

Supplementary Materials

Table S1. Average daily dietary intakes of different elements for Chinese residents.

Table S2. Recommended intake levels of different elements for infants aged 0-3 years and adolescents aged 4-17 years.

Table S3. Recommended intake levels of different elements for pregnant women.

Table S4. Recommended intake levels of different elements for males and females aged 18 years and above.

Table S5. Appropriate tea consumption to supplement elements for infants aged 0-3 years based on average daily dietary intakes.

Table S6. Appropriate tea consumption to supplement elements for adolescents aged 4-17 years based on average daily dietary intakes.

Table S7. Appropriate tea consumption to supplement elements for pregnant women based on average daily dietary intakes.

Table S8. Appropriate tea consumption to supplement elements for males aged 18 years and above based on average daily dietary intakes.

Table S9. Appropriate tea consumption to supplement elements for females aged 18 years and above based on average daily dietary intakes.

Table S1. Average daily dietary intakes of different elements for Chinese residents.

Element	Ca (mg/d)	K (mg/d)	Na (mg/d)	Mg (mg/d)	Fe (mg/d)	Zn (mg/d)
Recommended intake	356.3	1547.2	6046.0	264.9	21.0	10.3
Element	Cu (mg/d)	Mn (mg/d)	Se (µg/d)	Cr (µg/d)	Mo (µg/d)	
Recommended intake	1.2	4.8	41.6	139.1	161.0	

Table S2. Recommended intake levels of different elements for infants aged 0-3 years and adolescents aged 4-17 years.

Element	Infants aged 0-3 years			Adolescents aged 4-17 years				
	0-0.5	0.5-1	1-3	4-6	7-8	9-11	12-14	15-17
Ca (mg/d)	200	350	500	600	800	1000	1000	1000
K (mg/d)	400	600	900	1100	1300	1600	1800	2000
Na (mg/d)	80	180	500	800	900	1100	1400	1600
Mg (mg/d)	20	65	140	160	200	250	320	330
Fe (mg/d)	0.3	0.3	10	10	12	16	16	16
Zn (mg/d)	1.5	3.2	4	5.5	7	7	7.5	8
Cu (mg/d)	0.3	0.3	0.3	0.4	0.5	0.6	0.7	0.8
Mn (mg/d)	0.01	0.7	1.5	2	2.5	3	4	4
Se (µg/d)	15	20	25	30	40	45	60	60
Cr (µg/d)	0.2	5	15	15	20	25	30	30
Mo (µg/d)	3	6	10	12	15	20	25	25

Table S3. Recommended intake levels of different elements for pregnant women.

Element	Early pregnancy	Mid-pregnancy	Late pregnancy	Lactation period
Ca (mg/d)	800	800	800	800
K (mg/d)	2000	2000	2000	2400
Na (mg/d)	1500	1500	1500	1500
Mg (mg/d)	370	370	370	330
Fe (mg/d)	18	25	29	24
Zn (mg/d)	10.5	10.5	10.5	13
Cu (mg/d)	0.91	0.9	0.9	1.5
Mn (mg/d)	4	4	4	4.2
Se (µg/d)	65	65	65	78
Cr (µg/d)	30	33	35	35
Mo (µg/d)	25	25	25	30

Table S4. Recommended intake levels of different elements for males and females aged 18 years and above.

[illegible]

Table S5. Appropriate tea consumption to supplement elements for infants aged 0-3 years based on average daily dietary intakes.

Element	Average daily normal intake (mg/d)	0-0.5 years		0.5-1 years		1-3 years	
		Recommended intake (mg/d)	Appropriate tea consumption (g/d)	Recommended intake (mg/d)	Appropriate tea consumption (g/d)	Recommended intake (mg/d)	Appropriate tea consumption (g/d)
Ca	356.3	200	—	350	—	500	851.15±188.53
K	1547.2	400	—	600	—	900	—
Na	6046.0	80	—	180	—	500	—
Mg	264.9	20	—	65	—	140	—
Fe	21.0	0.3	—	0.3	—	10	—
Zn	10.3	1.5	—	3.2	—	4	—
Cu	1.2	0.3	—	0.3	—	0.3	—
Mn	4.8	0.01	—	0.7	—	1.5	—
Se	0.0416	0.015	—	0.020	—	0.025	—
Cr	0.1391	0.0002	—	0.005	—	0.015	—
Mo	0.1610	0.003	—	0.006	—	0.010	—

Note: — indicates that it is not advisable to obtain these elements through tea consumption.

