

Randomized controlled trials of ephedra for weight loss*

Study	Design	Duration	Treatment	Result
Boozer et al ² (2001)	RDBPCT 67 randomized/ 48 completed	8 weeks	Metabolife-356 [®] (E 72 mg/d + C 240 mg/d) vs. placebo Dietary advice: 30% dietary fat Exercise advice: 3x/wk	Significantly greater weight loss in treated group (-4 kg ± 3.4 kg vs. -0.8 kg; P < 0.006); 23% treated vs. 0% placebo group withdrew because of adverse effects (including hypertension, palpitations, chest pain, and extreme irritability).
Molnar et al ² (2000)	RDBPCT 32 obese adolescents randomized/ 29 completed	20 weeks	If < 80 kg, E 10 mg/d + C 100 mg/d If > 80 kg, E 20 mg/d + C 200 mg/d Diet: calculated energy requirement minus 500 kcal	Significantly greater relative weight loss in treated group (14.4% ± 10.5% vs. 2.2% ± 5.8%; P < 0.05).
Buemann et al ⁴ (1994)	RDBPCT 41 overweight women randomized/ 32 completed	8 weeks vs. placebo	E 20 mg + C 200 mg/d tid weight loss or loss of fat mass.	No significant difference between groups in Diet: 4.2 MJ/d
Breum et al ⁵ (1994)	RDBTCT 103 overweight subjects random- ized/81 completed	15 weeks	E 20 mg/d + C 200 mg/d tid vs. dexfenfluramine (DF) 15 mg bid	No significant difference between groups (both groups lost weight: DF 6.9 kg; E + C 8.3 kg); in those with BMI > 30, weight loss significantly different (7 vs. 9 kg); 43% of DF group and 54% of E + C group had side effects (withdrawals: 2 DF, 6 E + C).
Astrup et al ⁶ (1992)	RDBPCT 180 obese subjects randomized/ 141 completed	24 weeks	E 20 mg vs. C 200 mg vs. E 20 mg + C 200 mg Diet: 4.2 MJ (low-fat, high-carbohydrate)	E + C (but not E or C alone) significantly better than placebo (P = 0.0015); weight loss: E + C = 16.6 kg; E = 14.3 kg; C = 11.5 kg; placebo = 13.2 kg. More adverse effects in E groups (including dizziness, headache, tremor, psychiatric, insomnia, dry mouth, tachycardia). Withdrawals due to adverse effects: 1 E; 2 C; 3 E + C.
Astrup et al ⁷ (1992)	DBPCT 14 obese women/ 12 completed	8 weeks	E 20 mg, C 200 mg tid vs. placebo Diet: 4.2 MJ/d	No significant difference in weight loss between groups
Daly et al ⁸ (1993)	RDBPCT 29 obese subjects randomized/ 24 completed	8 weeks	E 75 mg/d + C 150 mg/d + ASA 330 mg/d vs. placebo for four weeks, then E 105 mg/d + C 150 mg/d + ASA 330 mg/d for four weeks	Significant difference between groups at 8 weeks; weight loss: E + C + ASA = 2.2 ± 0.7 kg, placebo = 0.7 ± 0.6 kg (compared to baseline, P < 0.001).
Mancini et al ⁹ abstract only (1990)	RDBPCT 42 overweight women random- ized/32 completed	8 weeks	Low-calorie diet and E 22 mg + C 20 mg + aminophylline 50 mg tid	Weight loss: E + C + aminophylline = 4.5 ± 3.7 kg, placebo = 2.2 ± 2.8 kg (P < 0.05, apparently between groups; unclear).
Pasquali, Casimiri ¹⁰ (1993)	PCT 22 obese women/ 20 completed	4 months	E 50 mg tid vs. E 50 mg + C 100 mg tid vs. placebo Diet: 4,180-5,016 KJ/d	No significant difference among groups.
Cesari ¹¹ abstract only (1989)	RDBPCT 20 obese women randomized/ ? completed	4 months	E 50 mg tid (n = 6) vs. E 50 mg + C 100 mg tid (n = 7) vs. placebo (n = 7)	No significant difference in weight loss or BMI.

* Four Danish studies (with no English abstracts) were omitted for lack of translation resources.

Key: E = ephedrine, C = caffeine, ASA = aspirin, RDB = randomized, double-blind, PCT = placebo-controlled, TCT = treatment-controlled, BMI = body mass index.