2008



5th International Whey Conference

WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION

How did we get here ?



USAGE GUIDELINES

For optimum results, follow these simple steps:

- Add one 80g sachet of Provon® Revive
- to 500ml of cold water
- Shake in a sealed container
- Allow beverage to stand until foam has dispersed then invert once
- Consume as soon as possible after exercise.

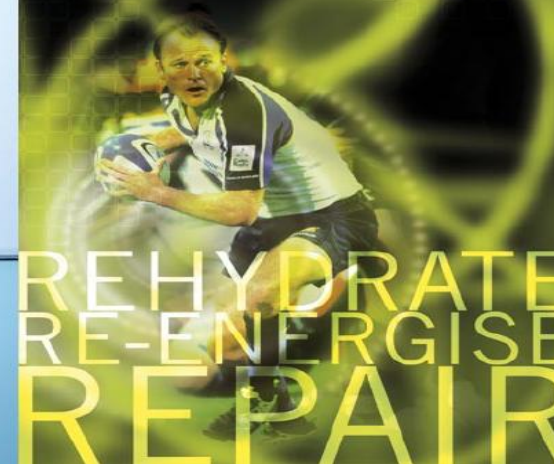
Used as directed, after exercise, Provon® Revive will help to aid and promote optimal recovery. Provon® Revive is not a food-substitute and should be used as part of a balanced diet. Larger players may require more Provon® Revive, please consult with your Nutritionist for further directions.



Contact
t. 892839 8928392894 f. 5849383863 582365
e. provonrevive@glanbia.ie www.provonrevive.ie www.glanbianutritionals.ie

PROVON
REVIVE

EXPERIENCE THE UNIQUE TRIPLE R EFFECT





How did we get here ?

WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION

- ~ High intensity sports can deplete the body's store of carbohydrate, amino-acids and electrolytes.
- ~ This can limit performance and lead to the onset of fatigue.
- ~ Sports drinks despite there advantages - can be heavy, difficult to carry and be a lot of volume to consume –
- ~ Hence new alternative delivery systems are continually being developed. One such example of this are sports gels.

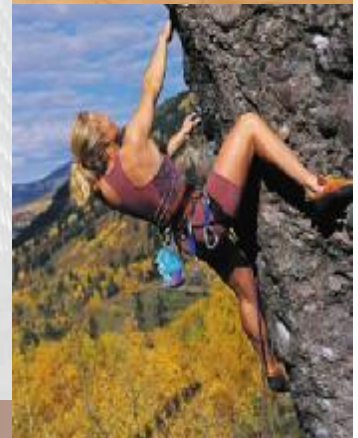
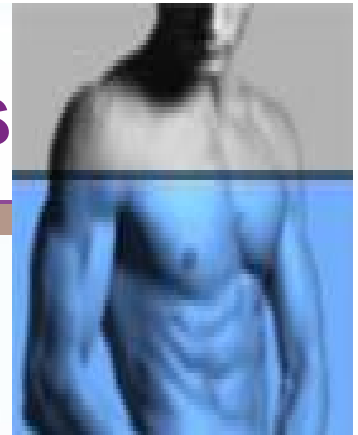




Sports Recovery Gels

WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION

- ~ Carbohydrate sports gels are now well established on the market.
- ~ Carbohydrate recovery products only promote glycogen synthesis leading to incomplete recovery
- ~ A new age of sports gels is now developing with the inclusion of whey protein and its components, particularly in the area of recovery gels.





WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION

What is it?

- ~ Protein gels are concentrated blend of whey protein isolate and complex and simple carbohydrates.

Benefits

- ~ No stomach bulk or distress. Convenient format – easy to open, easy to carry pouch.

Dosage

- ~ 40-70g sachet

Protein Recovery Gel

<u>Active Ingredient</u>	<u>Quantity/ Dose</u>
WPI	11%
Maltodextrin	4%
Simple sugars	23%

IWC
PARIS
2008



5th International Whey Conference

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

Muscles & Protein



(JET PROPULSION LABS)



The Protein Story

Protein needs of athletes are high; active individuals have higher protein needs than normal individuals

- ~ Protein is needed for the growth and maintenance of tissue
- ~ Protein is required to produce enzymes and hormones such as adrenalin and insulin
- ~ Provides a source of energy

Recommended Daily Allowance (RDA)	Protein Requirements
RDA in normal/inactive individual	0.75g/ kg/ per day
RDA in endurance athletes	1.2-1.4g / kg/ per day
RDA in strength athletes	1.4-1.8g/ kg/ per day



The Protein Story

Achieving adequate protein intake is critical for athletes:

