

nutramit™

2 in 1

Double Advantage **with**
Total Difference





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Nutramit ProFem

**Food supplement for daily formation of
red blood cells, reducing fatigue**

Nutramit ProFem

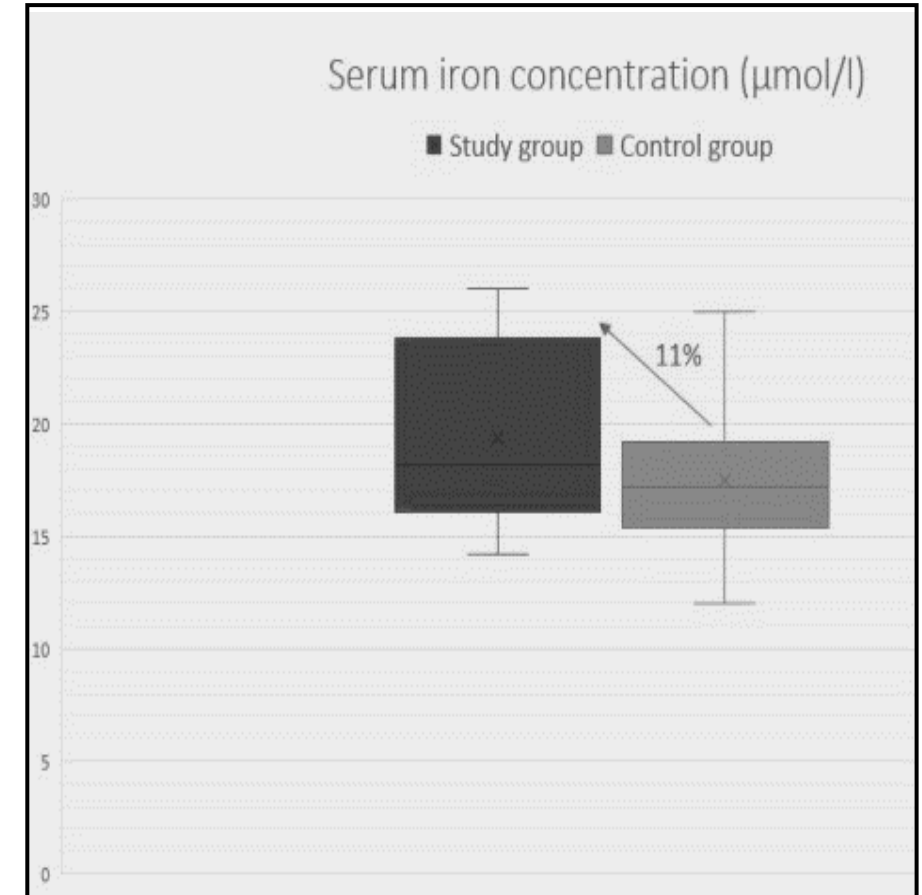
Food supplement for daily formation of red blood cells reducing fatigue, increasing haemoglobin and strengthening immunity with vitamins B12, D3 and K2MK7.

L. plantarum's effect on iron absorption and RBC:

- Increases Iron Absorption and Hemoglobin levels.
- Reduces Fatigue and Tiredness associated with anemia and promotes a good health.
- Strengthen the immune system.

20-40 years healthy women prone to iron deficiency Total Participant 20

Parameters	Study group (n=10)		Control group (n=10)		Total serum iron concentration
	Mean	SD	Mean	SD	
S-Fe (umol/l)	19.4	4.1	17.5	3.6	11%
Ferritin (ng/ml)	44.0	9.2	41.9	7.2	
TIBC (ug/l)	69.6	6.8	64.7	5.6	
Hb (g/l)	138.9	8.5	135.3	5.3	



L. plantarum shows the positive effects on iron absorption by creating an acidic environment in the intestinal tract which makes iron more absorbable, making iron biologically available by producing iron-chelating ligands, or degrading mineral complexing phytic acid from food.

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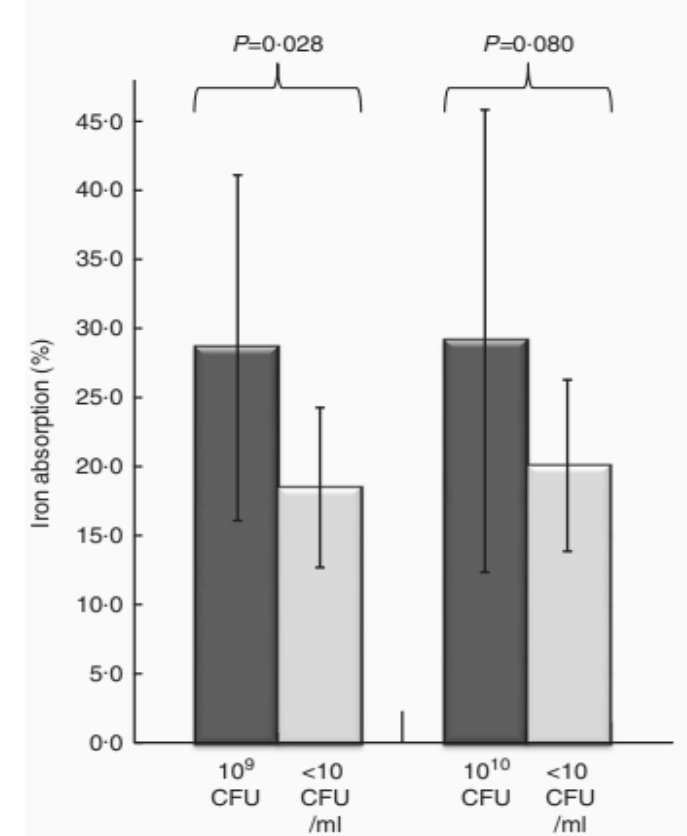
Food supplement for daily formation of red blood cells reducing fatigue, increasing haemoglobin and strengthening immunity with vitamins B12, D3 and K2MK7

Non-haem iron absorption from the meals containing the four different oat gruels

Meal...	(A) Fermented oat gruel*		(B) Pasteurised fermented oat gruel		(C) Non-fermented oat gruel (pH-adjusted)		(D) Non-fermented oat gruel with organic acids	
	Mean	95 % CI	Mean	95 % CI	Mean	95 % CI	Mean	95 % CI
Non-haem Fe absorbed in blood (%)†	1.1 ^a	0.8, 1.5	0.6 ^b	0.4, 0.7	0.5 ^b	0.4, 0.7	0.5 ^b	0.4, 0.7

- L. Plantarum fermented oat gruel shows significant ($P < 0.0001$) improvement in Non-haem Fe absorption in the blood compared to the different oat gruels.
- In Fermented Oats Gruels the improvement in iron absorption is solely by L plantarum, which shows L plantarum significantly improve in iron absorption.

