

## MALNUTRITION IN THE ELDERLY

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*Some hae meat, and canna eat.  
And some wan eat that want it;  
But we hae meat, and we can eat,  
And sae the Lord be thankit.*

(The Selkirk grace)

There has been much discussion devoted to malnutrition among the old age pensioners both in the medical and in the lay press. The purpose of this study was to see if malnutrition really existed among the old age pensioners, and to what extent the extra nourishment and vitamins would improve the health of the elderly.

Observation was kept on 60 old age pensioners over a period of two years. The practice is an industrial one with 6,500 N.H.S. patients. There are about 600 old age pensioners in the practice. The elderly patients were selected at random as they came along for medical help. Table I shows the sex and age distribution of the patients.

TABLE I  
THE AGE AND SEX OF THE PATIENTS

<i>Age in years</i>	<i>Male</i>	<i>Female</i>
60—65		3
65—70	5	9
70—75	5	12
75—80	6	10
80—85	2	7
Over 85	1	
Total	19	41

*Methods of observation.* Patients were investigated and treated for their complaints in the surgery or in their homes. Some of them were admitted to hospital for investigation. Special attention was paid to the nutritional state of the patients. Blood samples were taken for full blood counts. Urine was tested for sugar and albumin. Ascorbic acid saturation tests were performed as described by Varley (1958). A health visitor was asked to visit the patients and to collect the information regarding financial situation and their eating habits. Table II shows the diseases diagnosed and treated among the 60 old age pensioners.

TABLE II  
DISEASES OF THE 60 ELDERLY PATIENTS

<i>Diseases</i>	<i>No. of Cases</i>
Osteoarthritis .. .. .	10
Chronic bronchitis .. .. .	10
Ischaemic heart disease .. .. .	5
Cerebral accidents .. .. .	5
Senile osteoporosis .. .. .	4
Diaphragmatic hernia .. .. .	3
Chronic dermatitis .. .. .	2
Gout .. .. .	2
Diabetes mellitus .. .. .	1
Carcinoma of colon .. .. .	1
Bronchogenic carcinoma .. .. .	1
Paget's disease .. .. .	1
Vertigo .. .. .	1
Anxiety state .. .. .	1
Hypertension .. .. .	1
Chronic pyelitis (uraemia) .. .. .	1
Prostatism (uraemia) .. .. .	1
Myxoedema .. .. .	1
No organic diseases .. .. .	8

It is seen that eight cases (13 per cent) had no organic diseases, and they complained of being run down; three of these had signs of scurvy. Table II shows that majority of the patients suffered from serious diseases. By the end the two year period of this observation ten patients had died. Table III shows the causes of death.

TABLE III  
CAUSES OF DEATH OF 10 PATIENTS

<i>Diseases</i>	<i>No. of cases</i>
Recurrent cerebral accidents ..	3
Ischaemic cardiac failure .. ..	2
Bronchopneumonia (chronic bronchitis)	1
Carcinoma of colon .. .. .	1
Uraemia (prostatism) .. ..	1
Uraemia (chronic pyelitis) .. ..	1
Carcinoma of bronchus .. ..	1

*The examination of urine* uncovered diabetes mellitus in one case. Albuminuria was found in two cases, one suffering from chronic pyelitis and one from prostatism.

*Full blood count* was carried out on all of the patients. Iron deficiency anaemia was found in six women and in two men.

*Ascorbic acid saturation tests.* In malnutrition all vitamins found in the food will be taken in small quantities and there will be deficiency of them all. Ascorbic acid is easily measured by the saturation method. This test was performed on all the patients and it was repeated twice a week for three weeks. Table IV shows the results of the first ascorbic acid saturation tests.

It is accepted that a person eating a well balanced diet should excrete at least 13 mg. of ascorbic acid per 100 ml. of urine. Table V shows the results of ascorbic acid saturation tests in healthy people between 18—40 years of age.

It is seen that the healthy young people gave higher values of ascorbic acid saturation tests than the old age pensioners.

TABLE IV

INITIAL RESULTS OF THE ASCORBIC ACID SATURATION TESTS IN THE ELDERLY

<i>Value of ascorbic acid in mg./100 ml. of urine</i>	<i>No. of cases</i>
Under 0.5 mg. .. ..	13
0.5 mg.—1 mg. .. ..	18
1 mg.—1.5 mg. .. ..	13
1.5 mg.—2 mg. .. ..	6
2 mg.—2.5 mg. .. ..	5
2.5 mg.—3 mg. .. ..	2
3 mg.—3.5 mg. .. ..	3

TABLE V

INITIAL VALUES OF THE ASCORBIC ACID SATURATION TESTS IN 20 YOUNG HEALTHY PEOPLE

<i>Value of ascorbic acid in mg./100 ml. of urine</i>	<i>No. of cases</i>
5—10 .. .. .	4
10—20 .. .. .	2
20—30 .. .. .	4
30—40 .. .. .	2
40—50 .. .. .	3
Over 50 .. .. .	5

A health visitor collected detailed information about the financial situation of each patient. A typical example is given below.

