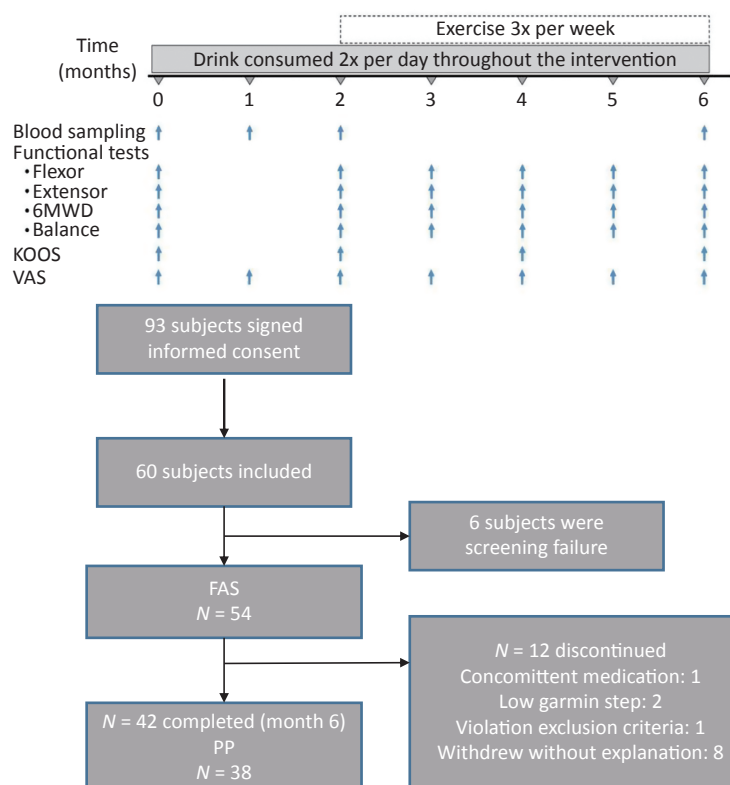




Supplementary Figure S1. Outline of study highlighting the collection of blood samples and performance of functional tests (isokinetic knee flexor and extensor, 6-minute walking distance test, balance), visual analogue scale for knee pain (VAS score) and osteoarthritis outcomes score (KOOS) and disposition of subjects.

Supplementary Table S1. Subject ($n = 54$) characteristics at baseline and 6 months

Parameter	Baseline Mean $\pm$ SEM (range)	6 months Mean $\pm$ SEM (range)
Age (years)	55.8 $\pm$ 2.26 (47–65)	N/A
Sex	747	N/A
Weight (Kg)	62.5 $\pm$ 3.05 (43–86)	62.2 $\pm$ 10.15 (42–89)
Height (cm)	161.8 $\pm$ 2.60 (141–178)	N/A
BMI (kg/m ²)	23.8 $\pm$ 1.59 (20–28)	23.9 $\pm$ 1.71 (19–30)
Calcium intake (mg/d)	672 $\pm$ 15.7 (317–1,255)	520 $\pm$ 13.7 (279–1,053)
Proteins intake (g/d)	76.7 $\pm$ 5.2 (54.5–138.7)	74.1 $\pm$ 4.8 (32.5–146.5)

Note. Values are expressed as mean $\pm$ SEM.

Supplementary Table S2. Data showing 5-KOOS Scores [i.e. Pain, Symptoms, function in daily leaving (ADL), function in sport and recreation (Sport) and knee-related quality of life (QOL)] throughout the duration of the trial

Parameter	Month	Mean $\pm$ SEM
KOOS- Pain	0	57.46 $\pm$ 2.95
	2	59.72 $\pm$ 2.99
	6	60.67 $\pm$ 2.15*
KOOS- Symptoms	0	59.85 $\pm$ 3.62
	2	63.01 $\pm$ 3.37
	6	63.16 $\pm$ 3.48
KOOS-ADL	0	64.03 $\pm$ 2.69
	2	65.81 $\pm$ 2.77
	6	66.56 $\pm$ 3.01*
KOOS- Sport	0	49.44 $\pm$ 3.92
	2	50.54 $\pm$ 4.21
	6	54.21 $\pm$ 4.27*
KOOS-QoL	0	35.53 $\pm$ 4.17
	2	37.28 $\pm$ 3.93
	6	53.95 $\pm$ 4.19**

Note. * $P < 0.05$; ** $P < 0.001$ relative to baseline (0 months). Values are expressed as mean $\pm$ SEM.

Supplementary Table S3. Data showing serum levels of biomarkers, i.e. bone resorption (CTX-1, ng/mL), bone formation (P1NP, μ g/L), cartilage breakdown (CTX-2, μ g/L) and inflammation (IL-6, pg/mL) throughout the duration of the trial

Parameter	Month	Mean $\pm$ SEM
CTX-2	0	0.91 $\pm$ 0.029
	2	0.87 $\pm$ 0.043
	6	0.71 $\pm$ 0.0230**
CTX-1	0	0.42 $\pm$ 0.030
	2	0.36 $\pm$ 0.026**
	6	0.34 $\pm$ 0.025**
P1NP	0	49.33 $\pm$ 3.02
	2	45.28 $\pm$ 2.37*
	6	43.26 $\pm$ 2.54*
IL-6	0	2.74 $\pm$ 1.56
	2	2.85 $\pm$ 1.69
	6	3.51 $\pm$ 2.26

Note. * $P < 0.05$; ** $P < 0.001$ relative to baseline (0 months). Values are expressed as mean $\pm$ SEM.