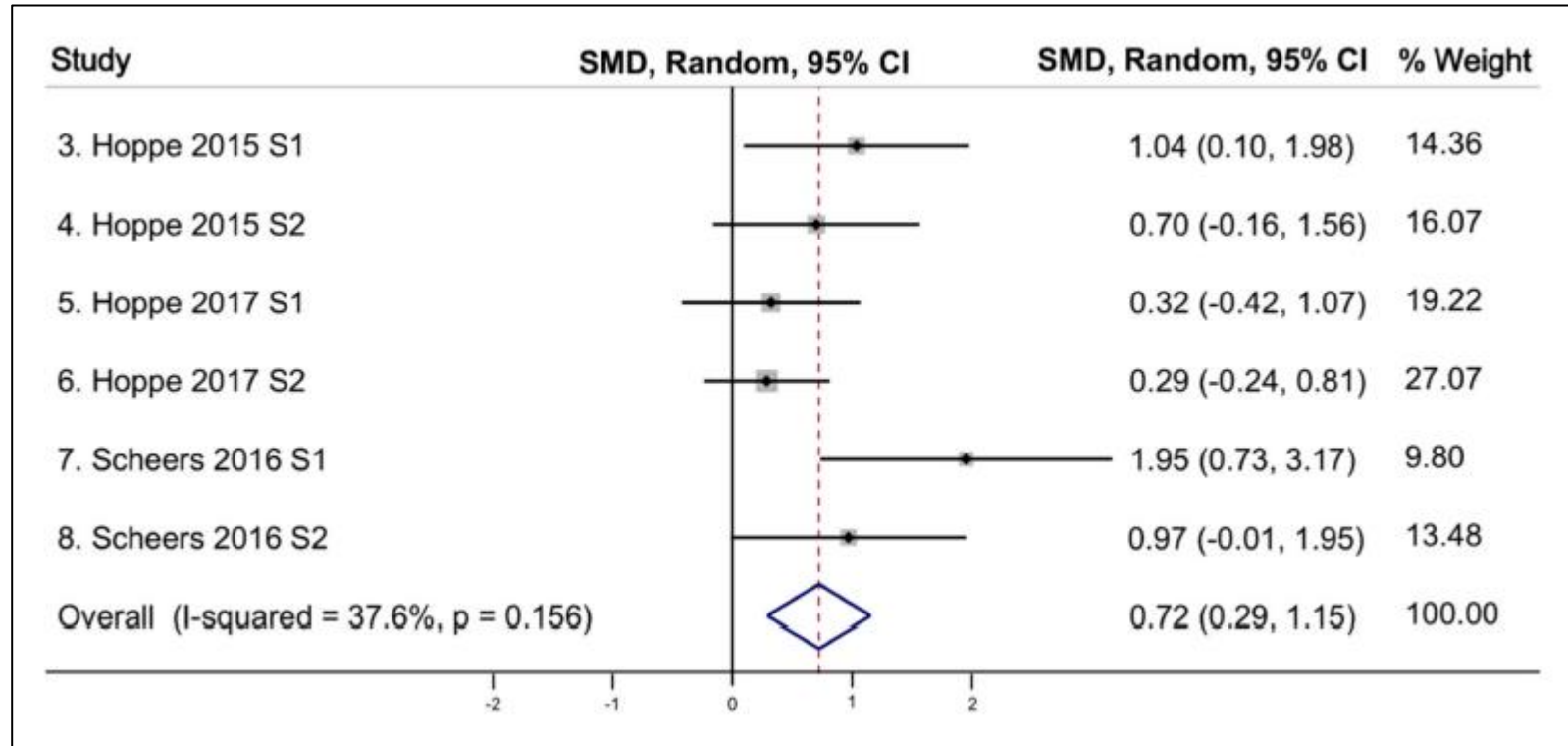
Iron absorption from a fruit drink with and without L. plantarum .



Absorption of non-haem iron from a fruit drink containing L. plantarum is 50 % higher compared with a similar fruit drink without L. plantarum 19 %.

Effects of probiotics on iron absorption and iron status-related markers in humans

Findings of
Meta-Analysis



Lactobacillus plantarum 299v increased dietary non-heme iron absorption in healthy white Europeans who were primarily women.

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Rationale for the Nutramit ProFem Composition

L. plantarum INDUCIA[®] and *L. plantarum* TENSIA[®]

Composition Reason:

- *L. plantarum* INDUCIA[®] and *L. plantarum* TENSIA[®] have antioxidant effects and help to balance gut microbiota (lactic acid bacteria and a balanced gut microbiota helps to increase the bioavailability of dietary iron).
- *L. plantarum* INDUCIA[®] has strong anti-oxidative properties.



