

Dr Flambert : Innovative solution

Instant effects Global benefits

MealShape is a new patented polyphenolic ingredient that manages your glyceimic and insulinemic responses immediately after a meal. Based on scientific evidence, **MealShape** lowers the starchy food glyceimic index from the first intake. For global health benefits, far beyond blood sugar and weight management.

MealShape
efficient . natural . safe



Today's lifestyle and its consequences



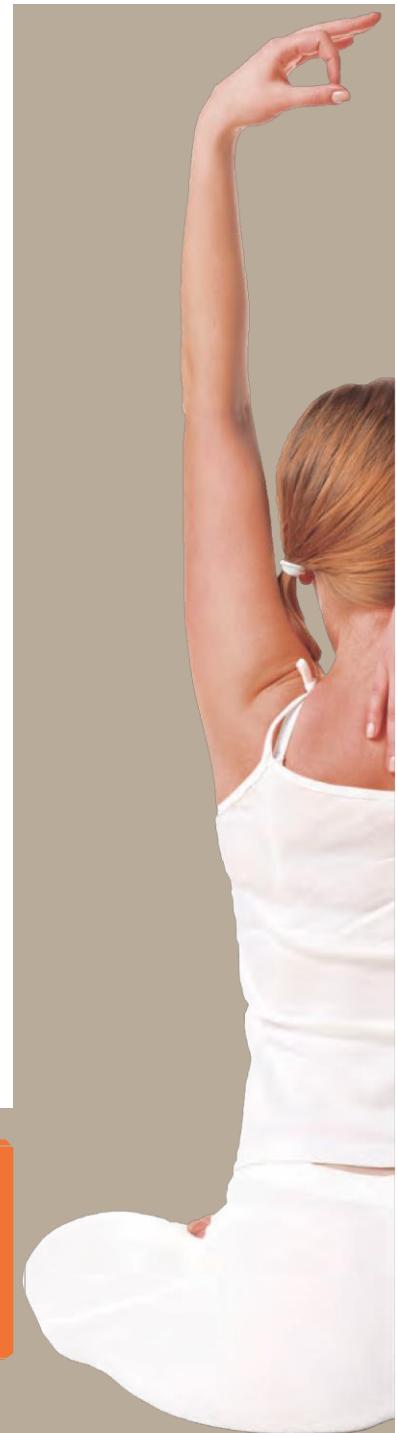
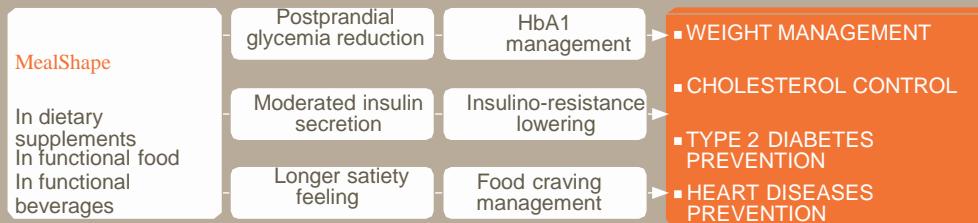
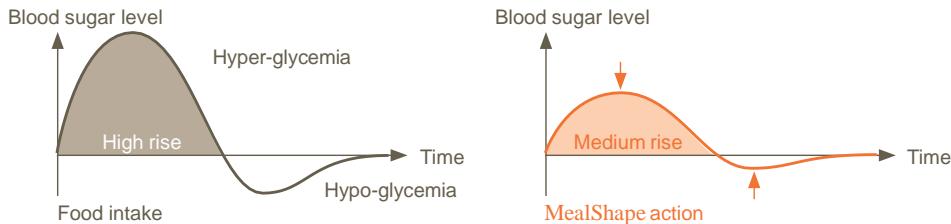
Obesity and diabetes, a growing worldwide health concern

2.3 billion overweight people in 2015, 380 million diabetics in 2025 (Source: WorldHealth Organization)

MealShape, the benefits of a low Glycemic Index diet

Carbohydrates constitute 45 to 60% of our daily food intake and are required by the body for energy. However, an excessive consumption of highly refined carbs with a high glycemic index can lead to obesity and type II diabetes.

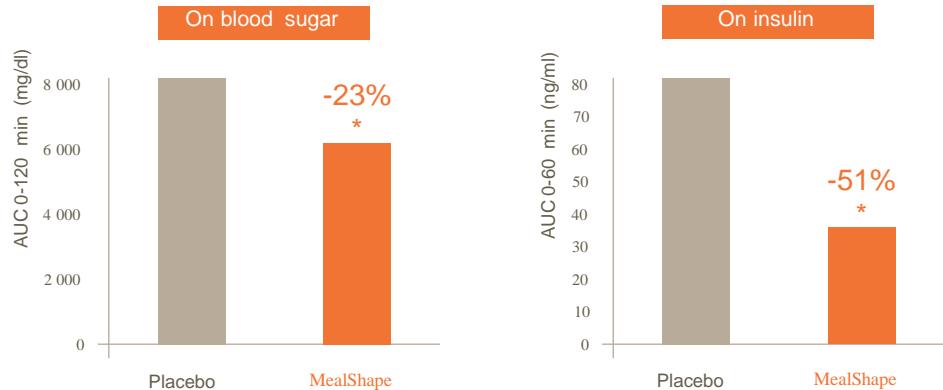
The Glycemic Index (GI) is a scale that ranks carbohydrate-rich foods by how much they raise blood glucose levels compared to a standard food (glucose, GI = 100).



