

were also contributed by rice. Peanut oil supplied more than one-fifth of fats, followed by pork, mixed oil, lard, pig chops and rice according to the CA. As for energy, the combined, urban and rural data also demonstrated almost have the same ranking for protein, fat and carbohydrate.

According to the category of the China Food Composition 2002, the 125 foods/recipes listed in the SQFFQ comprised: cereals (11 items), legumes (6), fresh legumes (3), vegetables (13), melons and nightshade (5), cauliflower (1), roots (7), fruits (11), meats (11), poultry (5), milk (2), eggs (3), pickles (4), marine products (16), mushrooms (5), nuts (2), cakes (3), condiments (6), oils (3) and beverages (8).

Nutrition coverage in the SQFFQ

Table 6 shows the percentage coverage of 29 nutrients by the SQFFQ. The selected food items covered 17, 19, and 16 nutrients with up to 90% of the total intake for the rural, urban and combined SQFFQ, and the lowest coverage percentage of the combined SQFFQ was still 82.7%, for linolenic acid.

DISCUSSION

The present study showed that variation in nutrient consumption between urban and rural subjects in the Chaoshan area was small, and the selected food items for the rural and urban SQFFQs were similar, covered all 29 nutrients with acceptable

percentage values. The present results thus revealed that development of a combined SQFFQ for rural and urban populations is feasible.

The nationwide survey of China held in 1992 showed the national average energy intake to be higher in urban than in rural areas, especially in those with middle and high incomes^[18]. Recent economic improvement may have reduced the variation in diet between rural and urban populations, and increased the amount of nutrient intake in both, but especially in rural individuals. The total energy intake in males was 2.4% higher in the present urban area and 21.0% higher in the rural area than those in the representative urban and rural areas of the same province by nationwide survey. The mean intakes of major nutrients in the present study were 6.4% higher in the urban area and 25.9% higher in the rural area for protein; 15.6% higher and 70.6% higher for fat; 2.1% lower and 1.0% higher for carbohydrate; and 31.9% higher and 15.9% higher for crude fiber, compared with the respective figures from the nationwide survey. The present urban population took more unsaturated fatty acid from vegetables, and the rural population took more animal fat, although geographical variation in total fat intake was not apparent.

Here we chose the 3-d WDR method as the "gold standard" rather than others to develop a SQFFQ for Chaoshan area, because it is the most efficient method for collecting dietary information at present. To decrease the

Table 6 Percentage coverage of nutrients by the SQFFQ

	% coverage		
	Rural	Urban	Combined
Energy	94.3	94.2	93.7
Protein	91.7	90.1	88.4
Fat	95.0	93.5	93.8
Carbohydrate	94.3	95.4	94.6
Crude fiber	86.5	87.3	87.5
Cholesterol	93.3	88.9	86.3
Carotene	88.7	93.9	90.3
Retinol	91.8	81.7	89.1
Folic acid	91.5	92.8	92.5
Vitamin C	86.3	94.6	91.2
Vitamin E	89.7	88.3	89.4
Calcium	87.3	87.3	88.6
Phosphorus	92.4	90.5	86.4
Potassium	86.8	90.5	88.2
Sodium	97.7	96.1	95.1
Magnesium	89.7	90.9	90.1
Iron	83.5	90.3	89.6
Zinc	90.9	91.9	91.6
Selenium	86.6	83.7	85.8
Copper	87.9	86.8	87.4
SFA	94.7	90.5	92.6
MUFA	96.2	95.6	88.4
PUFA	91.1	91.7	97.6
Oleic acid	96.5	95.7	90.2
Linoleic acid	94.2	92.1	97.6
Linolenic acid	91.2	92.2	82.7
Arachidonic acid (g)	90.3	88.5	92.7
EPA	82.4	80.2	87.6
DHA	88.4	81.9	82.9
Mean	90.7	90.2	90.0

SFA: saturated fatty acid; MUFA: mono-unsaturated fatty acid; PUFA: poly-unsaturated fatty acid; EPA: eicosapentaenoic acid; DHA: docosahexaenoic acid.

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