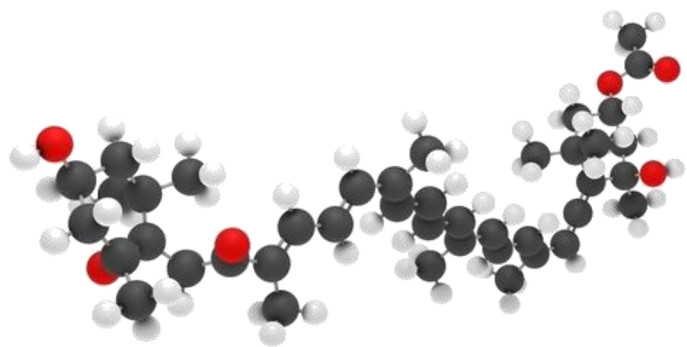
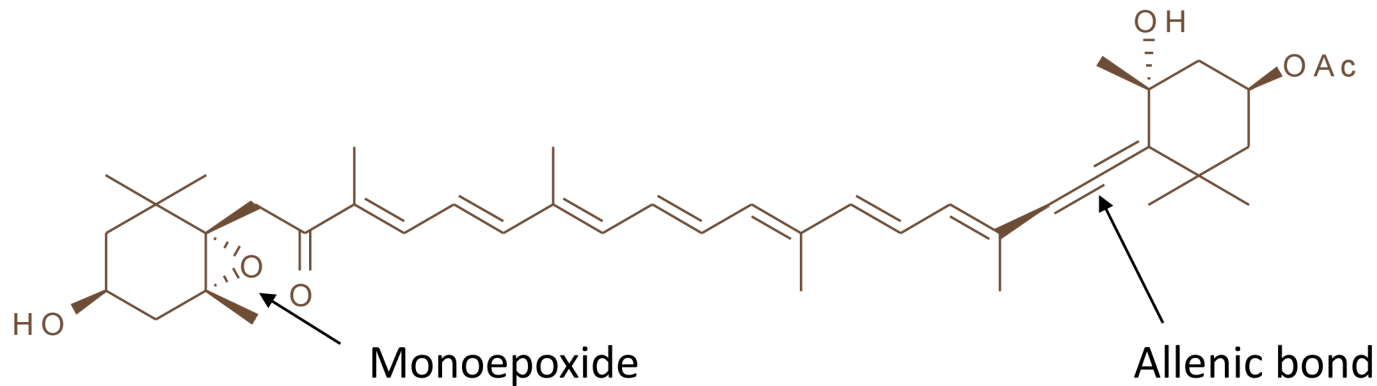


