



# CranLoad™ Sport

*Novel formula for high intensity sports performance and endothelial function\**



\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

## CranLoad™ Sport

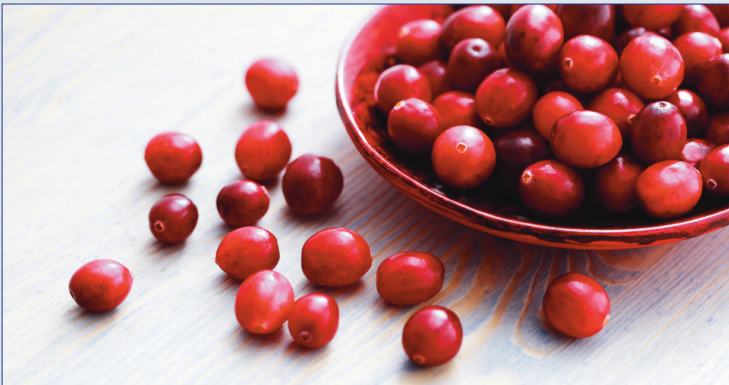
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### *CranLoad™*

CranLoad™ Sport features CranLoad™, a novel fruit blend developed as part of an extensive research program with the Institute of Nutraceuticals and Functional Foods (INAF) and Laval University in Quebec, Canada. CranLoad™ delivers a unique cranberry and grape seed blend that has been the subject of two pilot trials involving high-profile, elite athletes. Cranberries and grapes are particularly generous sources of proanthocyanidins and polyphenols. In addition to being powerful antioxidants, these compounds offer specific vascular support mechanisms that are associated with enhanced endothelial function,<sup>(1-3)</sup> making them of critical interest, particularly to sports nutritionists. As training intensity is known to be directly correlated to blood flow and impeded by accumulation of muscle lactate, nutrients that facilitate and upregulate blood flow could be utilized as a means to enhance high-intensity sports performance.\*

### *Green Tea Caffeine and MCTs*

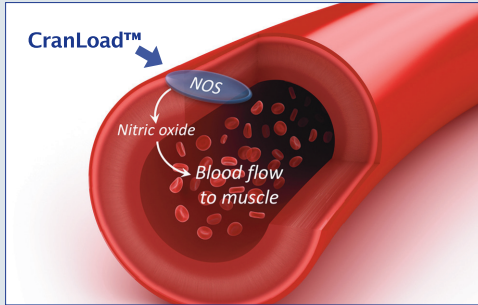
CranLoad™ is combined with caffeine naturally derived from green tea and medium chain triglycerides (MCTs) in a liquid-filled Caplique® Capsule for broad-spectrum sports performance support. Caffeine promotes energy and mental focus and has also been associated with a positive dose-response effect on athletic performance.<sup>(4-7)</sup> Furthermore, green tea consumption has been shown to support metabolic capacity through the utilization of fatty acids for energy and has been shown to favorably affect oxidative markers during training.<sup>(8,9)</sup> MCTs provide easily-absorbed lipid fuel substrates for working muscle.<sup>(10)\*</sup>



## Clinical Research

### Study 1: A pilot trial on the effects of CranLoad™ in elite athletes

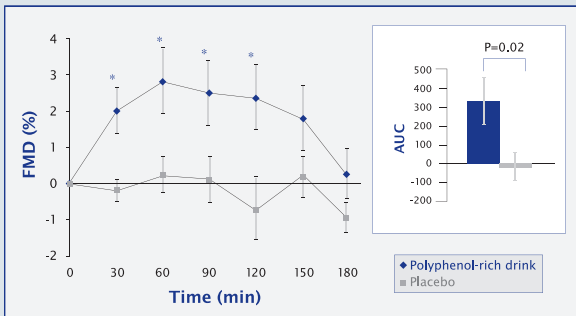
The effects of a CranLoad™ containing beverage were investigated in a pilot trial of elite athletes. The results indicated an increase in flow-mediated dilation (FMD). FMD reflects blood vessel dilation mediated by nitric oxide synthase (NOS), an enzyme that generates the endogenous vasodilator, nitric oxide (Figure 1).