Table S6. Appropriate tea consumption to supplement elements for adolescents aged 4-17 years based on average daily dietary intakes.

Element	Average daily normal intake (mg/d)	4-6 years		7-8 years		9-11 years		12-14 years		15-17 years	
		Recommended intake (mg/d)	Appropriate tea consumption (g/d)	Recommended intake (mg/d)	Appropriate tea consumption (g/d)	Recommended intake (mg/d)	Appropriate tea consumption (g/d)	Recommended intake (mg/d)	Appropriate tea consumption (g/d)	Recommended intake (mg/d)	Appropriate tea consumption (g/d)
Ca	356.3	600	1443.46±319.72	800	2628.08±582.11	1000	3812.70±844.49	1000	3812.70±844.49	1000	3812.70±844.49
K	1547.2	1100	—	1300	—	1600	342.81±50.18	1800	1641.33±240.26	2000	2939.85±430.33
Na	6046.0	800	—	900	—	1100	—	1400	—	1600	—
Mg	264.9	160	—	200	—	250	—	320	121.54±0.86	330	143.59±1.02
Fe	21.0	10	—	12	—	16	—	16	—	16	—
Zn	10.3	5.5	—	7	—	7	—	7.5	—	8	—
Cu	1.2	0.4	—	0.5	—	0.6	—	0.7	—	0.8	—
Mn	4.8	2	—	2.5	—	3	—	4	—	4	—
Se	0.0416	0.030	—	0.040	—	0.045	148.46±47.65	0.060	803.45±257.88	0.060	803.45±257.88
Cr	0.1391	0.015	—	0.020	—	0.025	—	0.030	—	0.030	—
Mo	0.1610	0.012	—	0.015	—	0.020	—	0.025	—	0.025	—

Note: — indicates that it is not advisable to obtain these elements through tea consumption.

Table S7. Appropriate tea consumption to supplement elements for pregnant women based on average daily dietary intakes.

Element	Average daily normal intake (mg/d)	Early pregnancy		Mid-pregnancy		Late pregnancy		Lactation period	
		Recommended intake (mg/d)	Appropriate tea consumption (g/d)	Recommended intake (mg/d)	Appropriate tea consumption (g/d)	Recommended intake (mg/d)	Appropriate tea consumption (g/d)	Recommended intake (mg/d)	Appropriate tea consumption (g/d)
Ca	356.3	800	2628.08±582.11	800	2628.08±582.11	800	2628.08±582.11	800	2628.08±582.11
K	1547.2	2000	2939.85±430.33	2000	2939.85±430.33	2000	2939.85±430.33	2400	5536.89±810.49
Na	6046.0	1500	——	1500	——	1500	——	1500	——
Mg	264.9	370	231.82±1.64	370	231.82±1.64	370	231.82±1.64	330	143.59±1.02
Fe	21.0	18	——	25	100.17±21.11	29	200.34±42.21	24	75.13±15.83
Zn	10.3	10.5	17.03±3.89	10.5	17.03±3.89	10.5	17.03±3.89	13	229.87±52.55
Cu	1.2	0.91	——	0.9	——	0.9	——	1.5	52.14±13.39
Mn	4.8	4	——	4	——	4	——	4.2	——
Se	0.0416	0.065	1021.77±327.95	0.065	1021.77±327.95	0.065	1021.77±327.95	0.078	1589.43±510.15
Cr	0.1391	0.030	——	0.033	——	0.035	——	0.035	——
Mo	0.1610	0.025	——	0.025	——	0.025	——	0.030	——

Note: —— indicates that it is not advisable to obtain these elements through tea consumption.