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Nutramit ProPulse

Food supplement with *Lactobacillus plantarum* TENSIA®, B vitamins and minerals

Nutramit ProPulse

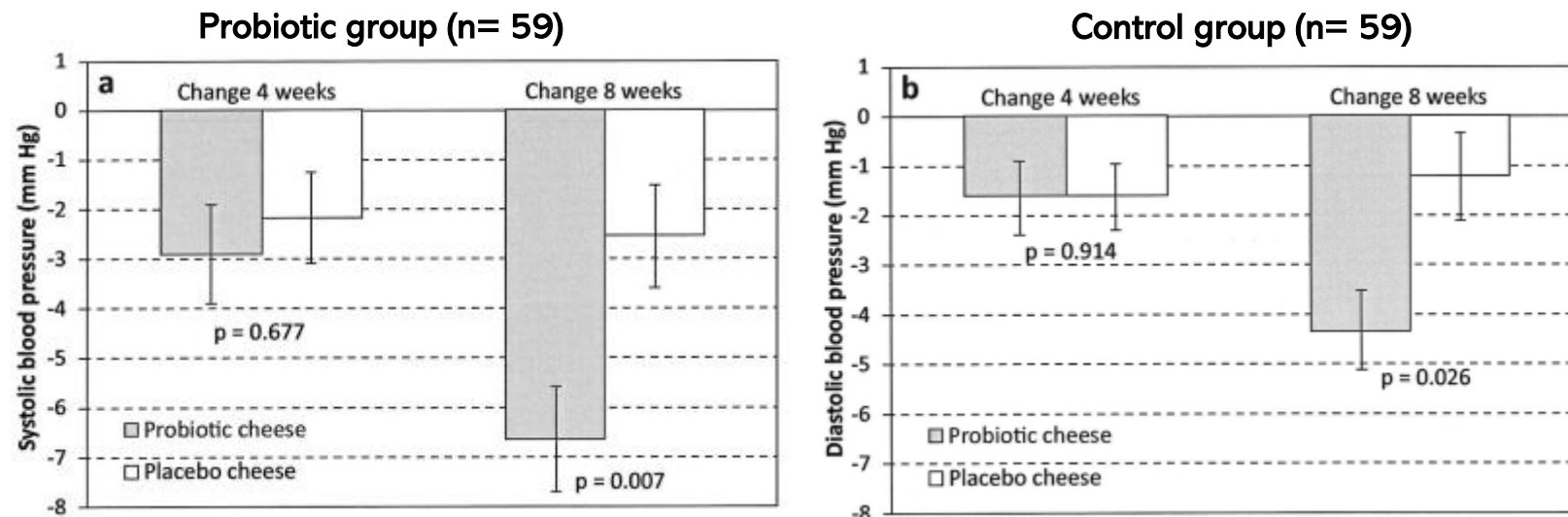
Food supplement with *Lactobacillus plantarum* TENSIA®, B vitamins and minerals

Cardio-protective effect of *L. plantarum* Tensia®

- Tensia produces blood pressure-lowering compounds (NO and ACE inhibitors)
- Works synergistically with vitamins and minerals
- Protect from excessive oxidative stress
- Contributes to the normal function of the heart
- Folate, Vitamin B6, Vitamin B12 contribute to normal homocysteine metabolism
- Probiotic *L. plantarum* TENSIA lowered diastolic and systolic blood pressure regardless of food matrix

Lactobacillus
plantarum TENSIA®
+ B vitamins
+ Minerals

Antihypertensive effect of *Lactobacillus plantarum* TENSIA®



Patient population: High normal (130-139/ 85-89 mmHg) or hypertension Grade 1 HT (140-159/90-99 mmHg)

8-week treatment with Tensia causes significant reduction in SBP and DBP

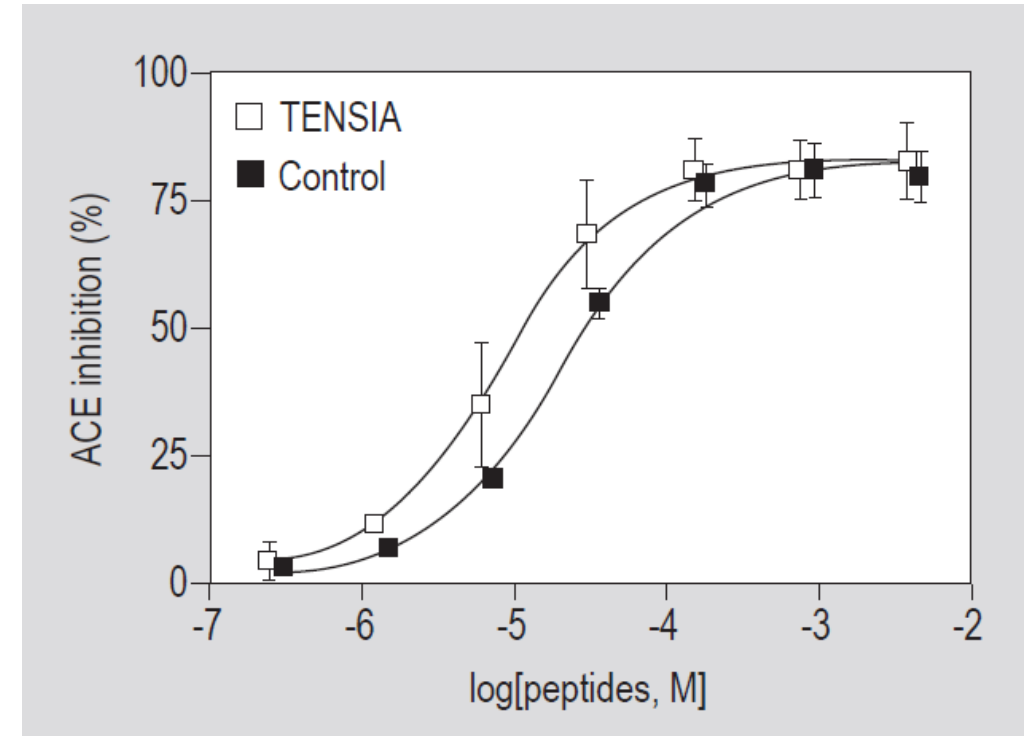
Nutramit ProPulse

Food supplement with *Lactobacillus plantarum* TENSIA®, B vitamins and minerals

TENSIA induces NO generation in host cells independently of its own NO production capability

TENSIA induces ACE inhibitory activity that helps in maintaining blood pressure

Growth environment	MRS broth	Skim milk
Medium + 3 mg NaNO ₃	4.5±0.9	3.4±0.7
Medium + 30 mg NaNO ₃	11.0±2.2	3.6±0.7
Control (medium with TENSIA)	2.6±0.8	1.2±0.2
Negative control (medium without TENSIA)	0.0±0.0	0.0±0.0

