32 The elderly

Summary

Advances in health care have increased lifespan, and nutritional considerations are very important when considering the health status of the elderly. Ageing itself may be influenced by nutritional factors. The nutritional problems of the aged include energy and nutrient deficiencies as well as relative energy excess. Nutritional deficiency may arise because of changes in body function and requirements or changes in food intake for which there may be socio-economic reasons. Education in nutrition is necessary for all people involved with the care of the elderly as well as the elderly themselves in order to prevent nutritional problems.

Introduction

Advances in health care, particularly the elimination of infectious disease and improved nutrition, have increased lifespan in Australia and in other Western societies. As more Australians live beyond sixty-five years, the health of this group will assume importance and nutritional considerations are likely to be relevant. In Australia in 1984, 10 per cent of our population, or 1 567 356 persons, were aged 65 years or older. Approximately 58 per cent of these elderly persons were females and 42 per cent males. By the year 2001, the group of those 65 years and over is expected to increase from 10 per cent to 12 per cent and by 2021 to 16 per cent.

The number of elderly women has increased more rapidly than the number of men, for two main reasons:

1. many men died in war; and
2. some chronic illnesses, such as heart disease, kill men more than women.

Since women usually outlive men, and since most people marry, the majority of elderly men are married and a majority of the women are widowed, divorced, or have never married.

Ageing is a variable process, both in the way it affects individuals and in the speed with which it does so. Throughout our lives we are constantly having to come to terms with changes ageing brings about and to alter our life-styles accordingly. Usually the process is gradual, but for many

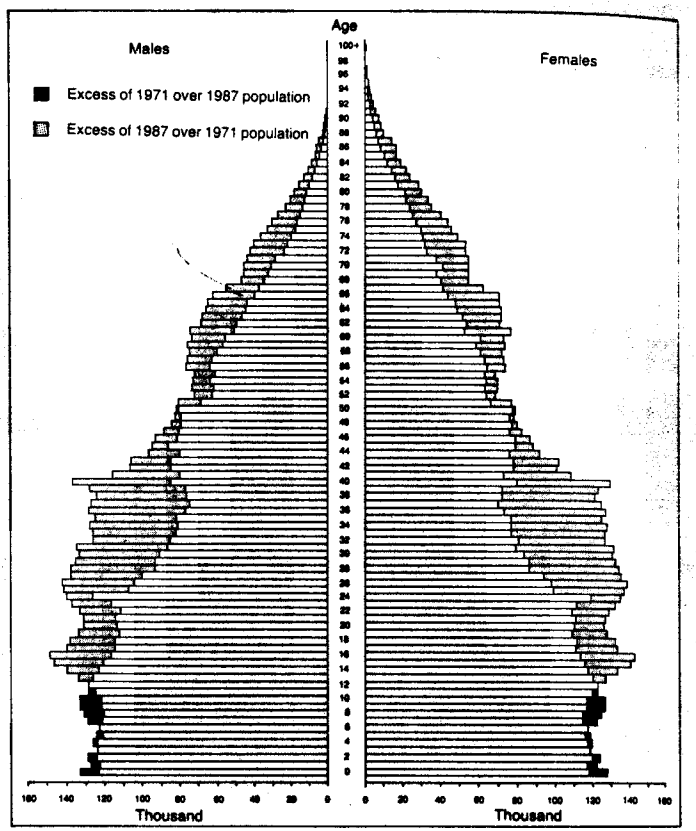

Figure 32.1 The estimated resident population of Australia by sex and age, 1981–1987 (Australian Bureau of Statistics, Canberra).

people a dramatic change of life-style occurs at the time of retirement. It is particularly difficult to adapt to the loss of a full-time occupation when its timing is not related to the needs and wishes of the individual and when there has been inadequate preparation. People need interests and activities during retirement and there is much value in preparation. These and other factors have a bearing on the food intake patterns of elderly people.

Nutritional environment and ageing

Theories of ageing

The causes of ageing, or growing old, remain a mystery. It is possible that nutritional factors play a role, for example, enzyme formation and function will depend on adequate nutrition and in turn affect body structure and function. The body's defence system (immune function) is adversely affected by undernutrition in some elderly people. The extent to which damaging chemicals, known as 'free radicals', form may be influenced by the intakes of vitamin E and of polyunsaturated fatty acids, but there is little experimental evidence to support this view.

