

Astaxanthin Bermanfaat pada Kegemukan



Di Korea telah dilakukan studi acak, tersamar ganda, kontrol plasebo, untuk meneliti efek positif suplementasi *astaxanthin* pada profil lemak dan kondisi stres oksidatif pada orang dewasa kegemukan. Dalam studi tersebut, total 27 subjek yang mempunyai indeks massa tubuh >25 kg/m² secara acak diberi kapsul *astaxanthin* 20 mg/hari atau plasebo selama 12 minggu. Kolesterol total, trigliserida, kolesterol HDL, kolesterol LDL, apolipoprotein A1 (ApoA1), serta apolipoprotein B (ApoB) diukur sebelum dan setelah intervensi. Petanda biologi stres oksidatif antara lain *malondialdehyde* (MDA), *isoprostane* (ISP), dan *superoxide dismutase* (SOD), serta total *antioxidant capacity* (TAC), diukur saat basal dan setelah 4, 8, dan 12 minggu intervensi.

Hasilnya menunjukkan bahwa saat basal, semua parameter petanda biologi tidak berbeda bermakna antar kedua kelompok. Kolesterol LDL dan ApoB secara bermakna lebih rendah setelah terapi *astaxanthin* dibanding dengan saat basal, sedangkan profil lemak tidak berubah pada kelompok plasebo (Tabel 1).

MDA dan ISP secara bermakna lebih rendah, tetapi TAC secara bermakna lebih tinggi

Tabel 1. Profil lemak darah setelah 12 minggu suplementasi dengan kapsul plasebo atau *astaxanthin*:

	Placebo (n = 13)			Astaxanthin (n = 14)		
	Baseline	12 weeks	ΔChange ^a	Baseline	12 weeks	ΔChange ^a
Total cholesterol (mg/dl)	174.8 ± 30.6	178.3 ± 28.8	3.54 (2.23%) ^b	178.3 ± 35.4	169.8 ± 3.19	8.50 (-4.77%)
Triglycerides (mg/dl)	113.4 ± 40.5	119.2 ± 65.9	5.76 (5.08%)	110.6 ± 51.5	110.9 ± 38.4	0.28 (0.25%)
HDL cholesterol (mg/dl)	48.6 ± 8.19	50.2 ± 8.44	1.54 (3.17%)	47.2 ± 10.2	50.4 ± 12.6	3.14 (6.65%)
LDL cholesterol (mg/dl)	120.1 ± 39.7	114.8 ± 24.1	5.31 (-4.42%)	127.9 ± 35.0	114.6 ± 28.6 ^b	13.29 (-10.38%)
Apolipoprotein A1 (mg/dl)	120.5 ± 15.5	121.5 ± 7.80	0.92 (0.77%)	116.6 ± 12.6	117.6 ± 14.6	1.00 (0.86%)
Apolipoprotein B (mg/dl)	85.4 ± 25.5	85.1 ± 18.8	0.31 (-0.36%)	89.6 ± 19.0	82.8 ± 18.0 ^c	6.76 (-7.54%)
ApoB/ApoA1 ratio	0.72 ± 0.25	0.70 ± 0.17		0.78 ± 0.18	0.72 ± 0.17 ^c	

All values are represented as mean + SD except Δchange [mean (%change)].

^a The percentage change was calculated as [value at 12-weeks value at baseline/value at baseline] x 100.

^b The value was significantly different (P<0.05) from that at baseline.

^c The value was significantly different (P<0.01) from that at baseline.

Tabel 2. Petanda biologi stres oksidatif setelah 12 minggu suplementasi dengan kapsul plasebo atau *astaxanthin*.

	Placebo (n = 13)				Astaxanthin (n = 14)			
	Baseline	4 weeks	8 weeks	12 weeks	Baseline	4 weeks	8 weeks	12 weeks
MDA (μmol/l)	2.18 ± 0.20	1.82 ± 0.17 ^a	2.08 ± 0.12 ^a	2.00 ± 0.24 ^b	2.11 ± 0.32	1.90 ± 0.17 ^b	1.72 ± 0.28 ^{ac}	1.42 ± 0.29 ^{ad}
ISP (pg/ml)	1731 ± 426	1628 ± 377 ^b	1635 ± 415	1551 ± 337 ^b	1783 ± 328	1347 ± 504 ^b	978 ± 197 ^c	731 ± 179 ^{ad}
SOD (U/ml)	1016 ± 200	998 ± 311	1025 ± 431	1040 ± 252	996 ± 285	1030 ± 313	1079 ± 439	1298 ± 510 ^b
TAC (mmol)	497 ± 128	539 ± 104 ^b	547 ± 126 ^b	518 ± 110	501 ± 144	601 ± 175 ^b	623 ± 172 ^b	674 ± 203 ^{ac}

All values are represented as mean ± SD.

^a The value was significantly different (P<0.01) from that at baseline.

^b The value was significantly different (P<0.05) from that at baseline.

^c The value was significantly different (P<0.01) from the placebo group at 8 weeks.

^d The value was significantly different (P<0.01) from the placebo group at 12 weeks.

^e The value was significantly different (P<0.05) from die placebo group at 12 weeks.

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