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INTRODUCTION

The objective of this investigation was to study whether the lowering stress effect, observed on healthy women after a 30 day intake of PRODIET™ F200, was different in Low (LSR) and High (HSR) Stress Responders. LSR and HSR were classified by their cardiovascular stress response and their trait-STAI score on D0.

METHODS

Randomized, double-blind, placebo controlled, 26 healthy women in two parallel groups.

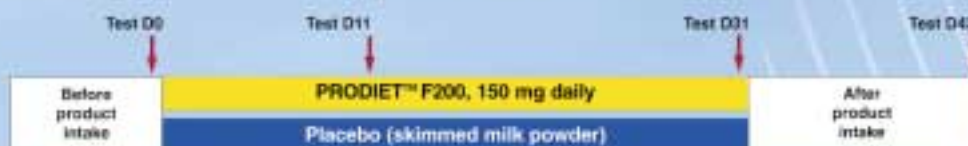
Test Studied parameters

> Mental stress: Stroop test

> Systolic (SBP) Diastolic (DBP) and Mean (MBP) blood pressure
 > Heart Rate (HR)

> Chronic anxiety level (Spielberger Trait-anxiety inventory): Trait-STAI

Study design



Test design: identical procedures on D0-D11-D31-D43



Data are shown as mean ± SEM. Comparison on D0 is made using non parametric two-sample Wilcoxon test. Product intake effect is evaluated on D11 and D31 by repeated measure ANCOVA with D0 values as a covariate.

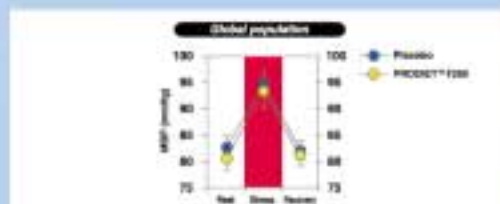
Subjects were classified into Low (LSR) and High (HSR) Stress Responders using the k-means classification method.

CONCLUSION

A 30 day chronic oral intake of bovine milk α_1 -casein hydrolysate (PRODIET™ F 200) significantly decreases the MBP change during the Stroop test on D11 and D31 in global and High Stress Responder populations. This effect remains significant on D43. PRODIET™ F200 has no side effects on basal parameters.

RESULTS

• D0: before product intake



The Stroop test induces a stress, which in fact generates MBP elevation. The MBP measure is a stress reactivity level indicator.

At D0	LSR (n=16)	HSR (n=10)
SBP change (mm Hg) (stress reactivity)	13.0 ± 1.4	26.4 ± 3.6**
Trait-STAI	33.0 ± 1.4	46.2 ± 2.6***

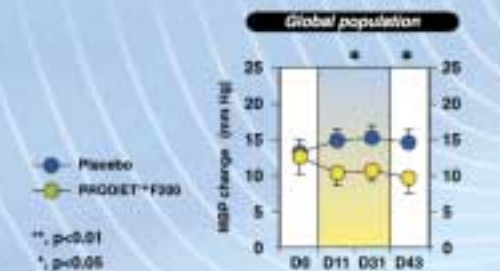
***, p<0.001
 **, p<0.01

• Product intake effect: placebo or PRODIET™ F200

- Basal state (before stress test)

No significant effect was observed on the basal parameters (HR, SBP, DBP and trait-STAI).

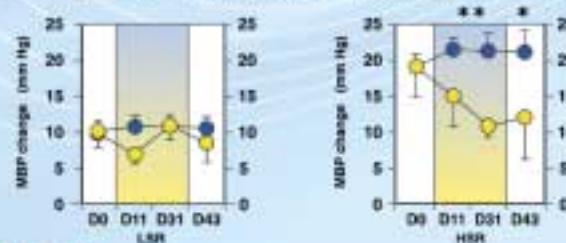
- Stress reactivity



** p<0.01
 * p<0.05

PRODIET™ F200 reduces significantly (p < 0.05) the MBP change on D11 and D31 in global population. On D43, the effect remains significant.

Low (LSR) and High (HSR) Stress Responders



PRODIET™ F200 reduces significantly (p < 0.001) the MBP change on D11 and D31 in HSR population. On D43, the effect remains significant.