ThinOgen™ Fucoxanthin

A New Fat-burning Natural Carotenoid



- Structure and Source



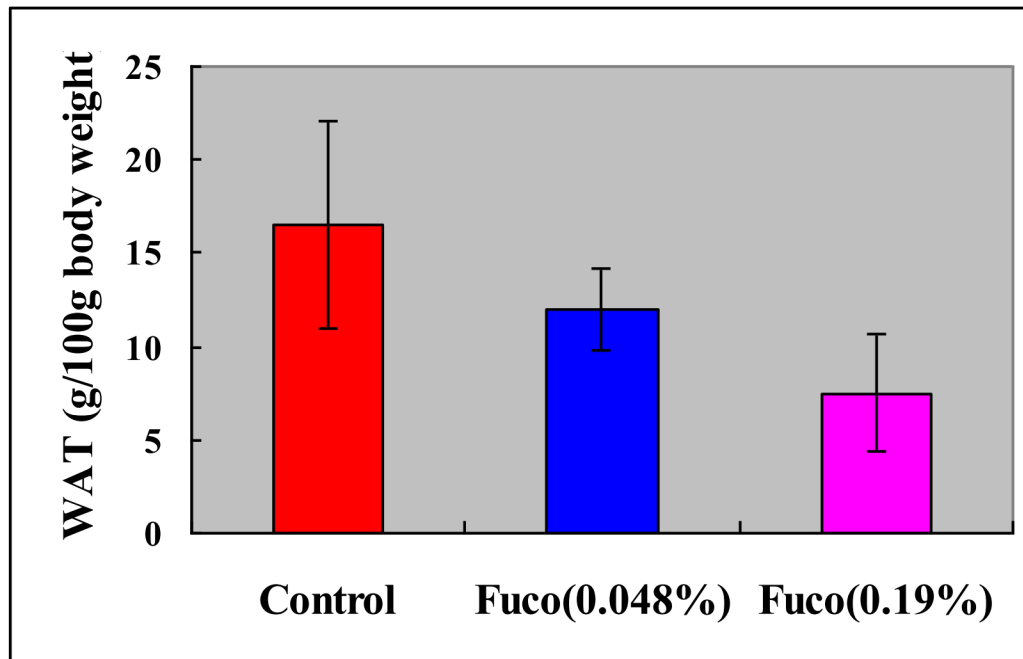
ThinOgen™ Fucoxanthin

ThinOgen™ fucoxanthin is a natural carotenoid extracted from edible brown seaweed and produced by BGG's proprietary technology. Fucoxanthin possesses a unique structure profile in which the allenic group is conjugated with the β,γ -epoxyketo moiety. Fucoxanthin has been found to have a number of therapeutic activities, including anticancer, antihypertensive, anti-inflammatory, and **anti-obesity** effect.

Anti-obesity Effect of Fucoxanthin

- Animal experiments

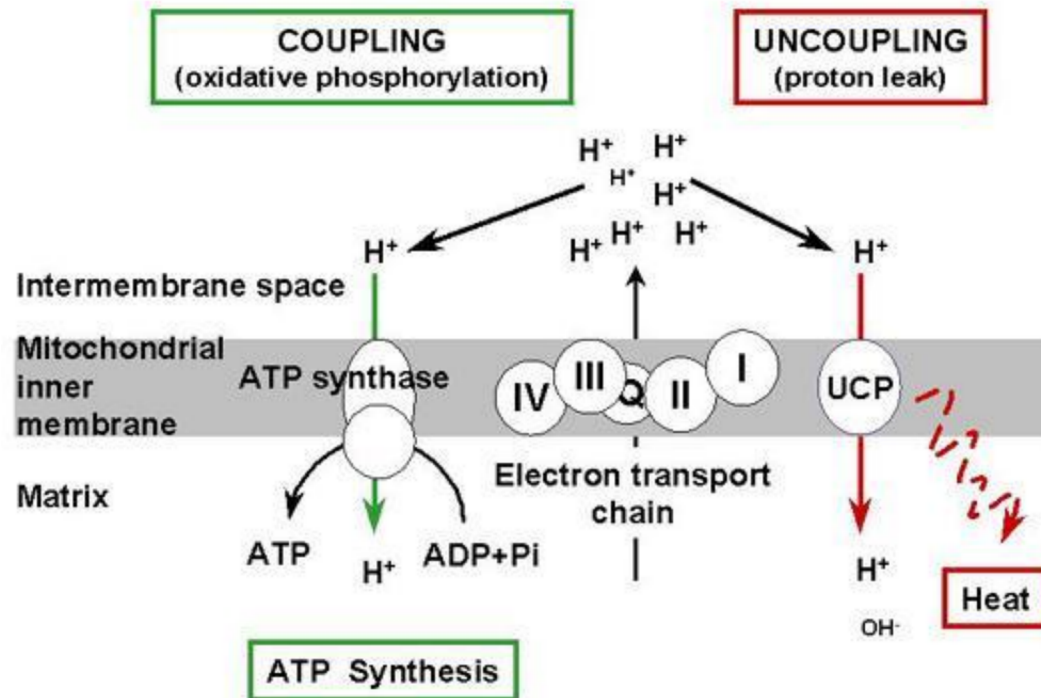
Feeding mice fucoxanthin significantly decreased fat weight stored in white adipose tissue (WAT) by **promoting fat burning**.



WAT weight of rats fed fucoxanthin and control diet for 4 weeks

*Significantly different from control ($P < 0.01$).

Uncoupling protein-1 (UCP-1) diverts energy from ATP synthesis to thermogenesis in the mitochondria of brown adipose by catalyzing a regulated leak of protons across the inner membrane.



