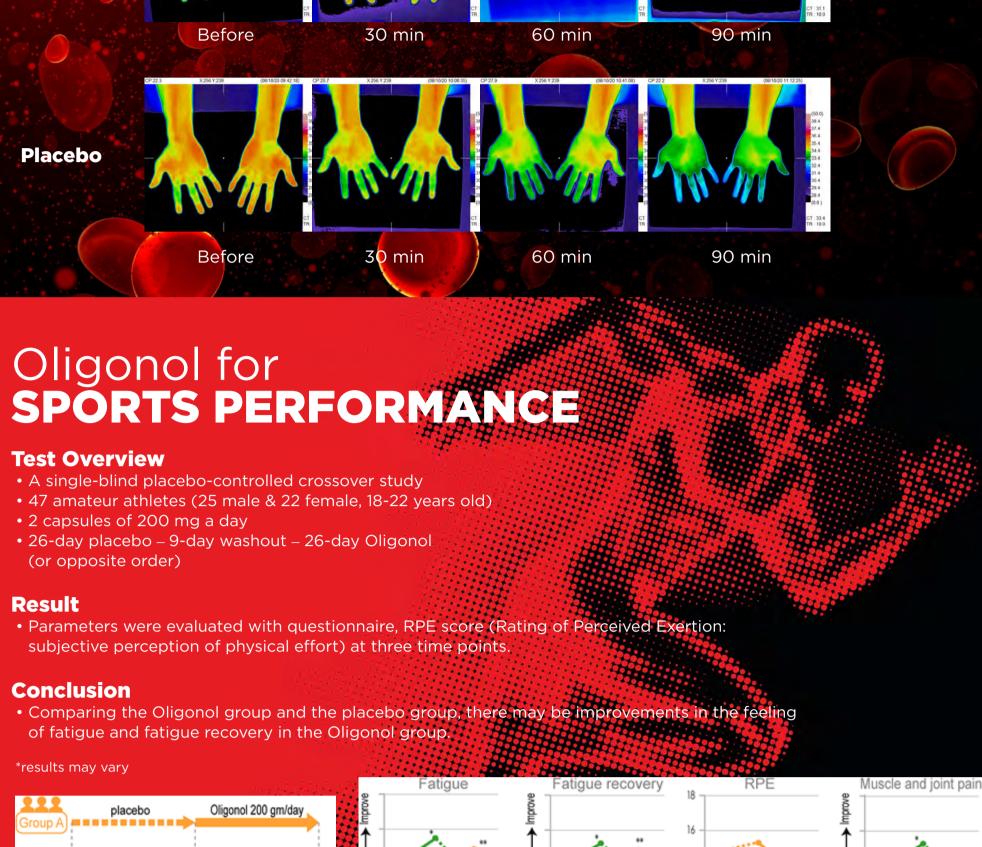


Low-Molecular-Weight Polyphenolic Extract

Oligonol





\*vs Day52

" vs Group B, Day26

Period (Days)

30

25

20

15

5

\* vs Group A, Day52 \*\* vs Group B, Day52

after

\*vs Group A, Day52 26

"vs Group A, Day52

Placebo group

Oligonol group

Pigmentary deposits

area

number

CRP (mg/dl)

0.2

0.1

Spot Gone

Waist

weight circumference

Subcutaneous

fat area

\*P<0.05 vs Placebo

**Heat** 

**ATP** 

synthase

Visceral fat area

<u>ا</u> 200

100

80

20

Abdominal

circumference

■ Placebo ■ Oligonol

(TG)

CREB

**UCP1 mRNA** 

Body

Wrinkle in eye angle

length

p < 0.05

20

## 16 10

**Anti-fatigue and Anti-inflammatory Effects** 

• Serum levels of Cortisol (stress marker) and IL-1-, IL-6 (inflammatory marker) were examined after

## 0

8

**Study Overview** 

60min.-exercise.