Nutrient requirements

Lean body mass, metabolic rate, and physical activity all decline with increasing age. Energy intake of the elderly must be adjusted to allow for this. Protein tissue is slowly replaced by fat, even in a person who is not overweight. The needs for protein are as great in the elderly as in younger age groups. It is important for this age group to have nutrient-dense foods. There is no convincing evidence that the need for protein, minerals and vitamins is increased in old age. However, because the energy requirement is reduced, there is a slight reduction in the recommended dietary allowances for niacin, riboflavin and thiamin. (See chapter 26, Food composition tables and dietary allowances.)

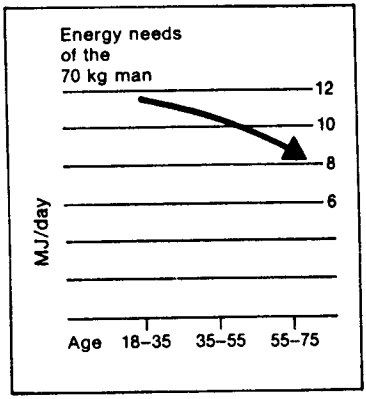

Figure 32.2 Energy needs diminish with advancing years and appropriate adjustments in energy intake must be made while ensuring an adequate nutrient intake; as far as possible the elderly should be encouraged to be physically active as this will allow more flexibility in food intake.

Nutritional problems of the aged

Physical problems, such as frailty, poor teeth, or other physical handicaps, can make it difficult for the older person to consume an adequate amount of food.

Various dietary studies indicate that the aged have a low intake of vitamins and minerals, particularly iron and calcium, and possibly zinc. Unsatisfactory intake of vitamin C and B vitamins, particularly folacin, are less common. Folic acid

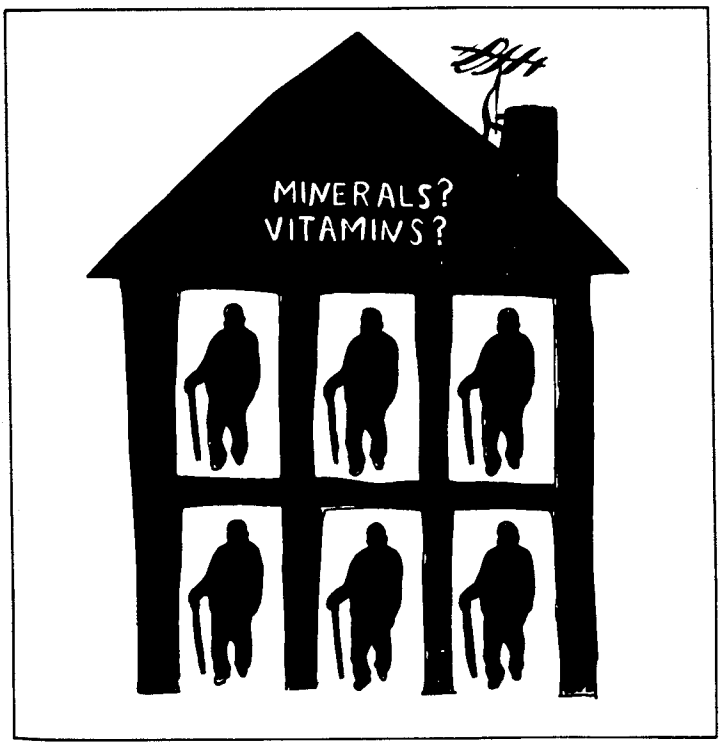

Figure 32.3 Nutrient deficiencies found in some institutionalised elderly in Australia.

deficiency is sometimes found in conjunction with vitamin C deficiency; both of these vitamins are found in fresh fruits and vegetables. Fibre intake is low in the elderly, and contributes to constipation, which is common in this group. In a study of community-based and institutionalised elderly people in Australia it was found that the institutionalised elderly were in a poor state of nutrition with respect to folic acid, zinc, vitamin C and perhaps protein. Surveys in other countries have indicated that iron-deficiency anaemia is more prevalent in persons aged 60 years and over than in younger people.

Although energy expenditure declines, some older people do not reduce their energy intake, and this leads to obesity. Hospitalised elderly persons may be at particular nutritional risk.

Physiological causes of nutrient deficiency

Degeneration of the salivary glands can cause a decrease in the flow of saliva. This change can make the food unpalatable because of the difficulty of swallowing without the lubricating effect of adequate saliva. The reduced sensitivity of taste buds and organs of smell also decreases the flavour sensation of food for older people. Poorly fitting dentures and loss of teeth may also affect the intake of food.