ThinOgen™ Weight Loss Effect

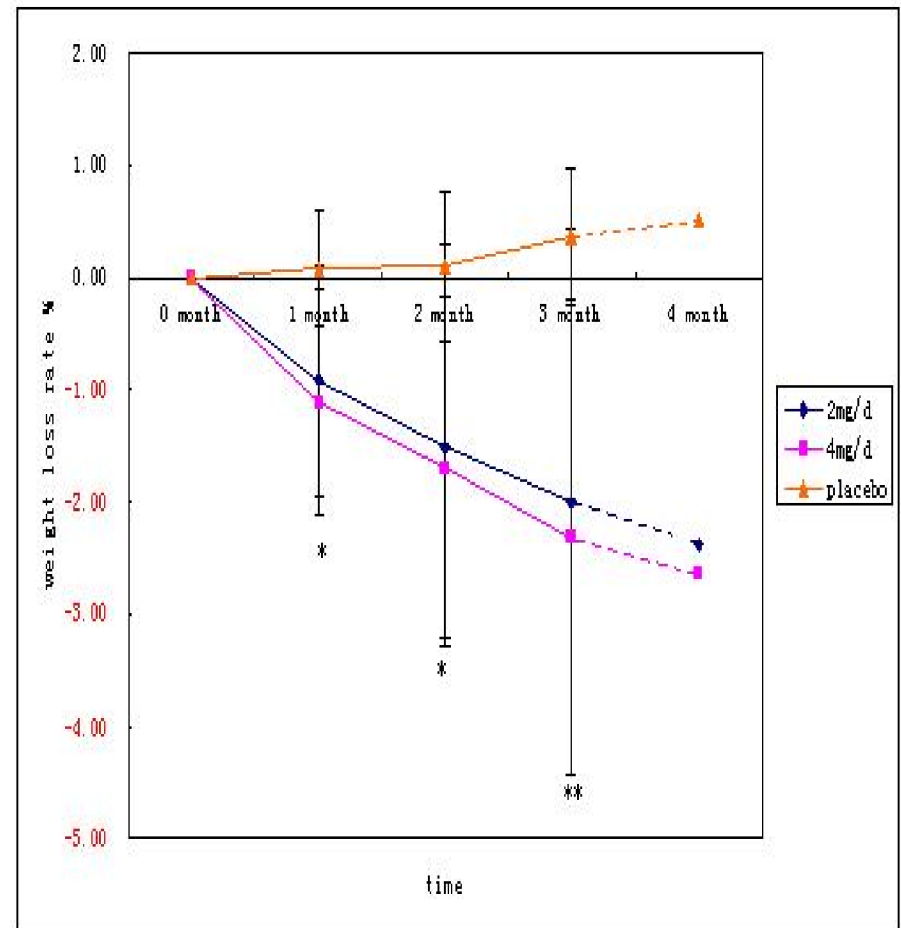
- Random with control
- 12 males and 7 females between 25 to 48 years old
- 2 dosage groups: 2mg/d (6), 4mg/d (8) and placebo group (5)
- **No dieting, no extra excises, no life style changes**
- Period: 3 month administration + 1 month observation
- Medical examination: 0, 1, 2, 3, 4month
- CT measurement of abdominal fat
- Regular follow-ups organized to get information of their experience and to keep them obey their trial plan.