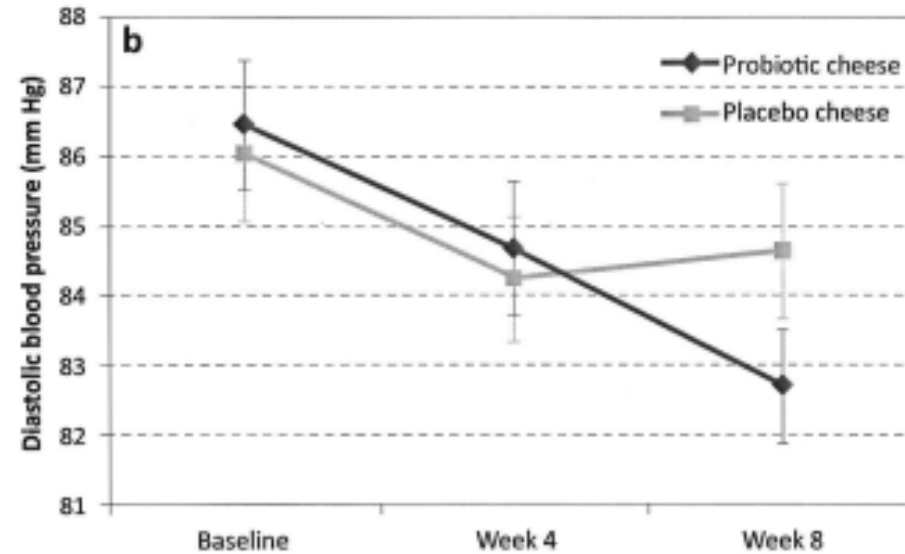
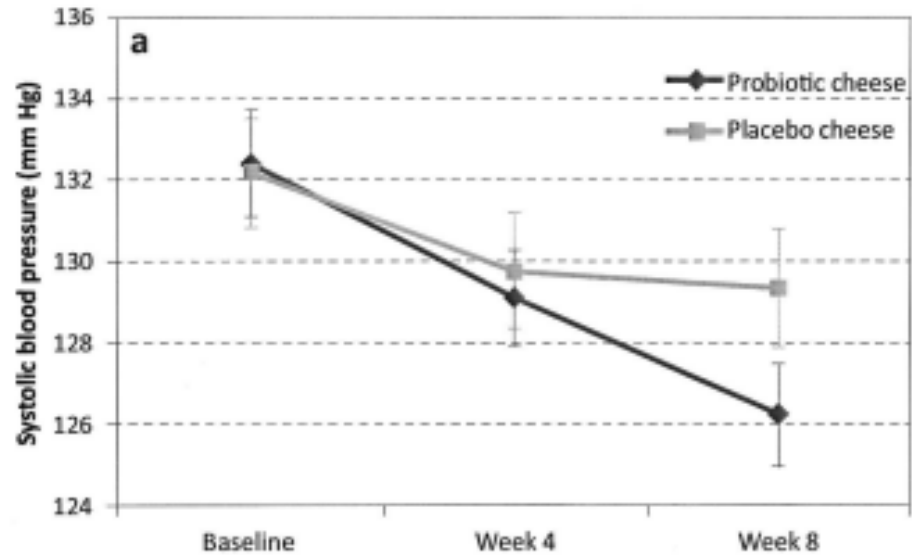


**Tensia : IC₅₀ of 2.7 μM,
Control milk IC₅₀: 6.6 μM.**

Nutramit ProPulse

Food supplement with *Lactobacillus plantarum* TENSIA®, B vitamins and minerals

Effect of *Lactobacillus plantarum* TENSIA® on SBP and DBP



Week	Groups	Average Reduction in BP	
		SBP	DBP
Week 8	L.plantarum TENSIA®	6.66 mmHg	4.34 mmHg
	Placebo	2.56 mm Hg	1.21 mmHg

Lactobacillus plantarum TENSIA® is an effective dose for achieving the maintenance of normal blood pressure

Nutramit ProPulse

Food supplement with *Lactobacillus plantarum* TENSIA®, B vitamins and minerals

Variable	Probiotic period			Placebo period		
	Baseline	Post 3 weeks	p value	Baseline	Post 3 weeks	p value
SBP (mm Hg)	131.0±8.1	127.9±10.9	0.0006	128.7±12.4	126.2±11.2	0.057
DBP (mm Hg)	83.4±8.5	81.0±8.3	0.0004	82.8±8.9	81.4±8.1	0.046
SBP [BMI<25]	130.5±7.0	126.1±10.4	0.001	126.7±13.2	124.7±10.3	0.213
SBP [BMI≥25]	131.5±9.2	129.7±11.1	0.064	130.8±11.3	127.8±12.0	0.048
DBP [BMI<25]	82.1±8.0	79.5±8.2	0.009	80.7±8.8	79.7±7.7	0.311
DBP [BMI≥25]	84.6±8.9	82.7±8.3	0.017	84.8±8.5	83.1±8.3	0.055

- Diastolic blood pressure (DBP) and Systolic blood pressure (SBP) significantly decreased during the probiotic period
- The reduction in blood pressure was more prominent with a lower BMI (<25 kg/m²) than with a higher BMI (≥25 kg/m²)

L. plantarum TENSIA lowered diastolic and systolic blood pressure regardless of food matrix and baseline values of blood pressure and BMI. Thus, decreasing the CVD risk



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Nutramit ProShield

**Synergistic food supplement with
Lactobacillus plantarum INDUCIA®,
vitamins, minerals and curcumin**

Nutramit ProShield

Synergistic food supplement with Lactobacillus plantarum INDUCIA[®], vitamins, minerals and curcumin.

- Contributes to resilience against intestinal infections.
- Contribute to the normal functioning of the immune system
- Help reduce tiredness and exhaustion
- Reduces the risk of a food-related infection
- Protect from oxidative stress

Lactobacillus plantarum INDUCIA[®]
 (5.0 x 10⁹ cfu -live microorganisms) +
 Curcuma longa + Vit C+Zn+ Vit
 A+Se+ Vit D3

Modulation of innate immune response

Markers	Baseline	Post 3 weeks	P values	Normal Range and Units
Monocytes	0.55 ± 0.17	0.64 ± 0.15	0.032	0.15–0.75 × 10 ⁹ /L
Cytokine IL-6	2.7 ± 1.0	3.8 ± 1.7	0.020	< 3.4 ng/L
IgA antibodies	2.5 ± 0.9	2.3 ± 0.8	0.009	0.7–4.0 g/L
IgM antibodies	1.3 ± 0.5	1.3 ± 0.6	0.776	0.4–2.3 g/L
IgG antibodies	12.9 ± 3.2	12.4 ± 3.9	0.017	7.0–16 g/L
IgE antibodies	19.6 ± 21.2	21.4 ± 25.9	0.232	< 85 kU/L

Patient population:
 Healthy subjects
 (n=12)

- L. plantarum Inducia and its food products can enhance the innate immune markers
- Significant increase in the monocyte and cytokine IL-6 values
- Decrease in the IgA and IgG antibodies was maintained in the normal range of units.



