Supplementary data

Table S1 Characteristics of all subjects (n=733)

Characteristics		**Female (n=412)**	**Male (n=321)**	**Total**	***P-value*** [a]
Age (Years)		71.50±5.97	71.74±5.91	71.61±5.94	0.59
Education	Illiterate	246(64.1)	44(15.2)	290(43)	＜0.001
	Primary	110(28.6)	153(52.8)	263(39)	
	High school & above	28(7.3)	93(32.1)	121(18)	
Marital status	unmarried	2(0.5)	5(1.7)	7(1)	＜0.001
	Married	272(70.8)	253(87.2)	525(77.9)	
	Widow	110(28.6)	31(10.7)	141(20.9)	
	divorced	0(0)	1(0.3)	1(0.1)	
Smoke	Yes	42(11)	149(51.4)	191(28.5)	＜0.001
	No	339(89)	141(48.6)	480(71.5)	
Drink	Yes	41(10.8)	152(52.6)	193(28.8)	＜0.001
	No	340(89.2)	137(47.4)	477(71.2)	
Body composition					
Protein (kg)	Bellow standard	82(19.9)	175(54.5)	257(35.1)	＜0.001
	Above standard	330(80.1)	146(45.5)	476(64.9)	
Protein (kg)	Deficiency	21(5.1)	64(19.9)	85(11.6)	＜0.001
	Normal	391(94.9)	257(80.1)	648(88.4)	
Mineral (kg)	Bellow standard	48(11.7)	96(29.9)	144(19.6)	＜0.001
	Above standard	364(88.3)	225(70.1)	589(80.4)	
Mineral (kg)	Deficiency	6(1.5)	20(6.2)	26(3.5)	＜0.01
	Normal	406(98.5)	301(93.8)	707(96.5)	

a: comparison of change between Female and Male

Table S2 Correlations between protein and MMSE-score

	Protein (kg)	
	P **value**	***R*** **Spearman**
MMSE-score	＜0.001	0.370

Table S3 Usual dietary Intake and the prevalence of inadequacy of micronutrients

	Female (n=17)		Male (n=43)	
	Mean ± SD	Below RNI (%)	Mean ± SD	Below RNI (%)
Energy (MJ/d)	5.42±1.72	82.4	6.12±1.56	93
Protein (g/d)	36.45±10.37	100.0	41.72±13.07	93.0
Fat (%)	33.81±11.69	11.8	33.84±13.94	16.3
Carbohydrate (%)	55.12±11.76	29.4	53.80±13.71	41.9
Vitamin A(μg/d)&	194.55±135.29	100.0	270.46±628.96	97.7
Vitamin B1 (mg/d)	0.47±0.24	100.0	0.47±0.18	100.0
Vitamin B2 (mg/d)	0.52±0.21	100.0	0.56±0.26	97.7
Vitamin C (mg/d)	29.59±19.01	100.0	32.93±26.8	97.7
Vitamin E (mg/d)&	18.31±10.96	52.9	21.49±13.14	30.2
Vitamin PP (mg /d) &	5.85±3.36	88.2	5.63±3.15	100.0
Potassium (mg/d)	1055.34±302.39	100.0	1103.25±338.75	100.0
Sodium (mg/d)	3458.79±1001.15	-	3475.10±1346.61	2.3
Calcium (mg/d)	264.59±130.53	100.0	251.03±179.63	100.0
Magnesium (mg/d)	191.88±76.30	94.1	216.94±79.05	93.0
Iron (mg/d)	12.42±5.25	58.8	13.73±4.60	27.9
Manganese (mg/d)	3.88±2.29	64.7	4.23±1.65	55.8
Zinc (mg/d)	5.20±1.42	100.0	6.13±1.77	100.0
Copper (mg/d)	1.06±0.62	47.1	1.11±0.46	25.6
Phosphorus (mg/d)	592.75±145.88	76.5	682.82±200.55	53.5
Selenium (μg/d)	32.54±12.57	94.1	41.10±19.74	88.4

Chinese Dietary Reference Intakes (DRIs) 2013. &: μg retinol Retinol Activity Equivalents (RAE) per day; mg α-tocopherol equivalent (TE) per day; mg **Niacin Equivalence (NE)per day.**

Table S4 Mini-Mental State Examination

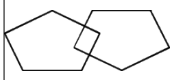
Maximum Score	Patient's Score	Questions
5		"What is the year? Season? Date? Day? Month?"
5		"Where are we now? State? County? Town/city? Hospital? Floor?"
3		The examiner names three unrelated objects clearly and slowly, then the instructor asks the patient to name all three of them. The patient's response is used for scoring. The examiner repeats them until patient learns all of them, if possible.
5		"I would like you to count backward from 100 by sevens." (93, 86, 79, 72, 65, …) Alternative: "Spell WORLD backwards." (D-L-R-O-W)
3		"Earlier I told you the names of three things. Can you tell me what those were?"
2		Show the patient two simple objects, such as a wristwatch and a pencil, and ask the patient to name them.
1		"Repeat the phrase: 'No ifs, ands, or buts.'"
3		"Take the paper in your right hand, fold it in half, and put it on the floor." (The examiner gives the patient a piece of blank paper.)
1		"Please read this and do what it says." (Written instruction is "Close your eyes.")
1		"Make up and write a sentence about anything." (This sentence must contain a noun and a verb.)
1		"Please copy this picture." (The examiner gives the patient a blank piece of paper and asks him/her to draw the symbol below. All 10 angles must be present and two must intersect.) 
30		TOTAL

Table S5 Means ± Standard Deviation for Body composition at baseline, endpoint and for overall change.

Body composition		MNSF	Soy Flour	*P-value* [a]
ICW(L)				
	baseline	17.43±2.74	16.62±2.70	0.20
	endpoint	17.83±2.82	16.81±2.67	0.08
	change	0.40±0.98	0.20±1.82	0.38
	P	＜0.05	0.41	
ECW(L)				
	baseline	11.28±1.70	10.75±1.67	0.12
	endpoint	11.50±1.79	10.85±1.73	0.05
	change	0.22±0.64	0.10±1.19	0.37
	P	＜0.05	0.52	
TBW(L)				
	baseline	28.72±4.43	27.37±4.37	0.16
	endpoint	29.33±4.58	27.69±4.41	0.07
	change	0.60±1.60	0.31±3.01	0.45
	P	＜0.05	0.39	
BFR(%)				
	baseline	23.30±8.62	24.38±7.60	0.61
	endpoint	25.93±8.12	27.54±9.48	0.48
	change	2.64±4.09	3.16±8.34	0.62
	P	＜0.01	＜0.01	
FM(Kg)				
	baseline	12.58±6.46	12.24±5.05	0.87
	endpoint	14.58±6.45	14.67±5.93	0.95
	change	2.00±2.00	2.44±4.25	0.68
	P	＜0.001	＜0.001	
VFA(cm^2)				
	baseline	123.76±21.82	123.68±15.34	0.99
	endpoint	130.46±22.62	131.50±21.20	0.86
	change	6.70±6.53	7.82±14.68	0.62
	P	＜0.001	＜0.01	

ICW: Intracellular Water; ECW: Extracellular Water; TBW: Total body water; BFR: Body fat ratio; FM: Fat mass; VFA: visceral fat area

P:Significant differences between baseline and 12- week were identified；

a: comparison of change between MNSF and Soy Flour