

Table 1. Disease Characteristics of Patients with Parkinson's Disease

Item	No. of PD patients
Stage of disease	
primary stage	14
advanced stage	12
Duration of disease	
< 2 yr	9
2-4 yr	8
≥ 5 yr	9
Combined with another illness ¹	
yes	14
no	12
Difficulty with	
chewing	2
swallowing	4
constipation	7
Appetite after disease	
reduced significantly	2
reduced a little	5
no effect	19

¹Including: hyperlipoproteinemia (3), hypercholesterolemia (3), diabetic mellitus (5), etc.

Table 2. Anthropometric Indices in Individuals with Parkinson's Disease and in a Normal Population^a

Item ^b	< 25%	25%-50%	> 50%	Average ^c
TSF (mm)				
Male	0	3	10	14.8 ± 4.5
Female	0	5	8	20.1 ± 5.7
MAC (cm)				
Male	3	5	5	29.0 ± 4.0
Female	0	7	6	27.4 ± 1.7
AMC (cm)				
Male	0	0	13	28.5 ± 3.9
Female	0	0	13	26.8 ± 1.6

^aResults were compared with sex- and age-matched normal control values of TSF and MAC obtained from results of a large population study in Taiwan by Kao et al.⁴ The normal values for males (60-69 yr) were TSF = 12.8 mm, MAC = 28.6 cm, and AMC = 24.6 cm, and for females (>70 yr) were TSF = 18.3 mm, MAC = 27.7 cm, and AMC = 21.9 cm.

^bTSF = triceps skinfold, MAC = mid-upper arm circumference, AMC = arm muscle circumference; male (n = 13) average age was 68.1 ± 8.4 yr; female (n = 13) average age was 73.2 ± 4.5 yr.

^cMean ± SD.

Table 3. Nutrient Intake of Patients with Parkinson's Disease^a

	Patients		
	Male (n=10)	Female (n=5)	Average
Energy (kcal)	1738 ± 192 (87%)	1492 ± 310 (79%)	1635 ± 272
Protein (g)	59.2 ± 12.4 (91%)	53.8 ± 15.1 (98%)	57.4 ± 13.1
Calcium (mg)	453.4 ± 205.1 (76%)	499.1 ± 311.6 (83%)	468.7 ± 235.1
Phosphate (mg)	879.5 ± 228.7 (147%)	879.7 ± 259.3 (147%)	879.6 ± 265.6
Iron (mg)	13.2 ± 5.3 (132%)	11.6 ± 6.5 (116%)	12.7 ± 5.6
Vit. B ₁ (mg)	0.93 ± 0.31 (85%)	0.91 ± 0.12 (101%)	1.3 ± 1.8
Vit. B ₂ (mg)	0.93 ± 0.4 (78%)	0.98 ± 0.38 (98%)	0.95 ± 0.35
Niacin (mg)	9.9 ± 3.4 (66%)	8.9 ± 2.9 (74%)	9.6 ± 3.2
Vit. A (IU)	5873.6 ± 3272.1 (117%)	368.1 ± 1531.4 (87.6%)	5142.8 ± 3272.1
Vit. C (mg)	133.1 ± 93.1 (222%)	119.4 ± 47.1 (198%)	128.5 ± 79.1
Vit. E (mg α-T.E)	6.5 ± 1.9 (54%)	4.6 ± 2.2 (46%)	5.9 ± 2.1

^aValue are the mean ± SD of more than three 24-h food records; the values in parentheses are the percentage of the RDNA (Recommended Dietary Nutrient Analysis).

tients were compared with a population control survey⁴ as shown in Table 2. This illustrates no apparent malnourished status in patients with less than an 11-year duration of disease. No correlation was found between anthropometric indices and clinical characteristics (i.e., duration of disease, stage of disease).

A subgroup of 15 patients (10 male, 5 female) was selected to gain information on protein and energy intake. The patients had 95% of the recommended protein intake of the dietary reference value published by the Department of Health, Executive Yuan, Taiwan in 1993 (Table 3). Males had a higher energy intake than did females, but both groups had less than 90% of the RDNA for energy intake. Vitamin E intake of both genders was 50% of the recommended RDNA. Vitamins A and C intake was more than 100% of the RDNA. Soluble vitamin B complex (vitamin B₁, B₂