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May 1990

THE GROWING ELDERLY CROWD AND THEIR FOOD HABITS

by

Jean Kinsey, Professor

May 30, 1990



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THE GROWING ELDERLY CROWD AND THEIR FOOD HABITS

Population Forces

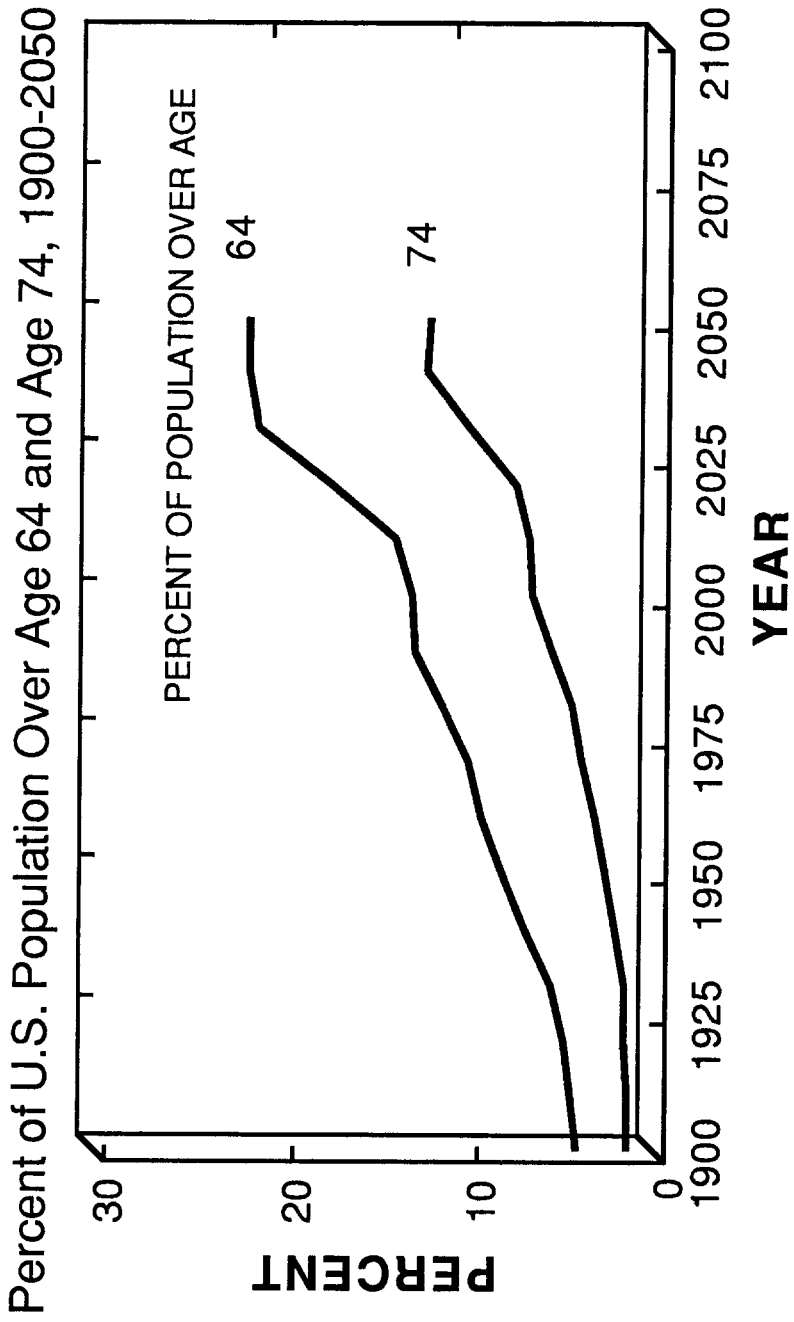
By 2030, the number of elderly in the United States will double to 64.6 million people, comprising 21 percent of the population. By then, twelve percent of the population will be over age 74, about the same percent that was over age 64 in 1990 (Duensing, 1988). By the second half of the twenty-first century, almost half of the people in the United States will be over age 50.

"No other demographic change will influence the nation in the next 50 years as much as this 'graying' of America. Every American and every facet of the society will be affected," (U.S. Congress, 1987, p. 160).

Populations are aging around the world. Between 1980 and 2020, the number of elderly (over age 64) in developed countries will grow 66%, while in less developed countries, especially in Asia, this population will grow by more than 200%. By 2000, Europe and North America will have over one third of the world's elderly (Plessner et al., 1988). Figure 8.1 illustrates the percentage increase in the elderly population in the United States. Figure 8.2 illustrates the proportion of the population over age 74 in seven countries by 2025. The median age in the United States increased from 22.9 in 1900, to 28 in 1980 to a projected age 42 by 2050.

