

[연수강좌]

김 성 수

충남의대 가정의학교실

(National Institute of Health, NIH) ephedra alkaloids (caffeine) (guarana
 1992 (National Center gotu kola
 for Complementary and Alternative Medicine, NCCAM) (麻黃, Ephedra sinica Stapf.) ephedrine
 . NCCAM 24
 1) (Alternative medical
 systems), 2) (Mind-body intervention), 3)
 (Biologically based therapies), 4)
 (Manipulative and body-based methods), 5)
 (Energy therapies)
 , dietary supplements)
 , , , , , ,
 , , , , , (extract),
 , , , , , .
 3-5% 1-2%,
 1-4% . Gotu Kola(Centella asiatica,
 Hydrocotyle asiatica, Indian pennywort) , ,
 ephedrine 4 (isomer)
 ephdrine
 ephdrine
 (ephedrine)
 ephdrine
 the Food and Drug Administration
 (FDA) (ephedra alkaloids)
 1997 6 1
 마황 (ephedra) / Guarana 또는 Gotu Kola (caffeine) 1999 3 31 140
 31% ("possibly
 related") . 47% , 18%

(17).
 (13), (, stroke) (10), (7) . 10 kg)
 13
 ("definite, probable, and possible" cases) 26% (75%)
 8
 FDA
 1)
 4)
 Boozer 2) (72 mg/day
 ephedrine alkaloids, 240 mg/day caffeine)
 29-35 kg/m²
 8
 67 (n=35) / 78% , 20% , 2% catechin
 polyphenol 30-50%
 polyphenol ()
 24 . 8 (-4.0±3.4 kg)
 (-2.1±3.0%fat) (-0.8±2.4 kg) (0.2±2.3%fat)
 (p<0.006).
 23%(8/35)
 (, ,)
 Boozer 3) Kola (90 3-5%), (6-8%) (4%)
 mg/day ephedrine alkaloids, 192 mg/day caffeine)
 167 (catechin noradrenaline
 31.8±4.1 kg/m²) (n=84) 5) catechol-O-methyl transferase , caffeine
 (n=83) 6 (-5.3±5.0 vs. -2.6±3.2 kg, p <
 0.001) (-4.3±3.3 vs. -2.7±2.8 kg, p = 0.020)
 noradrenaline cAMP
 phosphodiesterase
 Dulloo 6) 10
 (50 mg caffeine and 90 mg epigallocatechin gallate)
 24 (energy expenditure, EE) 24
 (respiratory quotient, RQ) .
 3 24 EE 4%
 (p<0.001), 24 RQ 0.88
 0.85 (p<0.001). Caffeine 50 mg
 EE RQ
 caffeine
 ephedrine/
 caffeine
 . Astrup 24

지각 (synephrine)

(枳殼, bitter orange, Citrus aurantium)



epinephrine synephrine

synephrine

cytochrome P450-3A

6,7'-dihydroxybergamottin bergapten

Synephrine

고추 (capsaicin)

Capsaicin

⁸⁾

uncoupling protein upregulation ⁹⁾ neuropeptide Y (NPY)

cholecystokinin (CCK)

¹⁰⁾

(chili pepper)

복합리놀렌산 (Conjugated linoleic acid, CLA)

(Conjugated linoleic acid, CLA)

() CLA

trans-10, cis-12 CLA isomer cis-9,

trans-11 CLA isomer

¹¹⁾

· Mirand ¹²⁾ 4 (male Wistar rats)

6 cis-9, trans-11 CLA isomer, trans-10, cis-12 CLA

isomer

CLA

CLA

)

Whigham ¹³⁾ CLA

CLA 6 g 1

CLA

CAL

Garcinia cambogia (hydroxycitric acid, HCA)

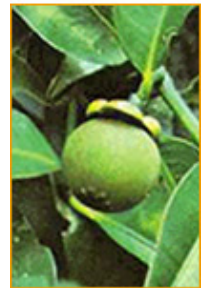
Garcinia cambogia hydroxycitric acid (HCA)

Garcinia

· Citric acid 16 isomer

HCA ATP-citrase lyase

· ATP-citrase lyase



HCA

¹⁴⁾ 10

HCA

· Heymsfield ¹⁵⁾ HCA

135

1,200 mg HCA

12

(HCA -3.2±3.3 kg, -4.1±3.9 kg; p=0.14).

(bioavailability)

HCA

/ -HCA (Super CitriMax)

-HCA

2,800 mg ¹⁶⁾

식이섬유

1980

Guar gum

(bran)

¹⁷⁾

gum (20) (11) (Guar gum) 20 g D, E
 12 . Guerciolini²⁴⁾ Orlistat (120 mg 3)
 . Guar chitisan (890 mg 3)
 . Orlistat
¹⁸⁾ glucomannan 1 g 3 (+16±7.27 g/d; p<0.001).
 1 8 2.5 kg chitisan
 (5.5 lb) .¹⁹⁾ 2 (+0.27±1.02 g/d; p=0.379).
 (psyllium) (bran)

²⁰⁾ Rigaud²¹⁾ 52 (7 g 6
 29.3) (-5.5±0.7 kg, -3.0±0.5
 kg; p=0.005).

기타

5-40 g 1-3
 kg
 5%

키토산 (Chitosan)

(deacetylation) (chitin) acetyl (long-chain fatty acid) carnitine
 acylcarnitine
 long-chain Acyl-CoA - ATP
 . Carnitine lysine methionine
 lysine methionine carnitine
 1970 resin

Wuolijoki²²⁾ 51 microcrystalline
 chitosan 1,200 mg 2 8
 . 8

결론

(HDL)- (p>0.1). 2
 transferrin . Pittler²³⁾ 34 (Fe⁺⁺)
 1,600 mg 2 28
 , , , A,

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