Table S8. Appropriate tea consumption to supplement elements for males aged 18 years and above based on average daily dietary intakes.

Element	Average daily normal intake (mg/d)	18-29 years		30-49 years		50-64 years		65-74 years		Over 75 years	
		Recommended	Appropriate tea	Recommended	Appropriate tea	Recommended	Appropriate tea	Recommended	Appropriate tea	Recommended	Appropriate tea
		intake (mg/d)	consumption (g/d)	intake (mg/d)	consumption (g/d)	intake (mg/d)	consumption (g/d)	intake (mg/d)	consumption (g/d)	intake (mg/d)	consumption (g/d)
Ca	356.3	800	2628.08±582.11	800	2628.08±582.11	800	2628.08±582.11	800	2628.08±582.11	800	2628.08±582.11
K	1547.2	2000	2939.85±430.33	2000	2939.85±430.33	2000	2939.85±430.33	2000	2939.85±430.33	2000	2939.85±430.33
Na	6046.0	1500	—	1500	—	1500	—	1400	—	1400	—
Mg	264.9	330	143.59±1.02	320	121.54±0.86	320	121.54±0.86	310	99.48±0.70	300	77.42±0.55
Fe	21.0	12	—	12	—	12	—	12	—	12	—
Zn	10.3	12.5	187.30±42.82	12	144.73±33.09	12	144.73±33.09	12	144.73±33.09	12	144.73±33.09
Cu	1.2	0.8	—	0.8	—	0.8	—	0.8	—	0.7	—
Mn	4.8	4.5	—	4.5	—	4.5	—	4.5	—	4.5	—
Se	0.0416	0.060	803.45±257.88	0.060	803.45±257.88	0.060	803.45±257.88	0.060	803.45±257.88	0.060	803.45±257.88
Cr	0.1391	0.035	—	0.035	—	0.030	—	0.030	—	0.030	—
Mo	0.1610	0.025	—	0.025	—	0.025	—	0.025	—	0.025	—

Note: — indicates that it is not advisable to obtain these elements through tea consumption.

Table S9. Appropriate tea consumption to supplement elements for females aged 18 years and above based on average daily dietary intakes.

Element	Average daily normal intake (mg/d)	18-29 years		30-49 years		50-64 years		65-74 years		Over 75 years	
		Recommended	Appropriate tea	Recommended	Appropriate tea	Recommended	Appropriate tea	Recommended	Appropriate tea	Recommended	Appropriate tea
		intake (mg/d)	consumption (g/d)	intake (mg/d)	consumption (g/d)	intake (mg/d)	consumption (g/d)	intake (mg/d)	consumption (g/d)	intake (mg/d)	consumption (g/d)
Ca	356.3	800	2628.08±582.11	800	2628.08±582.11	800	2628.08±582.11	800	2628.08±582.11	800	2628.08±582.11
K	1547.2	2000	2939.85±430.33	2000	2939.85±430.33	2000	2939.85±430.33	2000	2939.85±430.33	2000	2939.85±430.33
Na	6046.0	1500	—	1500	—	1500	—	1400	—	1400	—
Mg	264.9	330	143.59±1.02	320	121.54±0.86	320	121.54±0.86	310	99.48±0.70	300	77.42±0.55
Fe	21.0	18	—	18	—	18	—	10	—	10	—
Zn	10.3	8.5	—	8.5	—	8.5	—	8.5	—	8.5	—
Cu	1.2	0.8	—	0.8	—	0.8	—	0.8	—	0.7	—
Mn	4.8	4	—	4	—	4	—	4	—	4	—
Se	0.0416	0.060	803.45±257.88	0.060	803.45±257.88	0.060	803.45±257.88	0.060	803.45±257.88	0.060	803.45±257.88
Cr	0.1391	0.030	—	0.030	—	0.025	—	0.025	—	0.025	—
Mo	0.1610	0.025	—	0.025	—	0.025	—	0.025	—	0.025	—

Note: — indicates that it is not advisable to obtain these elements through tea consumption.