

Guest column

An African perspective on nutrition and ageing

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Abstract

Although the proportion of elderly in African populations is much smaller than that in white populations, it is increasing. Since the huge majority of Africans are in poor economic circumstances, questions arise as to how well they manage, particularly regarding their eating habits and nutritional state. On the one hand the limited information available indicates major shortfalls from international dietary recommended allowances of nutrients. Yet, outwardly, elderly Africans appear to manage better than would be expected. Unfortunately, no cross-sectional nor prospective studies in this area have been undertaken on representative groups of African elderly. In view of the increasing poverty of the populations of most African countries, it would be of value to learn from nutritional and clinical studies, of minimum food intakes which are still consistent with everyday good health.

Important questions are: Do many Africans reach old age in view of their almost invariably poor environmental circumstances? How do they manage? What do they eat? What is the pattern of their health/ill-health? How do they regard life? What future research should be undertaken on them? I attempt to briefly answer the questions.

Do many Africans really live to a good old age?

In sub-Saharan Africa the number of elderly people is growing rapidly with increasing life expectancy, while the proportion of children is declining due to a falling family size (McLigeyo, 1997). This is more the case in urban areas than in rural areas. In numerous African countries, where large families are still the norm, young children and adolescents comprise about half of the total population and hence the proportion of elderly is small. In Southern Africa, 6.2% of the African population is 60 years or older, while 2.5% is 70 years or older (Kinsella & Ferreira, 1997). It is noteworthy that in South Africa, one to two generations ago, of all Africans who reached 50 years, the proportion who reached 70 years and over was *higher* than that in the white population, due to a previous very low occurrence of degenerative diseases in Africans (Walker, 1974). In this regard, it is intriguing that in the US, African Americans aged 75 years and older will survive longer than their white counterparts (Guralnik, Land, Blazer *et al.*, 1993).

How do the elderly survive?

In Africa, an extended family – and thus kin support – is invariable, especially in rural areas. However, only in South Africa and Namibia is there formal economic support for older citizens (Kinsella & Ferreira, 1997). In South Africa, women aged 60 years and over and men aged 65 years and over are eligible for a monthly pension of R490 (approximately US\$80). Nearly 90% of elderly Africans receive this social pension, versus 19% in the white population. Pension sharing is common: “I know instances where there’s a grandmother and 10 persons living on the grandmother’s pension,” says Priscilla Reddy, a public health worker at the Medical Research Council in Cape Town (Amosun & Reddy, 1997). Of course, a pension by no means ensures an adequate standard of living. In a survey of Living Standards and Development, only 30% of the elderly households studied were living above the poverty line, i.e. above R1 400 (US\$ 280) a month (SALDRU, 1994).

What do the elderly eat?

Since the elderly almost invariably live in an extended family household, their diet is virtually the same as that of the family. Traditionally, the diet was very high in plant foods (Labadarios, Walker, Blaauw & Walker, 1996). In a study conducted in a rural area of the Eastern Cape Province, maize was found to be the staple food (Richter, Langenhoven, Du Plessis *et al.*, 1984). Various beans were popular. The main vegetable was pumpkin. Wild plant leaves (*imifino*) were eaten seasonally in large quantities. Most households owned a few cattle and sometimes goats and sheep. Only small amounts of milk and meat were eaten regularly. There were typically two meals daily, the evening meal being the main one. The majority of the elderly had near sufficiencies of energy and protein. Fat supplied about 15–20% energy. Animal protein contributed 20% of the protein intake. Calcium intake was low. Vitamin A was supplied by yellow maize and pumpkin. There were low intakes of nicotinic acid, riboflavin and ascorbic acid. However, the intake of dietary fibre was high, 25–30g daily.

In a study conducted in an urban area, among families in regular employment, breakfast consisted of maize or maltabella (*sorghum*) porridge with some milk and sugar, bread, peanut butter, jam, and tea with milk and sugar (Bourne, Langenhoven, Steyn *et al.*, 1994). At midday, bread rolls, with

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any spread available, or tinned fish or polony were eaten. In the evening, the following types of foodstuffs were eaten: sour porridge (*mageu*), meat (offal), sausage, cabbage, maize rice, maize samp and beans, tinned fish, pap and cabbage, and tomato gravy. At weekends, the meal was similar to that eaten on weekdays but sometimes included soup or fish and chips.

Among the very poor, breakfast was mostly tea with sugar and bread, with indigenous "spinaches" (*morogo*) and cabbage, sometimes margarine, no milk, occasionally condensed milk, and soft porridge. The midday meal included maize pap and cabbage or tinned fish, bread, or any leftovers. In the evening, there was maize pap with a variety of accompaniments – tomato, dumplings, offal or potato. At weekends, occasionally, rice with chicken livers, cabbage and potato were included in the meals. In the poor group, fat supplied 15-25% energy. Dietary fibre intake was relatively low, 10-15g daily.