- ~ Speeds up carbohydrate induced Glycogen synthesis which is depleted during high intensity sports
- ~ During prolonged exercise Branched-Chain Amino Acids are also utilised for fuel. This can rapidly deplete the amino acid pool and lead to the onset of fatigue



WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

Benefits of Whey Protein

- ~ Naturally complete protein containing all Essential Amino Acids required in daily diet. High Biological Value
- ~ Soluble, easy to digest, quickly enters the body to provide EAA's needed to nourish muscles. It is also the fastest absorbed protein compared to other sources e.g. casein
- ~ Helps maintain a healthy immune system by increasing the levels of glutathione in the body. Also contains Lactoferrin.
- ~ Rich source of Branched Chain Amino - Leucine, Isoleucine and Valine. (25g/ 100g)



IWC
PARIS
2008



5th International Whey Conference

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

Recovery Trial

To compare cycling performance following ingestion of either carbohydrate & protein (CHO+PRO), carbohydrate only (CHO) or placebo (CON).



**Consumed during the
rest/recovery period of 4 hours**



Recovery Trial

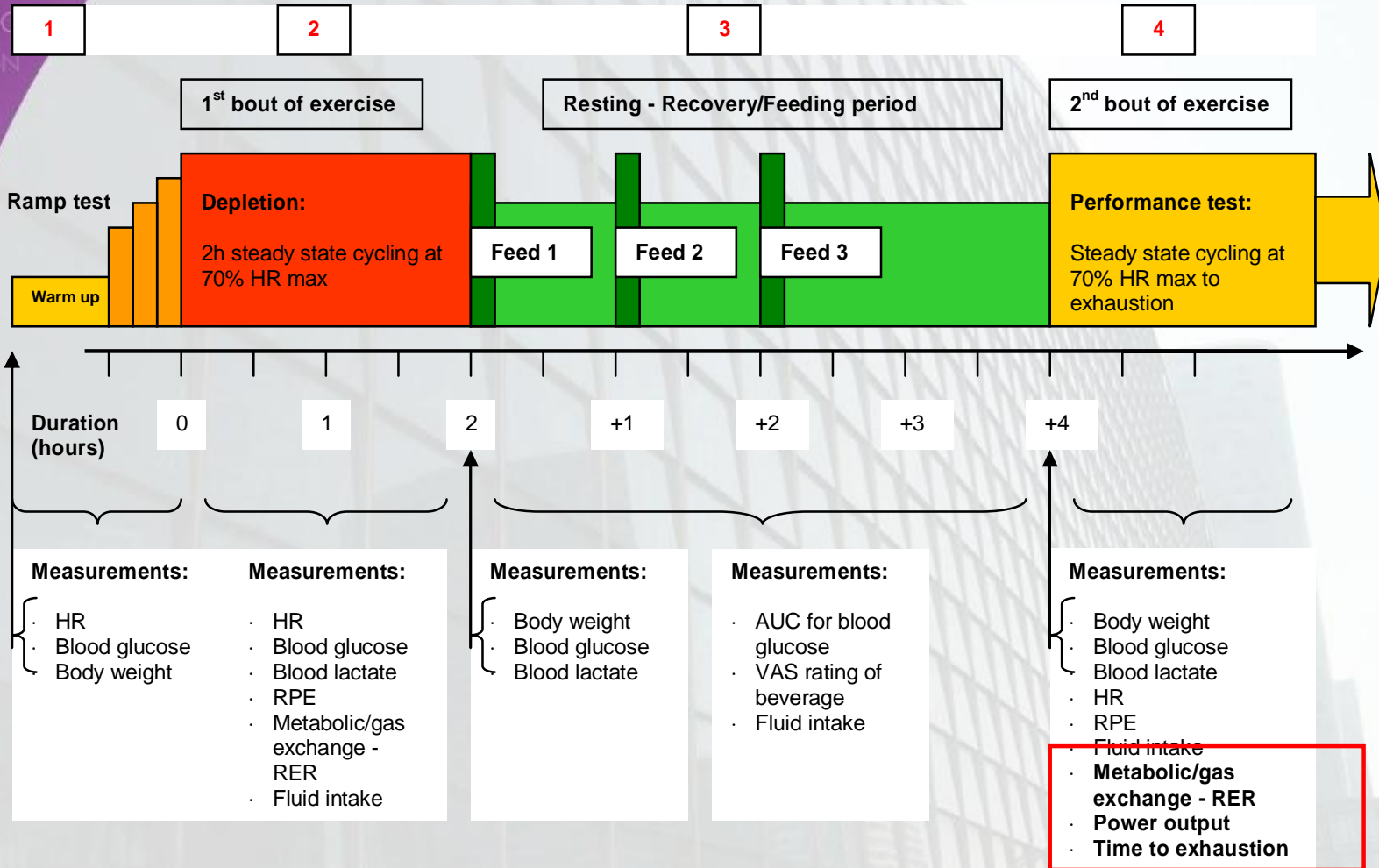
WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION



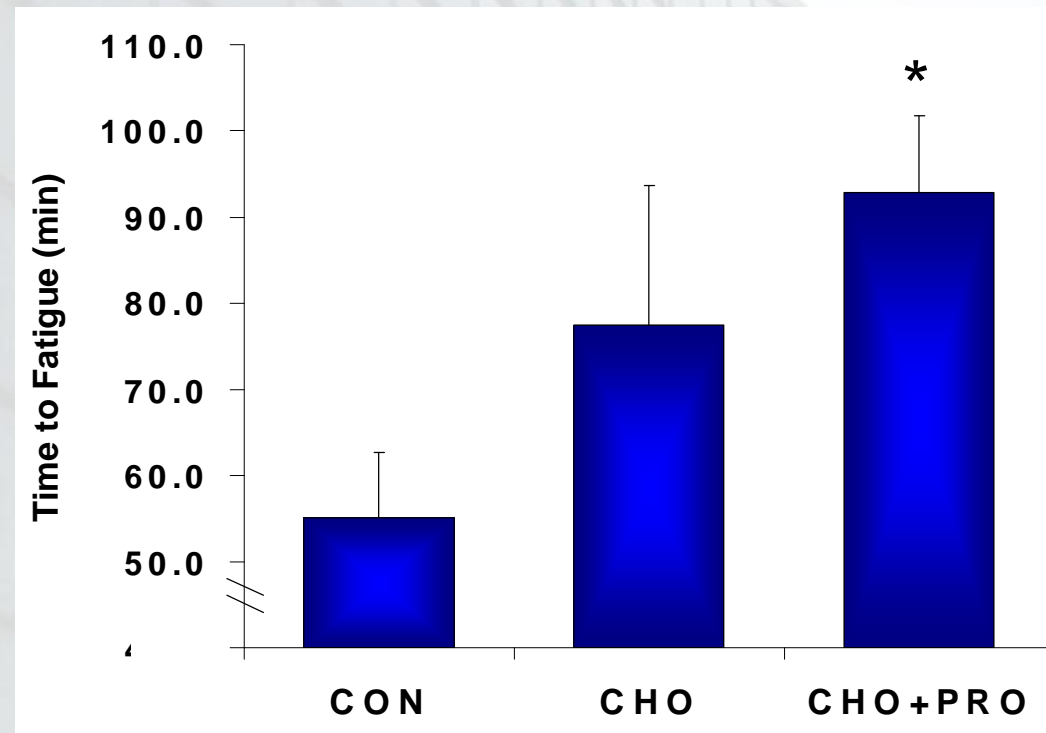
IWC
PARIS
2008



5th International Whey Conference

WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION

Results – Cycle 2 exercise



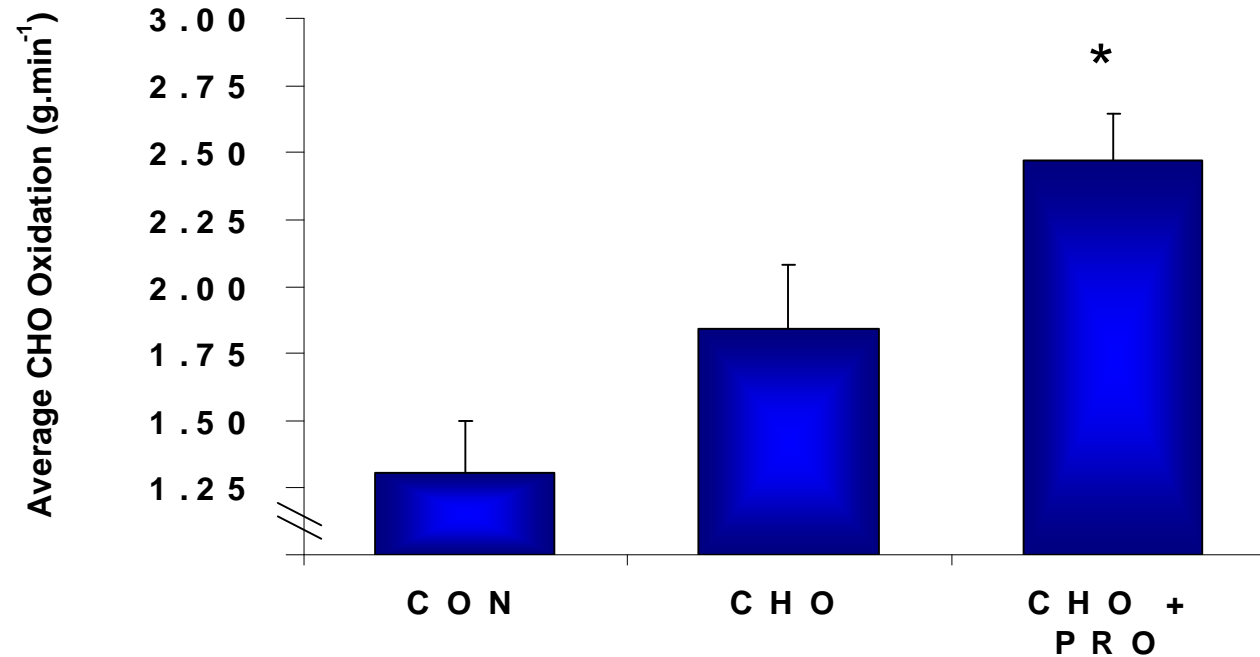
Improved Time to Fatigue for Provon Revive (CHO + PRO) translates to 15 minutes of additional peak performance.