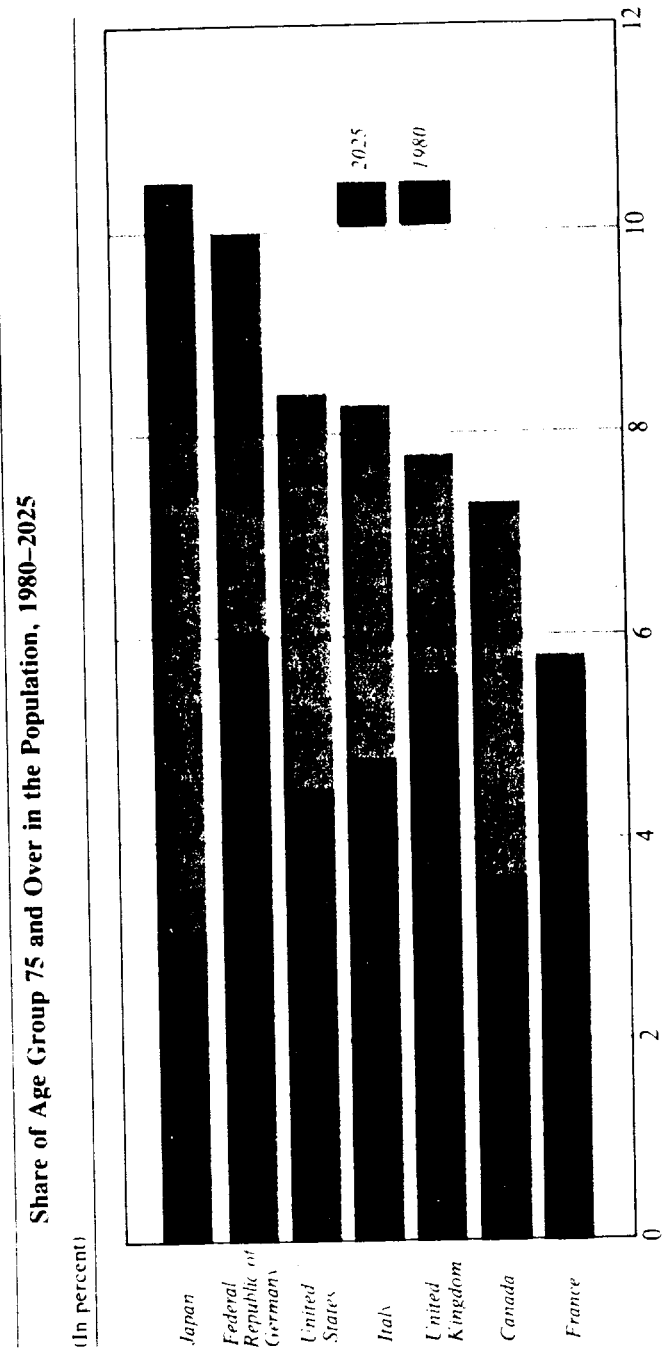
Two factors important to increases in the number of elderly in the United States are the 1946 to 1964 baby boom and improved life expectancy. The first of the baby boom babies will reach age 65 in 2011,

Figure 8.1



SOURCE: Duensing, Edward E., 1988

Figure 8.2



Source: Heller et al., 1989.

and the last will reach age 65 in 2029. A bulge in the elderly population due to the baby boom generation will start in about 21 years and continue for at least 21 years thereafter.

Improved life expectancy has resulted largely from better pre-natal care, post-natal care, nutrition and health care. For example, the rate of death due to coronary heart disease began to decline in the 1960s and, by 1990, had fallen by half. Over half of this drop is attributed to a decline in smoking, high blood pressure and high cholesterol (Stipp, 1990). Figure 8.3 illustrates the increase in life expectancy at birth in the United States for four population groups since 1900. For all groups, the greatest rates of increase were due to a decline in infant mortality early in the twentieth century. The United States has not made significant progress in reducing infant mortality since 1950, and ranks 17th among the world's nations, with 10 infant deaths per 1000 live births (Fein, 1989).

The longer people live, the older they are expected to live. Table 8.1 shows the ages to which four population groups were expected to live at birth and at age 5, 30, 65 and 80, in 1900 and 1986 respectively. The percentage gains in the average age of expected death were greatest for nonwhites at all ages up to age 65, where the gains for white women were greater. Figure 8.4 shows that after age 80, nonwhites have suffered a decline in life expectancy for several decades, including the 1980s. This is a source of concern and some puzzlement, considering their progress between 1930 and 1950, and again during the 1970s. A 1990 report by the U.S. Department of Health and Human Services suggests that Blacks are twice as likely as whites to die from stroke. Other factors that