Fats are less well digested if the secretion of bile is reduced with advancing years. A reduction in digestive enzymes secreted may also be found.

Chronic illness: long-standing illness.

Elderly people may have one or more chronic illnesses*, which themselves may affect food intake.

Medication and nutrient deficiency

Certain drugs can reduce the absorption of nutrients. For example, folacin deficiency can be found in persons using certain antibiotics and diuretics. Antibiotic therapy can produce vitamin deficiency by its action on the bacterial microflora in the intestine. Chronic use or abuse of medications, such as laxatives, can produce gastro-intestinal abnormalities that affect nutritional status.

Environmental causes of nutrient deficiency

Socio-economic (income, culture, food patterns) and physical factors (a lack of preparation facilities, distance to shopping) affect the nature and composition of the diet. Isolation may influence an individual's appetite or desire to prepare food. The availability of information may influence the selection and preparation of foods. Loss of status can lead to depression and affect food intake.

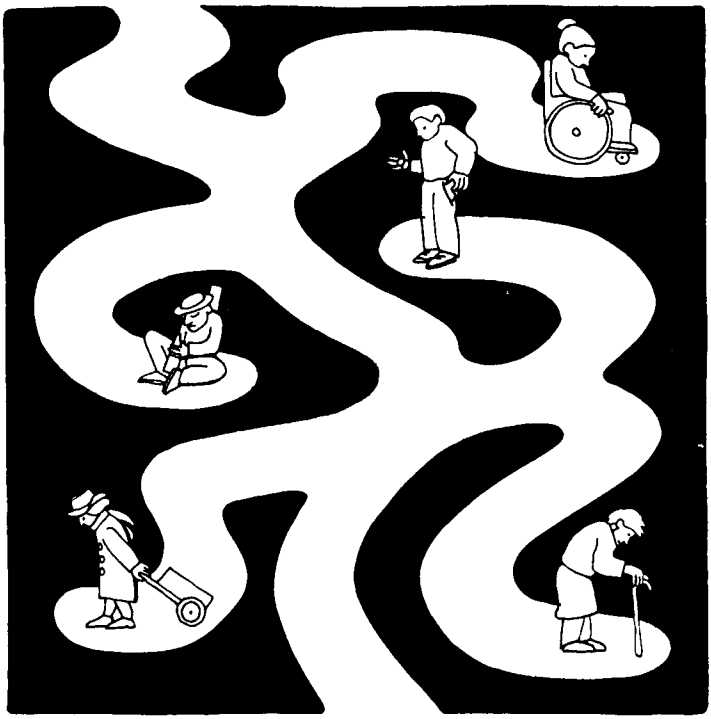

Figure 32.4 The ways in which the nutritional status of elderly people can be adversely affected are several; they include organic and mental disease, institutionalisation, isolation, poverty and difficulties with food supply.

Adjustments during bereavement can also be associated with nutritional problems. Widows and widowers may have to face financial responsibilities and the problems of managing one's home and meals alone. Funds may not be sufficient to make the remaining years comfortable and free of financial worry, and there may not be sufficient money to spend on food.

Some older people become interested in 'health foods' because they feel unwell, and they may delay seeking appropriate medical treatment.

Assessment of nutritional status

Nutritional evaluation will include an assessment of socio-economic factors, food intake pattern, a medical history and examination as well as laboratory investigations. Of particular importance may be an assessment of immune function (the body's defence system); there is now evidence that nutrition support for elderly people can partially reverse immune deficiencies and reduce the risk of infection.

Prevention of nutritional problems

Nutrition information is valuable not only for the elderly, but for those responsible for feeding them. The media, lay organisations, caterers (such as meals-on-wheels), and health professionals (such as district nurses) can all be helpful in improving the nutritional status of elderly people. Encouragement to maintain physical activity and energy expenditure, so that adequate energy and nutrient intakes are achieved, is crucial.

Further reading

FORD, BRUCE. *The Elderly Australian*. Penguin Books, Ringwood, 1979.
HOWE, ANNA. *Towards an Elderly Australia*. Queensland University Press, 1981.

Questions

1. Conduct an informal study on the elderly in your neighbourhood by a visit to your local supermarket. Prepare a list of the common food items purchased by these people. Do they differ from those you would buy for yourself?
2. Visit a community centre where meals are made available to elderly people. Does each meal appear to be nutritionally adequate for approximately one third of the dietary allowances for that age group? Should each meal provide one third of the dietary allowances? To what extent can overall meal and snacking pattern, along with the body's ability to store nutrients, be considered?

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Contents