**Figure 1.** CranLoad™ supports nitric oxide synthase (NOS) activity in the vascular endothelium. NOS generates nitric oxide, which increases blood flow to muscles during exercise.\*

FMD, assessed by brachial artery diameter, is therefore indicative of blood flow to muscles and lactate clearance and recovery. Specifically, the pilot study indicated a statistically significant increase in FMD as a percentage over baseline within 30 minutes for the subjects (Figure 2). Moreover, FMD remained elevated over baseline for 2 hours.\*

### Increased FMD with CranLoad™



**Figure 2.** Flow-mediated dilation (FMD) variation from baseline after intake of the polyphenol-rich drink and placebo; \*P<0.05 versus baseline and placebo at specified time points. The insert presents the area under the curve (AUC) of the change in FMD over time above baseline (time 0) values. The Y axis is in % min.\*

The peak increase in brachial artery diameter following consumption of the CranLoad™ beverage was 2.8% at 60 minutes. A similar physiological effect has been demonstrated with arginine in which supplemental arginine at doses ranging from 3-21 g increased FMD on average 1.98%.<sup>(11)</sup> Most studies investigating the physiological effects of arginine have been conducted in populations dealing with coronary artery disease (CAD). While a comparative study was not performed between CranLoad™ and arginine, this pilot study indicates that these nutrients appear to produce similar effects on blood flow.\*

*Study 2: A double-blind, placebo-controlled pilot trial on the effects of CranLoad™ in high-profile athletes*

In a double-blind, placebo-controlled pilot study, the effects of pre-exercise CranLoad™ administration was investigated in high-profile athletes. The athletes performed a 3 km stationary cycling time trial after consuming either CranLoad™ or a placebo. Results of the pilot study show a significant decrease in blood lactate in those athletes consuming CranLoad™ compared to placebo (Figure 3). This study supports the concept that CranLoad™ enhances blood flow, as determined in Study 1, and is associated with enhanced lactate clearance during high-intensity exercise. This outcome suggests a capacity for enhanced recovery.\*

	CranLoad™	Placebo	% diff	P
<b>Lactate (mmol/L)</b>				
Post warm up	1.7 ± 0.5	2.4 ± 1.2	-30.1%	0.01
Post 3 km TT, 0 min	12.1 ± 1.4	13.1 ± 2.1	-7.9%	0.03
Post 3 km TT, 2.5 min	14.1 ± 0.8	14.8 ± 0.9	-4.8%	0.06
Post 3 km TT, 5 min	13.7 ± 0.7	14.1 ± 0.7	-2.5%	0.06

**Figure 3.** Effects of CranLoad™ on blood lactate pre- and post-exercise. Data from the pilot study reveals a 30% reduction in blood lactate following warm up, and reduced lactate is maintained throughout exercise.\*

## Athlete Survey

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A blinded survey was conducted in Olympic-level athletes who trained with CranLoad™ during the 2009-2010 season:



*“10 out of 11 athletes who trained with CranLoad™ experienced enhanced recovery and would recommend CranLoad™ to other athletes.”\**

## CranLoad™ Sport **liquid-filled capsule**

*\*Novel fruit blend, green tea caffeine and medium chain triglycerides for optimal athletic performance*

### **CranLoad™: A novel, proprietary cranberry and grape seed blend**

- In a pilot trial involving elite athletes, CranLoad™ provided statistically significant support for healthy flow-mediated dilation (FMD) at rest, an effect similar to arginine administration.\*
- In another pilot trial, CranLoad™ helped maintain healthy blood lactate levels in high-profile athletes, suggesting the potential for enhanced recovery.\*

### **Caffeine: Derived from green tea**

- Provides support for energy and mental focus.\*
- Supports metabolic capacity and provides antioxidant protection for working muscles.\*

### **Medium Chain Triglycerides (MCT):**

- Provides easily-absorbed lipid fuel substrates for working muscle.\*

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3 Caplique® Capsules contain  V 00

CranLoad™ proprietary blend ..... 765 mg  
providing cranberry (*Vaccinium macrocarpon*)  
extract (fruit) and grape (*Vitis vinifera*) seed extract

Green Tea extract (*Camellia sinensis*) (leaves) ..... 250 mg  
standardized to contain 20% caffeine ..... 50 mg

other ingredients: rice maltodextrin, magnesium hydroxide,  
medium chain triglycerides, vegetable capsule

**3 Caplique® Capsules daily, 30-60 minutes before a workout.**

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Each Caplique® Capsule is preserved with a nitrogen bubble, which may give the appearance of the capsule not being full. Contents may appear cloudy or thick and may settle or separate.

	Quantity	Order Code
CranLoad™ Sport	90	CLS9

## References

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