

EFFECTS OF ROYAL JELLY ON SYSTEMIC INFLAMMATION:

CLINICAL STU

In Medex, we have conducted double blind, placebo controlled, randomized clinical study with purpose to find out if consumption of royal jelly has an effect on pro- and anti-inflammatory factors as well as to confirm or deny previously reported effects of royal jelly from *in vitro* studies on human individuals. For the study we picked only healthy asymptomatic individuals with BMI > 23, aged 25 - 60, without metabolic disorders, diabetes, cardiovascular diseases or endocrine organ dysfunction. All individuals did not take medication for lowering blood lipids, food supplements and had stable body mass last 3 months prior the study. The group of 60 individuals was divided into 2 groups – 30 placebo and 30 royal jelly group.

METHODOLOGY: Timeline



Consumption of liophylized royal jelly, equivalent of 2000 mg fresh royal jelly, and placebo. 2 capsules per day, divided in two doses, 30 min before meal on empty stomach.

Wash-out period (without consumption of either royal jelly or placebo)



hypopharynx glands of young (5 - 12 days old) nurse bees. It is a milky white creamy substance, with sour bitterish taste and characteristic odour.

It is used to feed the bee larvae in the first three days of their life, but only the bee **queen** is fed with royal jelly through her whole life, enabling her to become the only fertile female in the hive and to **live** 2 - 7 years, while worker bees usually live just few months.

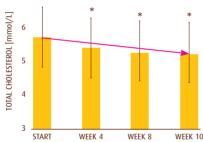
Royal jelly contains approx. 67 % water, 12 % protein, 15 % sugars, 6 % fat, vitamins and minerals.

10-hydroxy decenoic acid (10-HDA) is the main bioactive ingredient and a measure of quality, contains also bioactive peptides and glycoproteins (MRJP, apisimin, jeleins, rojalactin), AMP N1 oxide, acetilcholine, poliphenols, hormones, etc.

CHOLESTEROL

SIGNIFICANT DECREASE OF **BODY FAT AND INCREASE** OF PHASE ANGLE ONLY **ROYAL JELLY GROUP**

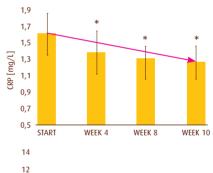
DECREASED BY 8 %



CRP SIGNIFICANT DECREASE OF **C-REACTIVE PROTEIN ONLY ROYAL JELLY GROUP**

CRP – systemic inflammation marker Decrease of CRP of great importance!

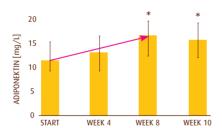
DECREASED BY 21 %



ADIPONECTIN

SIGNIFICANT INCREASE OF ADIPONECTIN LEVELS ONLY **ROYAL JELLY GROUP**

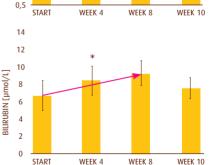
INCREASED BY 34 %



BILIRUBIN

SIGNIFICANT INCREASE OF **BILIRUBIN LEVELS ONLY ROYAL JELLY GROUP**

INCREASED BY 35 %



* Statistically significant differences within group in comparison to baseline values (p<0.05).

RESULTS

IMPROVES LIPID PROFILE 8 % lower total cholesterol

REDUCES SYSTEMIC INFLAMMATION 21 % lower CRP and 34 % higher adiponectin

INCREASES BLOOD ANTIOXIDANT POTENTIAL 35 % increase of bilirubin, endogenous antioxidant and TAC - Total Antioxidant Capacity

SUPPORTS APPETITE REDUCTION 17 % increase of leptin (satiety hormone), increase in subjective feeling of satiety



Faculty of Health Sciences, University of Primorska, Izola, Slovenia and Medex d.o.o, Linhartova 49A, 1000 Ljubljana, Slovenia. Double controlled, placebo controlled, randomized. 60 healthy asimptomatic people, 25–60 years old, BMI > 23. Results after 8 weeks of administration of 2000 mg royal jelly in a capsule.

The natural queen bee superfood - prevention for entire family!



GELÉE ROYALE		SUITABLE FOR	RECOMMENDED DAILY ALLOWANCE	ROYALL JELLY DOSAGE	10-HDA DOSAGE IN ROYAL JELLY
BIO GELÉE ROYALE FORTE VIALS, 10x 9 ml	@ meox @ gelée royale forte	adults & seniors	1 vial = 9 ml	1500 mg	21 mg
BIO GELÉE ROYALE FORTE CAPSULES, 30 pcs	e mees gelee ruyale furte	adults & seniors	1 capsule = 370 mg	1000 mg	14 mg
GELÉE ROYALE SUPER + D CAPSULES, 30 pcs	gelder oryale super + D ₂	teenagers & adults	1 capsule = 400 mg	1000 mg	14 mg
GELÉE ROYALE SUPER + D VIALS, 10x 9 ml	@ meex gelée royale super+ b;	teenagers & adults	1 vial = 9 ml	1000 mg	14 mg
GELÉE ROYALE MEN CAPSULES, 30 pcs	gelés royale	adult men	1 capsule = 386 mg	350 mg	4 mg
GELÉE ROYALE JUNIOR VIALS, 10x 9 ml	gelée royale junion	children 3+	1 vial = 9 ml	250 mg	3,5 mg

The quantity of 10 HDA is an important quality factor for royal jelly. In Medex, we have standardised the quantity of HDA and thus provided guaranteed & transparent quality.