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Nutramit ProFlora

5 beneficial probiotic strains support for during and after antibiotic treatment, travel and periods of stress

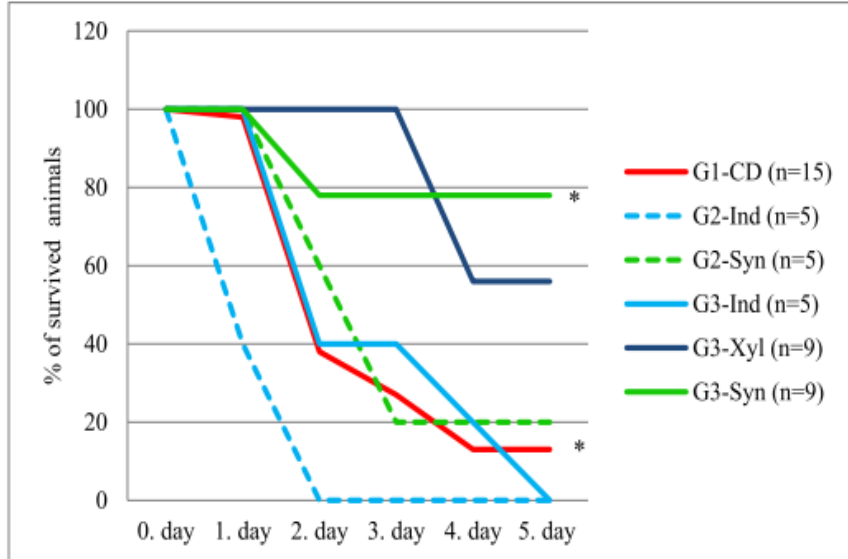
Nutramit ProFlora

5 beneficial probiotic strains support for during and after antibiotic treatment, travel and periods of stress

- Support during and after antibiotic treatment, travel and periods of stress
- L Plantum Inducia helps and protect in restoring the normal intestinal microbiota.
- Possess an antimicrobial activity against intestinal infection and increases the resilience of an organism against such infections.
- Prevents from excessive oxidative stress.

Pre Fed hamsters with L Plantum Inducia with Xylitol before ampicillin and C Diff Spores in G3 syn group have significant rate of survival compared to other groups.

Putative therapeutic approach includes usage of the synbiotic during antimicrobial therapy for prevention of CDI and its potential to reduce recurrences of CDI.



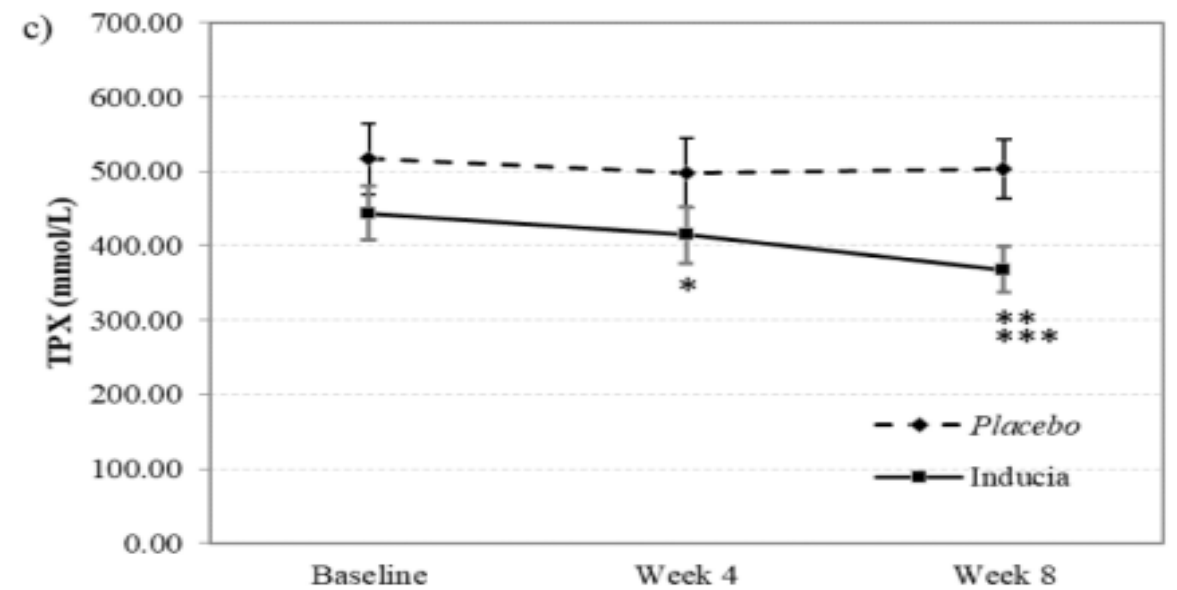
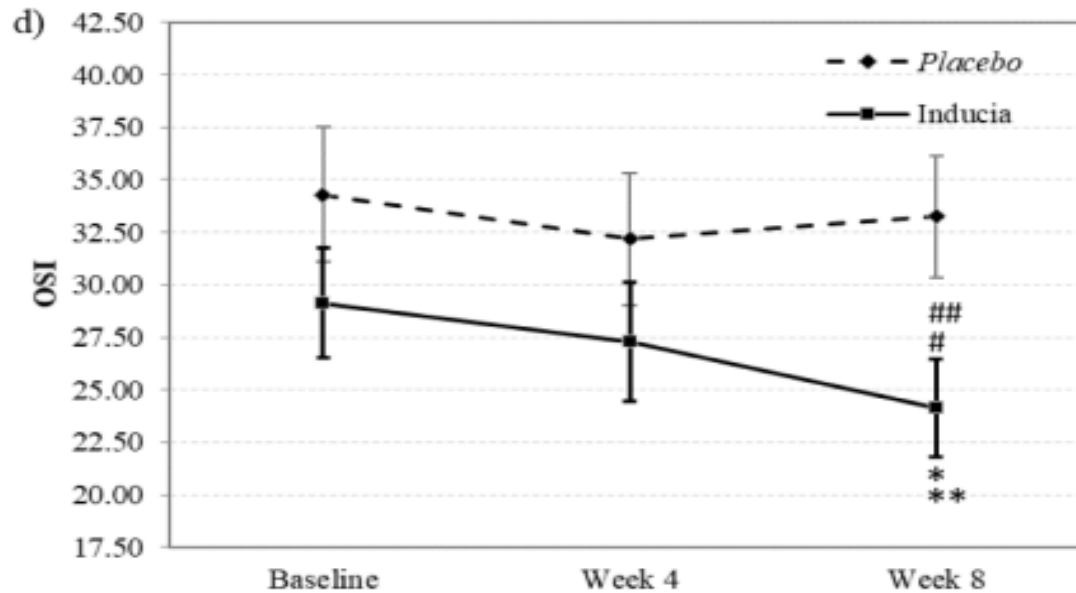
Group	Exp Infection Model	Mortality Rate
Control	G1-CD	87%
Post Induction	G2-Ind	100%
	G2-Syn	80%
Pre fed Group	G3-Ind	100%
	G3-Xyl	44%
	G3-Syn	22%