Weight Loss Effect of Different Doses

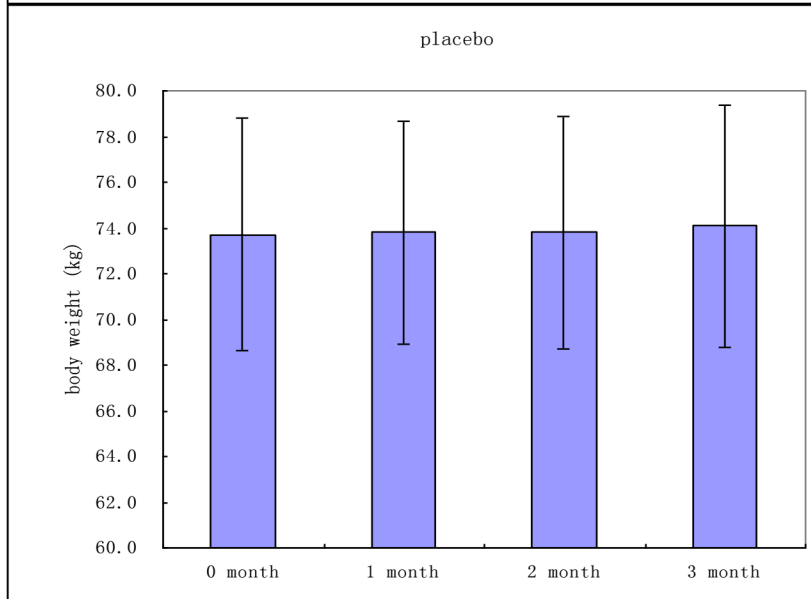
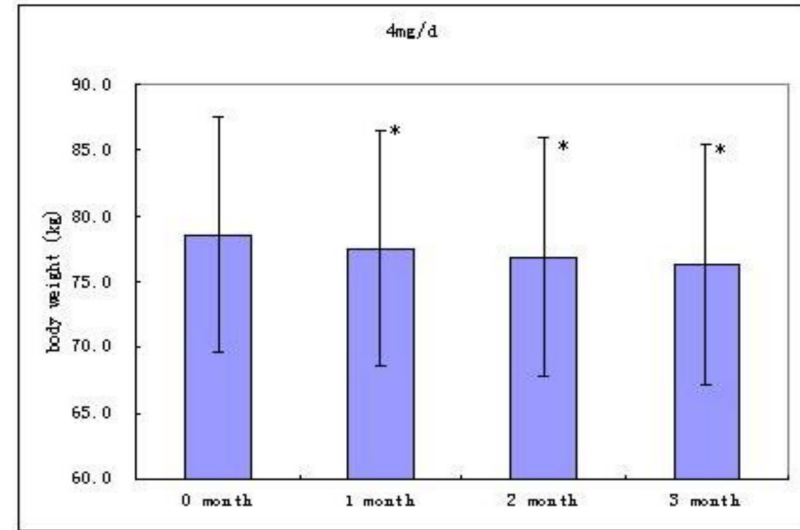
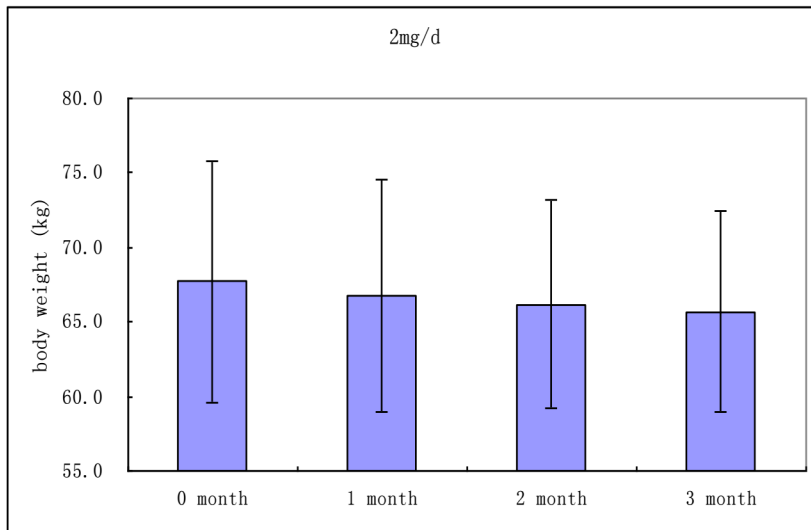
Observation:

Significant difference in weight loss between dosage groups and placebo group

- The weight loss of 4mg/d group is **significant different** in 1 month and 2 months ($p < 0.05$) comparing with the placebo group
- There is **very significant difference** in weight loss after 3 months ($p < 0.01$) for the 4mg/d group in comparison with the placebo group
- No body weight re-gain in a month after the last administration



Clinical Study – Body Weight Comparison



- The body weight of the 4mg/d group has a significant difference ($p < 0.05$) in all 3 months in comparison to the initial examination.
- The difference is even more significant between month 2 and month 3 ($p < 0.01$) for the 4mg/d group.

Conclusion of the clinical study:

- Use of **ThinOgen™** has a weight loss effect
- The optimal dose is 4 mg/day for adults
- Recommended doses are between 2 mg to 4 mg a day

- **Powder and Oil**

Powder: ThinOgen™ 1% Fucoxanthin, water soluble

Oil: ThinOgen™ 1%, 3% and 5% Fucoxanthin

- **Package Size: 1 or 10 KG**



2,000 kg



1 kg

- LD50: > 10g/kg BW
- Micronucleus test: Negative
- Teratogenicity test: Negative
- Ames test: Negative
- Thirty days feeding study: Negative