Results

– Cycle 2 exercise



Compared to CON, the rate of carbohydrate oxidation was:

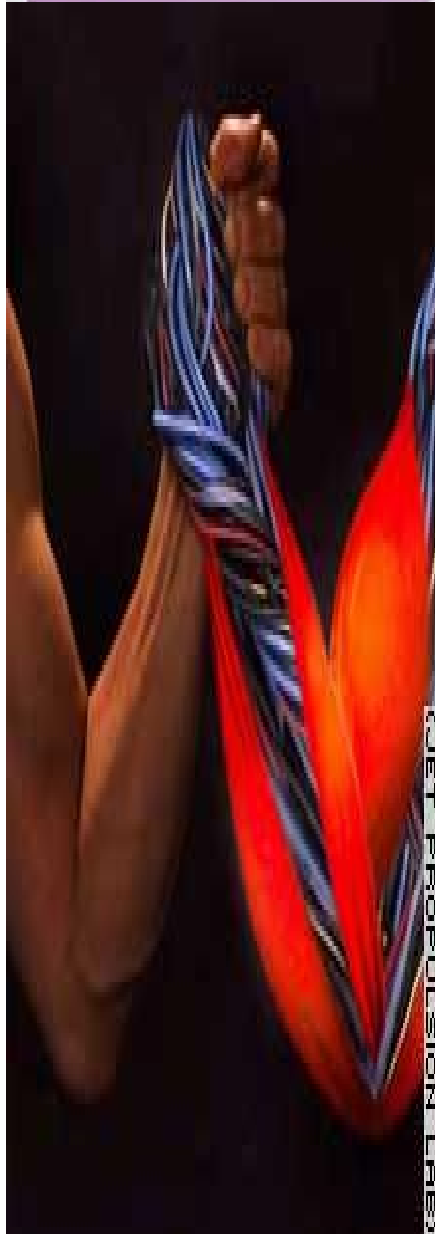
- 39% greater for CHO (1.8 (0.3) g.min⁻¹, p=0.184)***
- 92% greater for CHO+PRO (2.5 (0.2) g.min⁻¹, p=0.024)***

In addition Provon Revive is potentially 2.35 times more efficient in replenishing muscle glycogen as a fuel source compared to control.



Trial Conclusions

- ~ Ingestion of a CHO+PRO during 4h recovery from prolonged, intense exercise resulted in a 40% increase in endurance performance over CHO alone
- ~ The addition of PRO to a CHO produced a 20% greater ergogenic effect than an equivalent amount of CHO alone.
- ~ The greater ergogenic effect is thought to be driven by the higher sustainable rate of CHO oxidation following ingestion of Provon Revive.
- ~ This is attributable to a more rapid restoration of muscle glycogen when protein is added to the carbohydrate.
- ~ Rapid restoration of muscle glycogen, during the 4h recovery period, is potentially driven by a 15% greater insulin response enhancing glucose transfer from the blood to the muscle.



IWC
PARIS
2008



5th International Whey Conference

Whey Protein Sports Recovery Gels

WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION
WHEYVOLUTION

- ~ Protein is essential for Sports Recovery
- ~ Whey Protein and its Fractions Superior
- ~ Recovery Products must be more convenient
- ~ Whey Protein Sports Recovery Gels Ideal solution



IWC
PARIS
2008



5th International Whey Conference

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION

WHEYVOLUTION



glanbia
NUTRITIONALS
for life.