Nutramit ProFlora

5 beneficial probiotic strains support for during and after antibiotic treatment, travel and periods of stress

L. plantarum Inducia survives transiently in the human gut.

The recovery of the strain	4 weeks	8 weeks
At dose 5.9×10^9 CFU	70.4%	76.3%



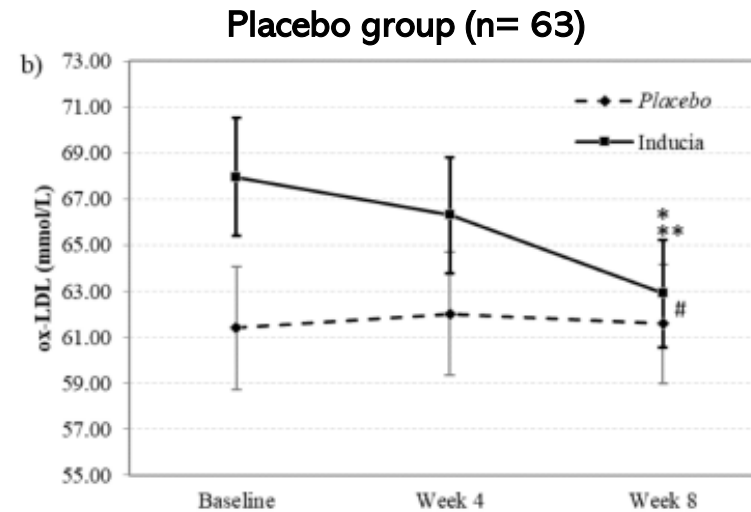
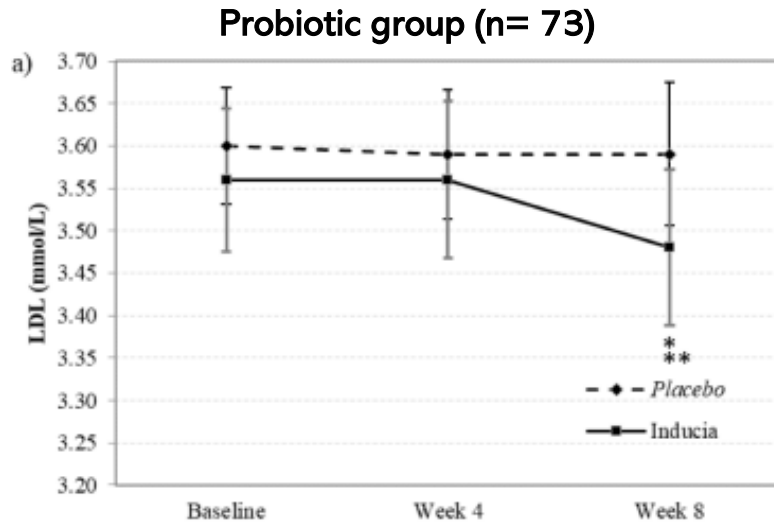
Daily consumption of the *L. Plantum* Inducia have significant changes in the OSI (Oxidative stress index) and TPX (Total peroxide) over the period from baseline to 4 weeks to 8 weeks, respectively.

Nutramit ProFlora

5 beneficial probiotic strains support for during and after antibiotic treatment, travel and periods of stress

L. plantarum INDUCIA®

- Reduces LDL-cholesterol in blood
- Protects human body from oxidative damage
- Enhances anti-oxidative activity by reducing oxidative stress markers ox-LDL, OSI and TPX.



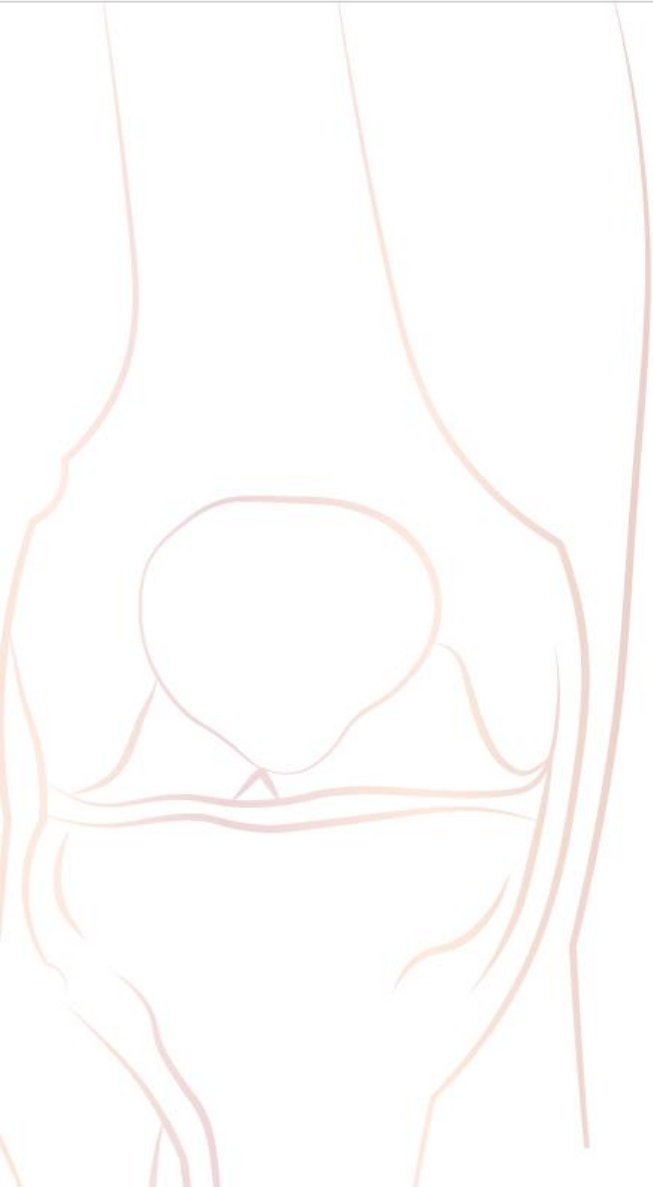
Patient population:

