

Supplementary Table 1. Study population baseline DXA

Measure	TC1X¹ (n=14)	TC2X¹ (n=13)	p-value
Lumbar spine			
BMA (cm ²)	56.3 ± 1.6	59.0 ± 2.1	0.319
BMC (g)	54.1 ± 2.6	55.0 ± 2.7	0.796
BMD (g/cm ²)	1.0 ± 0.04	0.9 ± 0.02	0.492
T score	-0.8 ± 0.4	-1.1 ± 0.2	0.494
Total hip			
BMA (cm ²)	35.6 ± 0.9	35.8 ± 1.4	0.892
BMC (g)	29.1 ± 1.5	28.6 ± 1.9	0.821
BMD (g/cm ²)	0.8 ± 0.03	0.8 ± 0.02	0.516
T score	-1.0 ± 0.3	-1.2 ± 0.2	0.428
Femur Neck			
BMA (cm ²)	5.1 ± 0.07	5.2 ± 0.1	0.535
BMC (g)	3.5 ± 0.1	3.5 ± 0.1	0.931
BMD (g/cm ²)	0.7 ± 0.02	0.7 ± 0.02	0.4470
T score	-1.6 ± 0.2	-1.7 ± 0.2	0.776
Trochanter			
BMA (cm ²)	11.4 ± 0.3	10.6 ± 0.3	0.051
BMC (g)	6.8 ± 0.4	6.4 ± 0.2	0.313
BMD (g/cm ²)	0.6 ± 0.02	0.6 ± 0.01	0.081
T score	-1.1 ± 0.2	-1.0 ± 0.1	0.865
Intertrochanter			
BMA (cm ²)	19.0 ± 0.9	20.0 ± 1.2	0.513
BMC (g)	18.8 ± 1.2	18.7 ± 1.7	0.965
BMD (g/cm ²)	1.0 ± 0.04	0.9 ± 0.02	0.189
T score	-0.7 ± 0.2	-1.2 ± 0.1	0.183

Data are presented as mean ± standard error (SE).

¹TC1X = 1 fl. oz. tart cherry juice concentrate consumed once per day; TC2X = 1 fl. oz. tart cherry juice concentrate consumed twice per day at least 8 hours apart.

Bone mineral area (BMA), bone mineral content (BMC), bone mineral density (BMD).

Scheme 2. Hand grip strength and physical activity at baseline and final visit.

Parameter	TC1X ¹ (n=14)			TC2X (n=13)			p-value ³	
	Baseline	Final	p-value ²	Baseline	Final	p-value ²	Base- line	Final
Hand grip strength ⁴								
Dominant hand	11.5 ± 0.6	11.5 ± 0.6	0.904	12.3 ± 0.6	12.3 ± 0.7	0.976	0.397	0.408
Non-Dominant hand	11.8 ± 0.7	12.4 ± 0.7	0.123	11.6 ± 0.6	11.9 ± 0.7	0.480	0.827	0.647
Weekly EE (kcal/week)								
Exercise (1 × 10 ³)	1.4 ± 0.3	1.6 ± 0.3	0.216	1.8 ± 0.5	1.5 ± 0.4	0.518	0.492	0.777
Total (1 × 10 ³)	6.4 ± 0.6	5.7 ± 0.6	0.257	8.3 ± 1.6	6.2 ± 0.9	0.058	0.280	0.645
Month index score (unit/month)								
Vigorous activity	27.1 ± 4.9	28.2 ± 4.9	0.841	26.2 ± 4.0	13.8 ± 4.4	0.010	0.878	0.039
Leisurely walking	14.5 ± 2.9	16.3 ± 3.6	0.507	21.2 ± 3.1	12.9 ± 2.7	0.0020	0.123	0.466
Summary Index	62.6 ± 6.7	64.3 ± 7.2	0.702	67.8 ± 7.4	47.5 ± 7.5	0.001	0.604	0.119

Data are presented as mean ± standard error (SE).

¹TC1X = 1 fl. oz. tart cherry juice concentrate/d; TC2X = 2 fl. oz. tart cherry juice concentrate/d

²P-values represent comparison within groups between baseline and corresponding final values.

³P-values represent comparison between TC1X and TC2X at baseline and final values.

⁴Grip strength assessed using a Jamar. Hand dynamometer are reported as the best of three attempts in kg of pressure exerted for each hand. Results are normalized to baseline kg lean mass in the corresponding arm (i.e., kg pressure/kg lean mass).