

Dietary calcium, phosphorus, sodium, potassium and iron intake of Koreans estimated using 2 different sources of their contents: Korean Food Composition Table and Korean Total Diet Study

Objective

- ◆ Total Diet Study (TDS) is particularly important for estimating dietary intake of nutrients, level of which may be changed as a result of preparation and/or cooking.
- ◆ We attempted to compare the dietary intake of calcium, phosphorus, sodium, potassium and iron estimated based on the Korean Total Diet Study (KTDS) and the Korean Food Composition Table (KFCT)

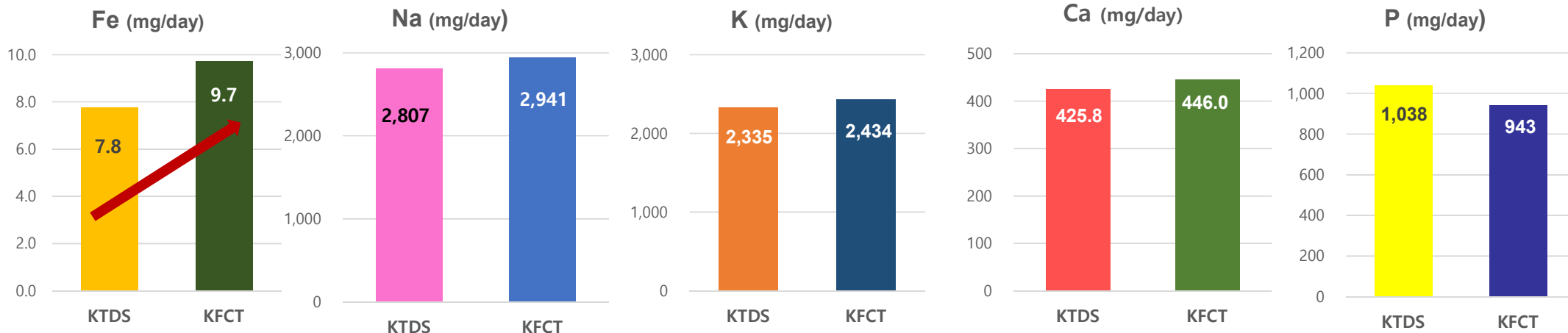
Result

- ◆ Mean dietary intake of nutrients in Koreans by 2 methods (KTDS vs. KFCT)

Method

- ◆ Selecting representative food (RFs) & preparation/cooking method: merged intake data from 2013 through most recent KNHANES

Year	KTDS year	Nutrients analyzed	No. of RFs	No. of 'RFs × cooking' pairs	No. of Samples analyzed	Food intake coverage (%)
2018	1 st	Fe	132	224	1,344	92.0
2019	2 nd	Na, K	134	228	1,368	92.3
2020	3 rd	Ca, P	137	232	1,392	92.5



◆ Top 10 food sources of dietary nutrient intake by 2 method (KTDS vs. KFCT)

rank	Iron intake (mg/day) by KTDS				Iron intake (mg/day) by KFCT			
	Food	Mean	%	Cum, %	Food	Mean	%	Cum, %
1	Beef	0.67	8.6	8.6	Polished rice	1.87	19.2	19.2
2	Egg	0.63	8.1	16.7	Egg	0.55	5.6	24.8
3	Kimchi	0.41	5.2	22.0	Beef	0.52	5.4	30.2
4	Tofu	0.33	4.2	26.2	Kimchi	0.51	5.2	35.4
5	Pork	0.30	3.9	30.0	Tofu	0.30	3.0	38.5
6	Beef,edible offal	0.22	2.9	32.9	Chicken	0.29	3.0	41.5
7	Soybean	0.22	2.8	35.7	Breads	0.26	2.6	44.1
8	Chicken	0.21	2.7	38.4	Pork	0.24	2.4	46.6
9	Polished rice	0.19	2.4	40.8	Beef,edible offal	0.23	2.4	48.9
10	Barley	0.18	2.3	43.1	Lettuce	0.22	2.3	51.2