Healthy subjects at risk of atherosclerosis

L. plantarum INDUCIA®

- Reduced LDL-cholesterol (LDL-c)
- between week 4 and week 8.
- Showed a steady intra-group reduction of oxidized LDL (ox-LDL). The change was also significant over the placebo ($p=0.026$)

Parameter	Change Between Weeks 4 and 8	Change at Week 8 from Baseline	Percentage Reduction
LDL-c	Decrease ($p = 0.04$)	Significant reduction ($p = 0.029$)	2.25%
Ox-LDL	Borderline significant reduction at Week 4, Significant reduction at Week 8 ($p = 0.055$)	Significant reduction compared to baseline ($p = 0.003$)	2.41% at Week 4, 7.43% at Week 8



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Nutramit ProFlex

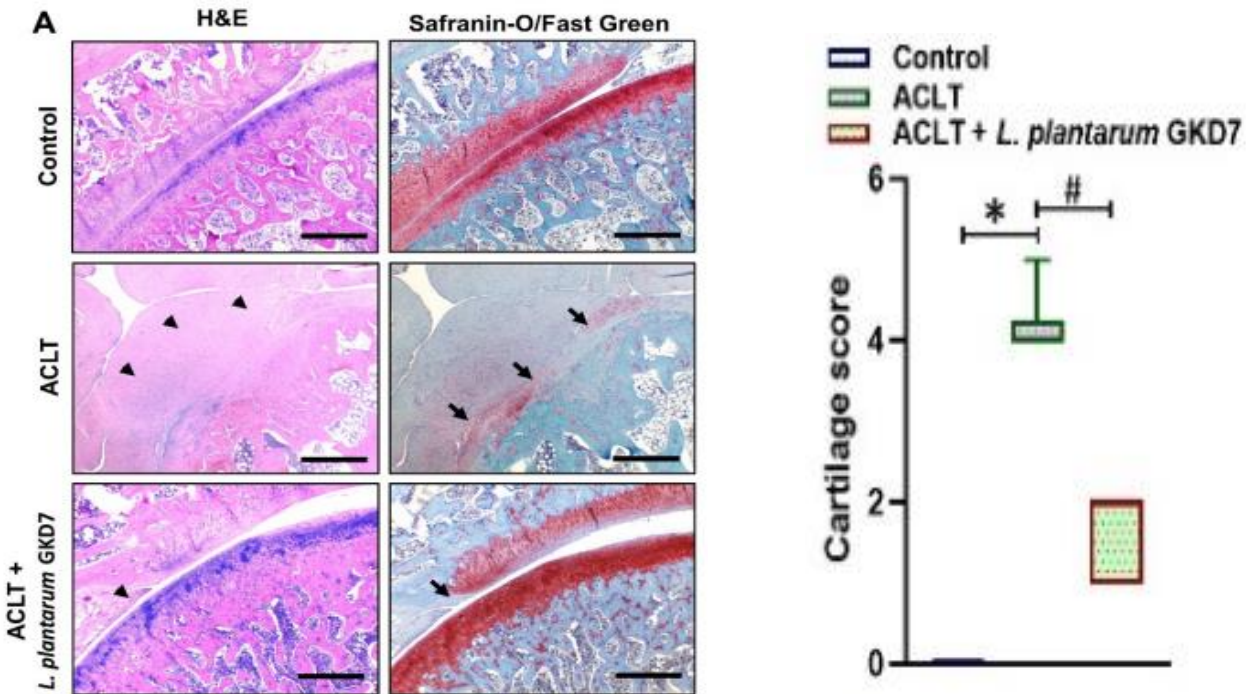
**Take Action On Your Joint And
Bone Health**

Nutramit ProFlex

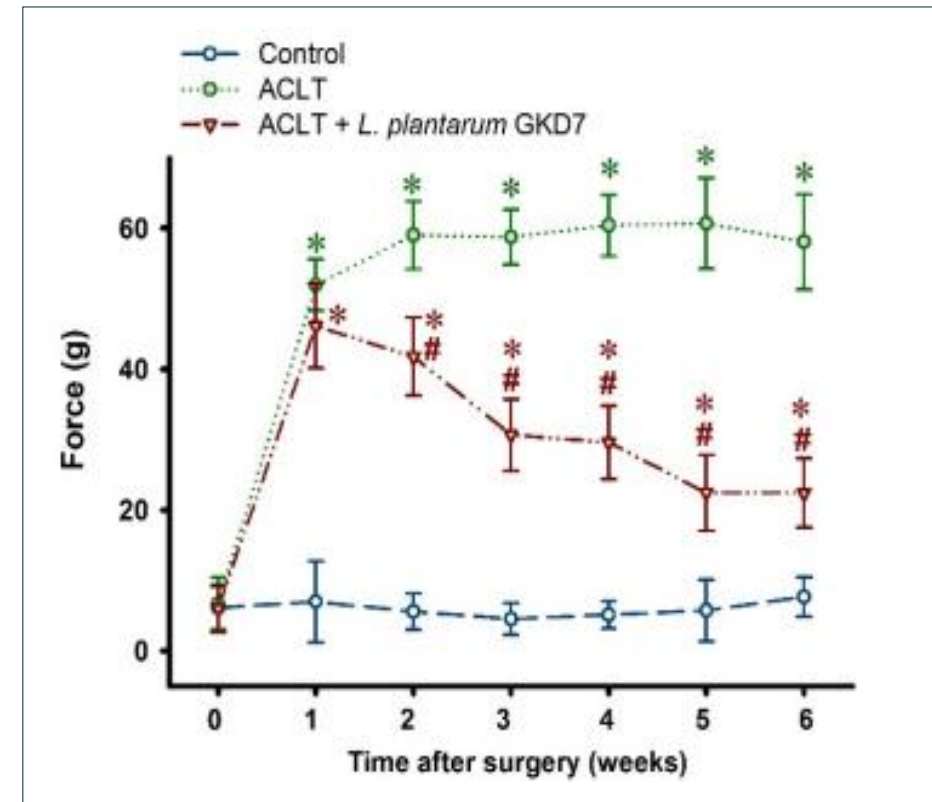
Contributes to the maintenance of normal bones and muscle function

L. plantarum anti-inflammatory and analgesic effect

- Repairs cartilage and protect joint tissues.
- Increases Joint mobility, flexibility and support joint structure.
- Elevates body's antioxidant activity



ACLT-induced cartilage damage was minimal in ACLT +L Plantarum group and the Cartilage score was also significantly superior to the ACLT group.