Scientific evidence

MealShape has been tested in several trials showing a strong and consistent efficiency on starchy food glycemic index reduction.

Significant effects after starch intake



Effects of MealShape on postprandial glycemia and insulinemia measured by an acute starch tolerance test in animal study (measure of the Area Under the Curve over 2 hours), * $p < 0.05$

Mechanism of action

MealShape delays the digestion and the absorption of carbohydrates by inhibiting alpha-amylase activity. This pancreatic enzyme breaks down starch into sugars which are absorbed by the organism.





A unique cinnamon extract for starchy food glycemic index reduction

Obtained by a specific manufacturing process, **MealShape** is the first cinnamon extract with proven acute effects on starchy food glycemic index reduction.

Extracted from Ceylon cinnamon, **MealShape** is 100% natural and safe: commonly named "the true cinnamon", Ceylon species only contains traces of coumarin, a potentially harmful compound which is however largely present in cassia cinnamon.

MealShape is a patented food-grade extract standardized in polyphenols.

Various applications

MealShape can be used in dietary supplements, functional food and beverages.

Appearance	Dry brown powder
Origin	Cinnamomum zeylanicum barks
Polyphenol content	> 40%
Recommended dosage	300 mg / meal (twice per day)
Safety and quality	MealShape is a 100% guaranteed ingredient which conforms to current European standards regarding the absence of pesticides, heavy metals, GMO, allergens and aflatoxins. The microbiological controls comply with current Eur. Ph. 5.1.8 C.

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Effect of the combination of MealShape and chromium picolinate on glycemic response to starch in rats

Objective

The objective of the study was to evaluate the effect of the combination of MealShape cinnamon extract (MCE) and chromium picolinate on glycemic response to wheat starch measured by an acute starch tolerance test (STT) in normal rat.

The dose of chromium picolinate was calculated in order to correspond to a dose of 48 µg in human (6 µg of chromium element). This dose of chromium corresponds to 15% of the daily recommended intake in Europe which allows to claim on the control of glycemia, according to the EFSA.

Estimation of dosage correspondence:

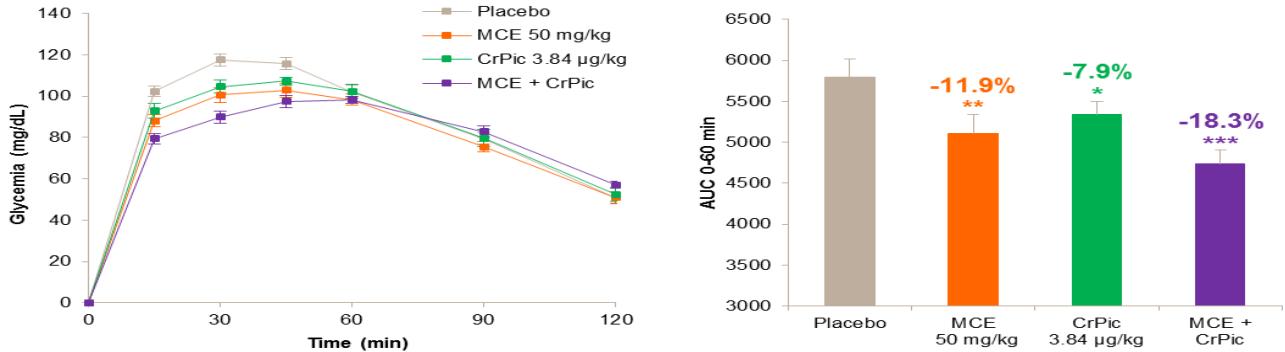
Dose in rat		Dose in human		Posology
CrPic	3.84 µg/kg of body weight	CrPic	48 µg	1 intake / day
MCE	50 µg/kg of body weight	MCE	1 g	

Material & Method

STT were conducted in overnight fasted animals by the administration by oral gavage of a 7.5% wheat starch solution at 1.5 g/kg of body weight containing the products to be tested. The control group was administered starch only. The actual volume administered to rats was calculated and adjusted based on the most recent body weight of each animal. Blood samples were collected via the tail vein before and 15, 30, 45, 60, 90, and 120 minutes after starch administration. One drop of blood was used for glucose determination using a hand-held glucometer.

Results

Effect of the combination of MCE and chromium picolinate on the glycemc response to starch



(* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$)

The area under the curve (AUC) between 0 and 60 min was reduced by 12% ($p < 0.01$) for MCE 50 mg/kg and 8% ($p < 0.05$) for chromium picolinate 3.84 µg/kg of body weight compared to placebo.

When taken in combination, MCE and chromium picolinate are more efficient on the reduction of blood glucose response than the ingredients taken separately. Considering AUC 0-60 min, they present a significant and additive effect with 18% decrease of blood glucose level compared to the placebo ($p < 0.001$).

Conclusion

MealShape and chromium picolinate can be advantageously associated in nutraceutical formulas for an optimal effect on the reduction of glycemc response to meal and the control of overall glycemia.