*H.B. a widower, age 68, living alone in a council flat.*

<i>Income per week</i>	£ s. d.	<i>Details of Food Expenditure</i>	
Old age pension	2 10 0	Meat, 1 Chop 1/-	
National assistance	1 5 6	1 Roast 3/6	
War pension	17 0	½ lb. liver 1/-	5 6
		Butter ¼ lb.	1 6
Total	4 12 6	Sugar 1 lb.	9
		Milk 7¼ pints	5 0

<i>Expenditure</i>		<i>Details of Food Expenditure—contd.</i>	
Rent and rates	1 4 1	Bread 4 lbs.	2 3
Fuel	8 6	Tea $\frac{1}{2}$ lb.	2 0
Gas and electricity	5 0	Potatoes 4 lb.	8
Laundry	3 6	Carrots 1 lb.	6 $\frac{1}{2}$
Papers	1 11	Onions 1 $\frac{1}{2}$ lb.	9
Windows	7	Rice $\frac{1}{2}$ lb.	4 $\frac{1}{2}$
Cleaning material	1 9	Bacon or cheese	1 9
Cigarettes	15 10	Oranges 7 at 3 $\frac{1}{2}$	2 0 $\frac{1}{2}$
Domestic help	3 0	Fish per kippers	9
Burial club	4 0	1 Fluke	9
	<hr/>		
	3 8 2		<hr/>
Left for food	1 4 4		£1 4 7 $\frac{1}{2}$
	<hr/>		
Total income	4 12 6		
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*Discussion.* The nutritional, social, mental health, and nursing problems of the elderly have been discussed (Hobson and Pemberton 1956; Hazell 1960; Monroe 1960; *Brit. med. J.* 1961; *Practitioner* 1962). This work was limited to ten per cent of the total number of old age pensioners present in the practice. The patients were visited at their homes or they were asked to attend the surgery regularly. Despite the limited financial resources, no signs of malnutrition were found among them. The ascorbic acid saturation tests were of low levels, but clinical scurvy was evident in only three patients. Iron deficiency anaemia was found in eight patients; two of these suffered from uraemia, one from diaphragmatic hernia, and in five no cause of anaemia was discovered. One of them, a man, had a full investigation of gastro-intestinal tract, a marrow biopsy, and no cause of anaemia was discovered.

All the patients admitted that they could not afford to buy fruits regularly. There were 14 patients who were buying diluted bottled orange juice from a milkman. According to the medical officer of health for Barrow-in-Furness (Nelson 1962), this kind of orange juice contains no vitamins.

An ailing old person, who loses the appetite and the interest in life, is like a baby who fails to thrive. The cause of this failure to thrive should be traced. Patients suffering from small, but repeated cerebral accidents are mentally confused, and have difficulty in swallowing. Uraemia, neoplastic growths, and chronic bronchitis are responsible for anorexia.

Elderly patients regard their doctors as trusted friends, and they bring a heavy demand for medical services. The old patients often

ask for a tonic when they do not feel well, but are reluctant to be investigated. Great difficulties are encountered in diagnosis of the elderly. The blood and urine samples have to be collected in the surgery or at the bedside. The x-ray examination of the alimentary tract, and the barium enema especially, can be upsetting to an old person when carried out as an outpatient procedure. Geriatric clinics would be of great help to the general practitioners in diagnosing and treating of the elderly. Health visitors are valuable in explaining the nutritional values of foods, and how the small budget of the pensioners could be used on foods important to health. District nurses are of great importance in nursing sick old people in their homes.

It is evident that the ageing process and the diseases associated with it cannot be cured by diet and vitamins supplement.

### Summary

Sixty old age pensioners were investigated for malnutrition in general practice. The investigation lasted 2 years. Serious organic diseases were found in all except 8 cases. At the end of the two years ten of the patients were dead.

No evidence of malnutrition was found. Despite the low levels of ascorbic acid saturation tests, clinical scurvy was observed only in three cases.

An ailing old person requires a careful diagnosis. The difficulties of diagnosis of diseases in the elderly are discussed.

Vitamins, iron preparations and tonics should not be prescribed to the old people until the nature of their ailments is found.

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### TO SEE OURSELVES

*O wad some Pow'r the giftie gie us  
To see oursels as others see us!  
It wad frae mony a blunder free us,  
And foolish notion.*

Sometimes doctors are mentioned in letters written by patients, and it may be that much can be learned of the shortcomings of our public image, of our power of communication of our superior knowledge, or of ourselves as peculiar people, by looking at the evidence in these writings. The following example is probably worth a prize in its class. It was a response to a circular asking for details of treatment or signs of illness when an anaesthetic was to be given for a brief manipulation in an out-patient department.

Dear Sister . . .

I have filled in the form as well as I can but cannot get to the doctors and he wouldnt know anyway but I had a manipulation last June I think it was, so theres nothing to worry bout, I shall have to have transport both ways as its so difficult for me to walk I have had transport to T— for treatment (heat and traction for my neck) so will you please arrange this for me I cannot bring anyone with me as I live alone my sister lives in London and so cannot sign the form but she would sign anyway so have given her address as I think thats what you really want the next of Kin, the bladder trouble was some years ago I went to a private doctor as the doctor I had *then* wouldn't believe me as my husband had bladder trouble but Dr \*\*\*\*\* found the cause after a lot of trouble by putting a light up the back passage *he did know I was telling the truth* as the Xray lady took a lot of water away when getting a specimen the Xray didnt reveal anything it was after that they used the light I think its alright as I brought a specimen last time, I could have sent the form to the doctor but as I said he wouldn't know without examining me, so as I have already had one manipulation there seems nothing to worry about hope it will be one of the older Surgeons this time.

Yours sincerely, Mrs. . . .

Our readers may have other examples of this sort, perhaps even more instructive, showing how doctors perform, or at least how their patients think they perform.