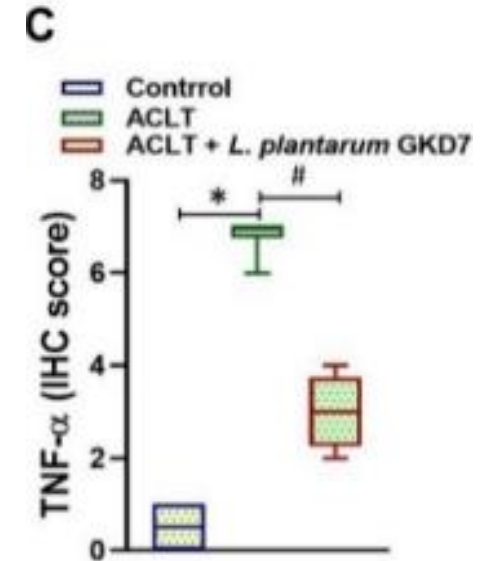
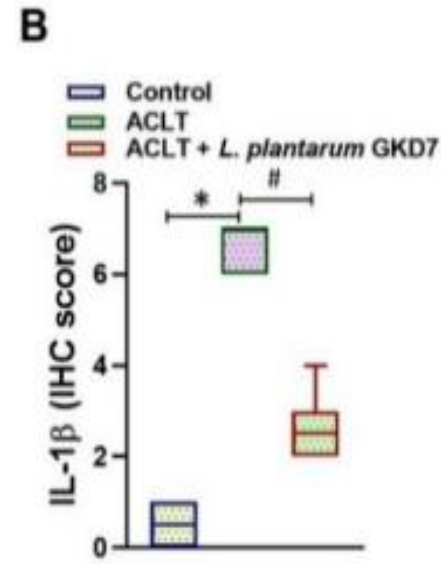
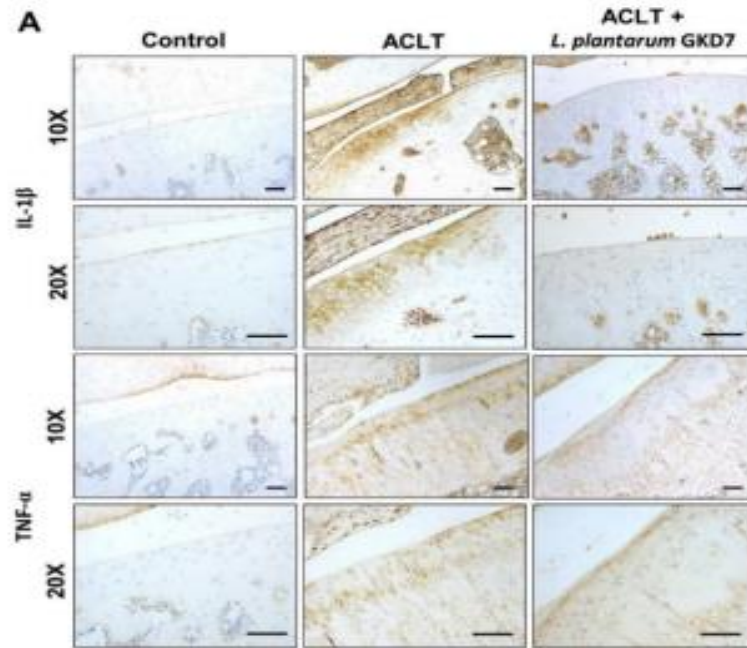
Weight bearing behavior after 6 weeks

Study Group	Control (n=6)	ACLT +L Plantarum (n=8)	ACLT (n=6)
Force Exerted by each limb	7.7 ± 2.8 g	22.4 ± 5.0 g	58.1 ± 6.7 g

ACLT + *L. plantarum* group showed improved asymmetry in weight-bearing behavior i.e. approximately half that of the ACLT-only group and close to that of the control group by week 6.

Nutramit ProFlex

Contributes to the maintenance of normal bones and muscle function



Downregulation of IL-1 β and TNF- α levels :

- Prevent mechanical pain hypersensitivity by decreasing the expression of nerve growth factor.
- Also decreases the phosphorylation state of transient receptor potential vanilloid receptor 1 (TRPV1), critical mediators of inflammatory pain signaling.

***L. plantarum* showed marked downregulation of IL-1 β and TNF- α levels and significantly less ICH scores compared to ACLT group thus improving the joint pain and the weight-bearing asymmetry**

Nutramit ProFlex

Contributes to the maintenance of normal bones and muscle function

Anti-inflammatory and Antioxidative Activity on Urinogenital Tract of *L. plantarum* MCC1

- *L. plantarum* MCC1 elevates GSH concentration and reduces the glutathione redox ratio (GSSG/GSH) ratio which results in the suppression of the OxS and the decreased release of 8-EPI (Prostaglandin).
- *L. plantarum* MCC1 also decrease infiltration of leucocytes and thus reduce the production of reactive oxygen species (ROS).

Characteristics	Study Group (n=22)		Control Group (n=21)		P value
	Baseline (Mean ± SD)	4 weeks (Mean ± SD)	Baseline (Mean ± SD)	4 weeks (Mean ± SD)	p < 0.005
Urinary OxS markers					
• 8-EPI (prostaglandin) in urine	68.5 ± 22.1	58.0 ± 17.9	74.7 ± 18.2	75.1 ± 17.5	p < 0.001
Basic Prostate parameters					
• PSA (ng/mL)	3.9 ± 3.9	2.6 ± 2.6	2.3 ± 2.7	1.7 ± 1.9	p = 0.048
• Q max (mL/s)	11.7 ± 2.9	14.2 ± 5.4	12.1 ± 7.2	13.5 ± 6.0	

L. plantarum MCC1 decreases 8-EPI in urine concomitant with pain reduction and shows improvement in urine flow rate (Q max) and PSA levels significantly in patients with men with moderate lower urinary tract symptoms.