40

32

24

• 19 healthy young male

Oligonol 200 gm/day

Group B

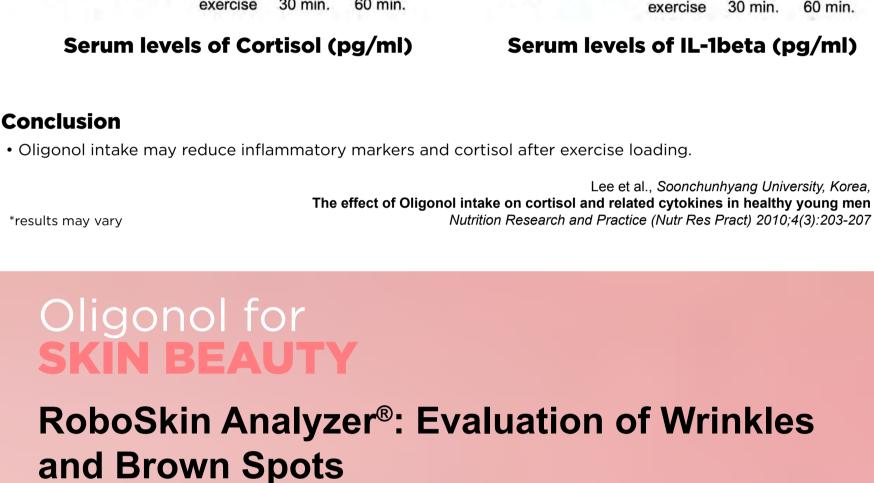
placebo

Oligonol 200 mg/day or placebo for 4 weeks

Placebo group

Oligonol group

0 Day 0 1-month after after after Day 0 1-month after after exercise 30 min. 60 min. 30 min. exercise



## Subjects: 17 women (26-60 years old) **Dose:** 2 capsules of 200 mg a day for 12 weeks; open label

## A questionnaire survey was conducted before and after the study. **Results:** Pigmentary deposit area and wrinkle length were improved. Results were more visible in participants over 40 years old.

4 week after

12 week after

Skin photo analysis by DermLite, and surface analysis by profilometry

Results: Oligonol may decrease fine lines on the faces of 8 of the 11 subjects.

