

Improvement for nutritional condition of aged peoples by digestive enzyme.

Malnutrition is an important risk factor for suffering disease in aged people.

In aged people, the production of the enzyme necessary for the digestion of food into absorbable nutrients decreases. Therefore administration of digestive enzyme preparation is thought to be effective for the improvement of malnutrition in aged people.

Dr. H. Shibata et. al. evaluated and reported (Geriat. Med. 37 1355-1359, 1999) the improvement of nutrition condition of aged people by administration of digestive enzyme preparation.

Methods

1. Subject

Aged people who were admitted to a home for the aged in Tokyo were entered into the study. All subjects received oral and written explanations of the nature of the study and possible risk involved and then signed an informed consent. Subjects were divided into digestive enzyme administration group and control group as below .

	Administration Group	Control Group
The average age	76.2 \pm 13.7 years	77.5 \pm 5.1 years
Male	4	3
Female	9	8

2. Administration of digestive enzyme preparation

Digestive enzyme preparation utilized in the study contained Biodiastase 2000 15mg, Lipase AP12 3.3mg and Newlase 10mg per capsule. Each 3 capsules were administrated 3 times in a day for 6 months.

Results

1. Change of body weight

There is no significant difference in body weight between two groups.

	Before the study	After the study
Administration group	45.2 \pm 8.4 kg	45.7 \pm 7.9 kg
Control group	41.1 \pm 6.0	40.6 \pm 5.1

2. Blood analysis

Blood albumin level and HDL-Cholesterol level increased after the study in administration group.

Blood albumin level

	Before the study	After the study
Administration group	3.98 \pm 0.21 g/dL	4.24 \pm 0.26 g/dL (p<0.001)
Control group	3.88 \pm 0.45	4.00 \pm 0.71

HDL-Cholesterol

	Before the study	After the study
Administration group	46.5 \pm 14.2 g/dL	53.5 \pm 16.6 g/dL (p<0.001)
Control group	53.7 \pm 15.8	54.6 \pm 17.9

Discussion

Blood albumin is the major blood protein and plays a role to carry the anti-bacterial agent. Therefore low concentration of blood albumin increase the risk for infectious disease. Low HDL- cholesterol is the risk factor for ischemic heart disease and certain cancer.

Because of increasing of blood albumin and HDL-cholesterol by administration of digestive enzyme preparation, digestive enzyme preparation might be effective for elongation of life expectancy of the malnourished aged people.