rank	Sodium intake (mg/day) by KTDS				Sodium intake (mg/day) by KFCT			
	Food	Mean	%	Cum, %	Food	Mean	%	Cum, %
1	Salt	599.8	21.4	21.4	Salt	618.4	21.0	21.0
2	Kimchi	389.2	13.9	35.2	Kimchi	396.2	13.5	34.5
3	Soy sauce	322.7	11.5	46.7	Soy sauce	319.1	10.9	45.3
4	Fermented soybean paste	162.3	5.8	52.5	Fermented soybean paste	177.2	6.0	51.4
5	Instant Noodles, Ramyeon	150.9	5.4	57.9	Fermented red pepper paste	134.6	4.6	56.0
6	Fermented red pepper paste	102.4	3.6	61.5	Instant Noodles, Ramyeon	124.8	4.2	60.2
7	Chicken	86.4	3.1	64.6	Noodles	106.9	3.6	63.8
8	Breads	65.2	2.3	66.9	Breads	67.6	2.3	66.1
9	Egg	46.1	1.6	68.6	seasoning powder	60.4	2.1	68.2
10	Fermented soybean paste w/ red pepper	46.1	1.6	70.2	Fermented soybean paste w/ red pepper	53.6	1.8	70.0

► Conclusion

◆ This study is meaningful in that it is the first study to estimate nutrient intake by applying the nutrient content analyzed by KTDS. More frequent revision of KFCD is warranted for staple foods and well-known sources of each nutrient.

rank	Potassium intake (mg/day) by KTDS				Potassium intake (mg/day) by KFCT			
	Food	Mean	%	Cum, %	Food	Mean	%	Cum, %
1	Coffee	217.8	9.3	9.3	Polished rice	241.8	9.9	9.9
2	Kimchi	212.2	9.1	18.4	Pork	128.7	5.3	15.2
3	Pork	122.1	5.2	23.6	Coffee	124.5	5.1	20.3
4	Milk	108.0	4.6	28.3	Kimchi	124.4	5.1	25.5
5	Potato	92.6	4.0	32.2	Milk	99.9	4.1	29.6
6	Chicken	85.4	3.7	35.9	Chicken	73.5	3.0	32.6
7	Polished rice	76.7	3.3	39.2	Potato	66.4	2.7	35.3
8	Beef	71.0	3.0	42.2	Sweet potato	62.2	2.6	37.9
9	Sweet potato	58.5	2.5	44.7	Beef	56.6	2.3	40.2
10	Apple	49.4	2.1	46.8	Apple	53.0	2.2	42.4

rank	Calcium intake (mg/day) by KTDS				Calcium intake (mg/day) by KFCT			
	Food	Mean	%	Cum, %	Food	Mean	%	Cum, %
1	Milk	72.4	17.0	17.0	Milk	76.5	17.2	17.2
2	Kimchi	30.9	7.3	24.3	Kimchi	40.6	9.1	26.3
3	Egg	17.9	4.2	28.5	Ramyeon	27.1	6.1	32.3
4	Tofu	15.9	3.7	32.2	Anchovy	19.0	4.3	36.6
5	Ramyeon	15.4	3.6	35.8	Yoghurt, Curd type	17.5	3.9	40.5
6	Yoghurt, Curd type	13.7	3.2	39.1	Egg	16.3	3.7	44.2
7	Polished rice	11.5	2.7	41.8	Cheese	13.3	3.0	47.2
8	Cheese	11.4	2.7	44.4	Tofu	12.2	2.7	49.9
9	Anchovy	10.7	2.5	47.0	Coffee	11.2	2.5	52.4
10	Coffee	9.9	2.3	49.3	Polished rice	10.7	2.4	54.8

rank	Phosphorus intake (mg/day) by KTDS				Phosphorus intake (mg/day) by KFCT			
	Food	Mean	%	Cum, %	Food	Mean	%	Cum, %
1	Polished rice	105.1	10.1	10.1	Polished rice	128.9	13.7	13.7
2	Pork	89.1	8.6	18.7	Pork	80.8	8.6	22.2
3	Egg	71.8	6.9	25.6	Milk	58.1	6.2	28.4
4	Chicken	69.5	6.7	32.3	Egg	57.7	6.1	34.5
5	Milk	52.0	5.0	37.3	Chicken	37.6	4.0	38.5
6	Beef	49.7	4.8	42.1	Beef	34.3	3.6	42.1
7	Kimchi	34.0	3.3	45.4	Tofu	28.6	3.0	45.2
8	Tofu	31.5	3.0	48.4	Coffee	25.8	2.7	47.9
9	Breads	26.3	2.5	51.0	Kimchi	24.8	2.6	50.5
10	Soybean	19.8	1.9	52.9	Breads	20.4	2.2	52.7