High-sensitive serum C-reactive protein (CRP) measurement

**Evaluation:** Skin condition was observed at 3 time points using Robo Skin Analyzer.

length

area

length

area

45 mm → 21 mm

48 mm<sup>2</sup> → 18 mm<sup>2</sup>

32 mm<sup>2</sup> → 8 mm<sup>2</sup>

before

DermLite® and Profilometer: Evaluation of Wrinkles and Spots

Methods: Oligonol 200 mg a day for 3 months

Subjects: 13 female, 1 male

**Testing Method:** 

TG

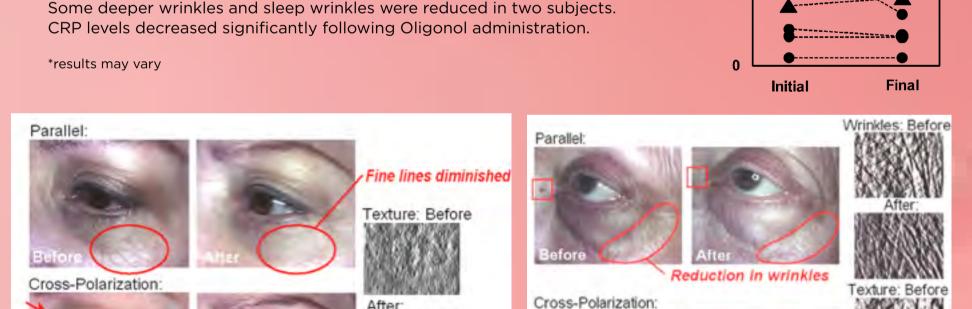
TG

TG

TG

**TG** 

TG

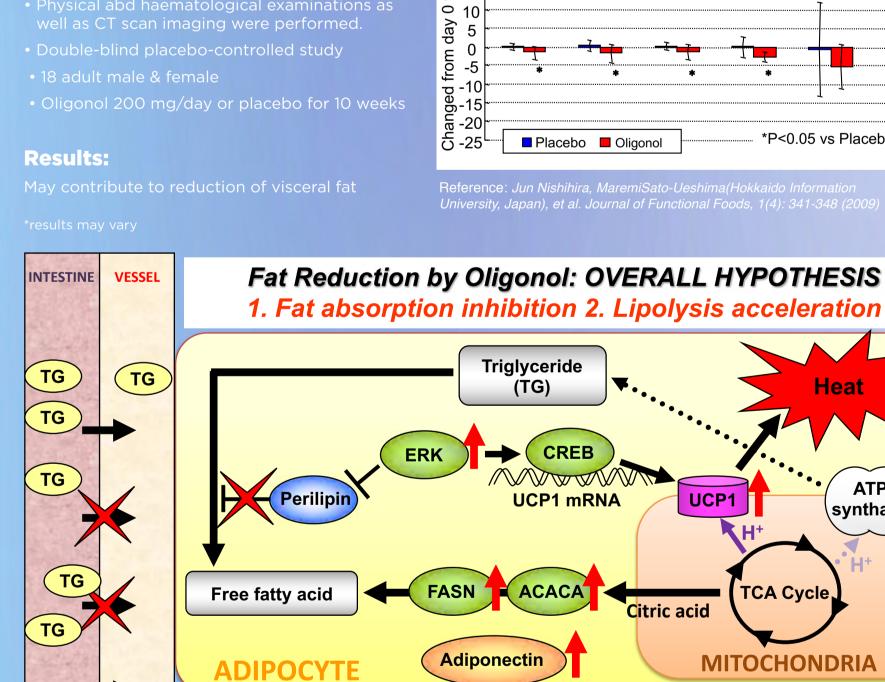


₽ 20

₽ 15

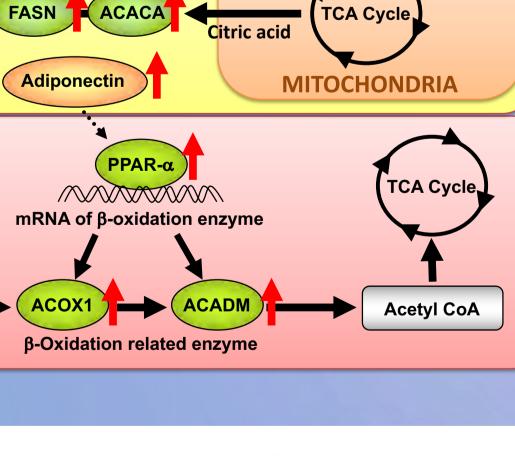
Red mark gone Darkness lessened

Oligonol for **BODY FAT REDUCTION** 

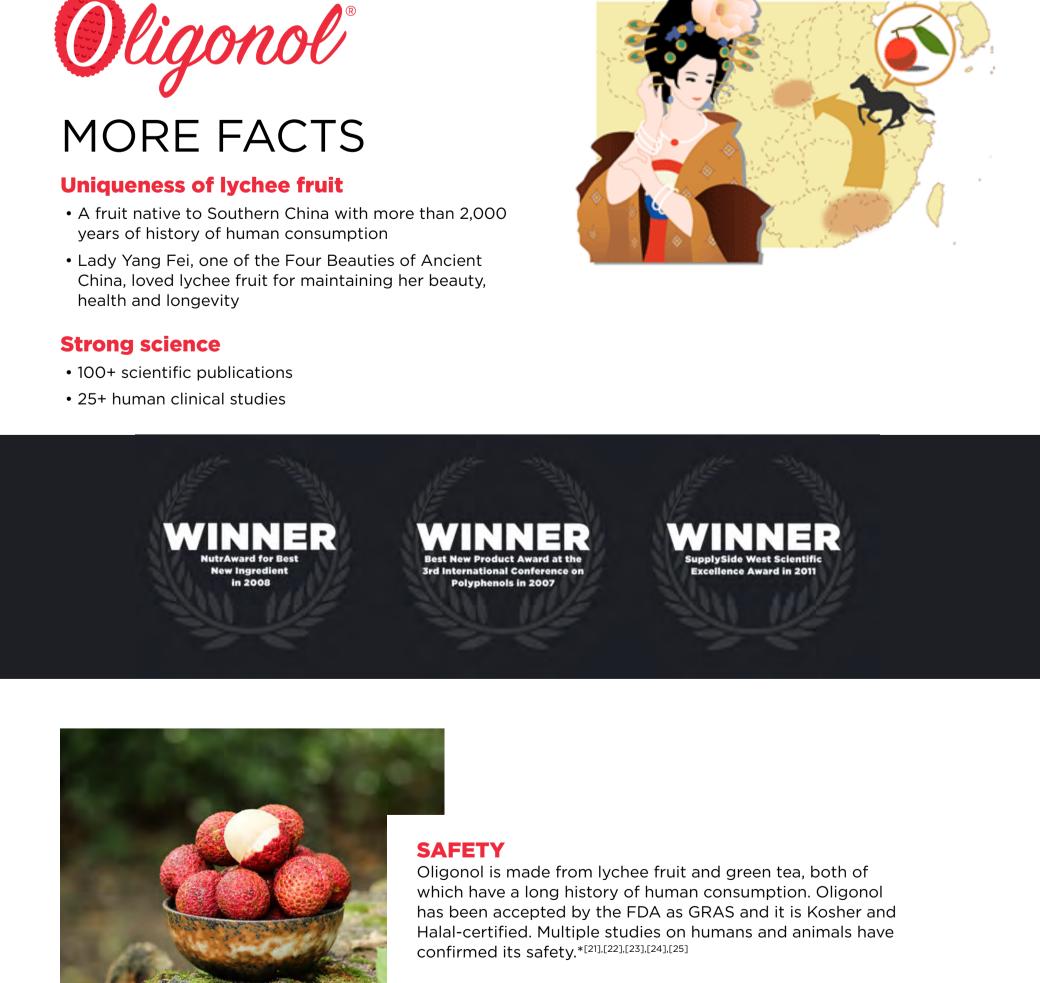


**HEPATOCYTE** 

Free fatty acid



UCP1





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\*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.

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