In an investigation of the dietary intakes of a representative series of elderly African women living in villages in North West Province, intakes in 1969 and 1989 were compared (Walker, Walker & Walker, 1992). Energy intake in 1989 averaged 8% higher. Fat provided 24% of energy, compared with 19% in 1969, and protein, 14% versus 12%. Maize meal intake had fallen by a half, being replaced largely by bread, mainly brown. The intake of beans had decreased slightly. Intakes of vegetables and fruit rose by 40%, and of meat and dairy produce, albeit both very low, by 75% and 20%, respectively. Sugar intake had trebled. The changes in diet were associated with significant rises in mean body mass index, in serum cholesterol level, and in urinary calcium creatinine ratio.

What is their pattern of health/ill-health?

Until two generations ago, as indicated in an editorial in the *Lancet* (1973: ii), elderly ailing Africans died almost wholly from infections. However, no prospective nor cross-sectional studies have been made of patterns of health/ill-health of elderly Africans. At present, as an indication of the situation, in a rural hospital in KwaZulu-Natal, principal causes of admissions of adults were tuberculosis, pneumonia and congestive cardiac failure (Walker, Walker, Dunn & Dunn, 1994). In an urban hospital in Johannesburg, the common causes of admission in the older age group were hypertension, cardiac failure, cardiomyopathy, diabetes and stroke (Dean & Gear, 1986).

Of major interest is that there are very low occurrences of coronary heart disease and colon cancer found in urban Africans (Walker & Sareli, 1997; Sitas, Blaauw, Terblanche *et al.*, 1997). Both diseases have very high prevalence rates in African Americans (Anonymous, 1997; Parkin, Muir, Whelan *et al.*, 1992). In addition, in elderly African women, there is a very low frequency of hip fracture (Solomon, 1979). Each of these diseases/disabilities is a fearful "killer" in western populations. What are white populations doing wrong to be so prone to these "killers"? Conversely, what are Africans doing right?

A further point of interest is that although obesity is very common in elderly African women (28%), local studies suggest that the condition is far less promotive of hypertension, hyperglycaemia and hyperlipidaemia than is the case with obese white women (Walker, Walker, Manetsi *et al.*, 1990). In this regard, in a recent study made in the US it was concluded that failure of body mass index and of fat patterning to predict mortality in African-American women challenges previously held assumptions regarding the role of overweight in their higher mortality experience (Stevens, Keil, Rust *et al.*, 1992).

What are the attitudes of elderly Africans?

As a very largely impoverished segment of African communities, how do elderly persons feel about the rigours of living? In a comparison of the circumstances of the elderly in the different South African subpopulations, older Africans had the lowest life satisfaction ratings (Ferreira, Møller, Prinsloo & Gillis, 1992). Overall factors identified as influencing quality of life were health, housing and living arrangements, income security and psychosocial well-being. In contrast, in Zimbabwe, in a study conducted on a series of rural-based elderly Africans on the determinants of happiness and life satisfaction, questions were asked regarding residence, whether children gave material support, and their satisfaction with financial circumstances (Allain, Matenga, Gomo *et al.*, 1996). Despite physical hardship and the invariably poor circumstances, the majority said that they were happy and half were satisfied with their lives.

Future research on the elderly

Dietarily, a major endeavour must be made to determine the levels of nutritional intakes consistent with sustained everyday good health, for in only a small proportion of African populations do nutrient intakes reach recommended dietary allowances or even reach the two-thirds levels of such (Labadarios, Walker, Blaauw & Walker, 1996; Richter *et al.*, 1984; Bourne *et al.*, 1994; Walker *et al.*, 1992). In Africa, no enquiry has as yet been made on older persons who keep consistently well. Regarding a need for this approach, John Ryle (1943: 635), one of the founders of social medicine, urged: "We have much to learn from the periodic health examinations and the study of fit groups in childhood, adolescence, and later."

In addition, in the context of the elderly, further information should be sought on the minimum sequelae of ageing. Even until relatively recently, African rural dwellers experienced very little rise in weight and blood pressure with age (Walker, 1996). In elderly Africans, lesions in the aorta were, and in a large measure still are, similar to those in young whites. In rural areas, the cancers of prosperity, particularly those of the colon and prostate, remain nearly absent. Currently, in urban areas, the colons of elderly Africans, free from polyps, still resemble those of young whites in appearance and resilience (Segal, Walker & Parekh, 1994). As to the antecedents of the elderly – in African youth in the not-so-distant past, the serum cholesterol concentration of rural African schoolchildren was very low, averaging 3.5 – 4.0 mmol/l; mean fasting blood glucose was also low at 3.5 mmol/l. In physical activity tests concerning maximum oxygen consumption, the mean performance of African schoolchildren was superior to those of white pupils (Walker, Walker, Richardson & Smith, 1972), as also were results of eye tests using the Snellen Chart. In the US, a memorable viewpoint was put forward by Wynder and Kristein (1977: 1507): "Nature did not intend us to grow old and ill; we were designed to die young, of old age, but free from disease." There are numerous areas in Africa where research could contribute valuable definitive information on the *least* degenerative sequelae of ageing, chiefly attributable to the consumption of a diet high in plant foods, and there being sustained physical activity in everyday life.

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