TABLE 8.1
LIFE EXPECTANCY OF FOUR POPULATION GROUPS
UNITED STATES, 1900 AND 1986

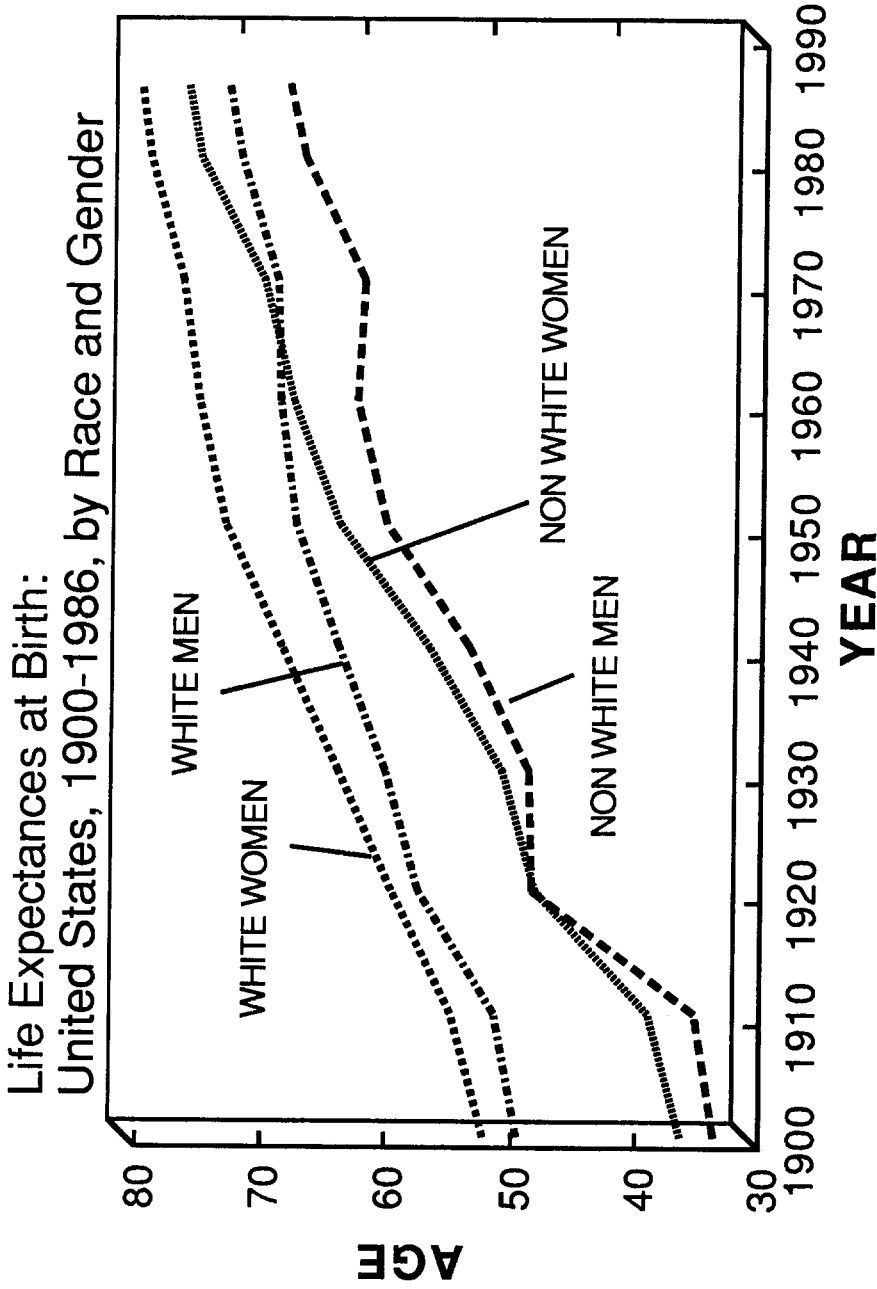
(Average Age of Death at Birth
and at Age 5, 30, 65, and 80,
with Percent Increase Over Time)

<u>Age</u>	<u>White Males</u>			<u>White Females</u>		
	<u>1900</u>	<u>1986</u>	<u>Percent Increase</u>	<u>1900</u>	<u>1986</u>	<u>Percent Increase</u>
Birth	48.23	72.0	49.3	51.08	78.8	54.3
5	59.43	72.8	22.5	61.03	79.6	30.4
30	64.88	74.2	14.4	76.42	80.1	4.8
65	76.51	79.8	4.3	77.23	83.7	8.3
80	85.1	86.9	2.1	85.5	88.8	3.8

<u>Age</u>	<u>Nonwhite Males</u>			<u>Nonwhite Females</u>		
	<u>1900</u>	<u>1986</u>	<u>Percent Increase</u>	<u>1900</u>	<u>1986</u>	<u>Percent Increase</u>
Birth	32.54	67.2	106.5	35.04	75.1	114.3
5	50.06	68.6	37.0	49.04	76.3	55.6
30	59.25	74.7	26.1	60.7	77.1	27.0
65	75.38	79.1	4.9	76.38	82.7	8.2
80	85.1	87.1	2.3	86.48	88.9	2.8

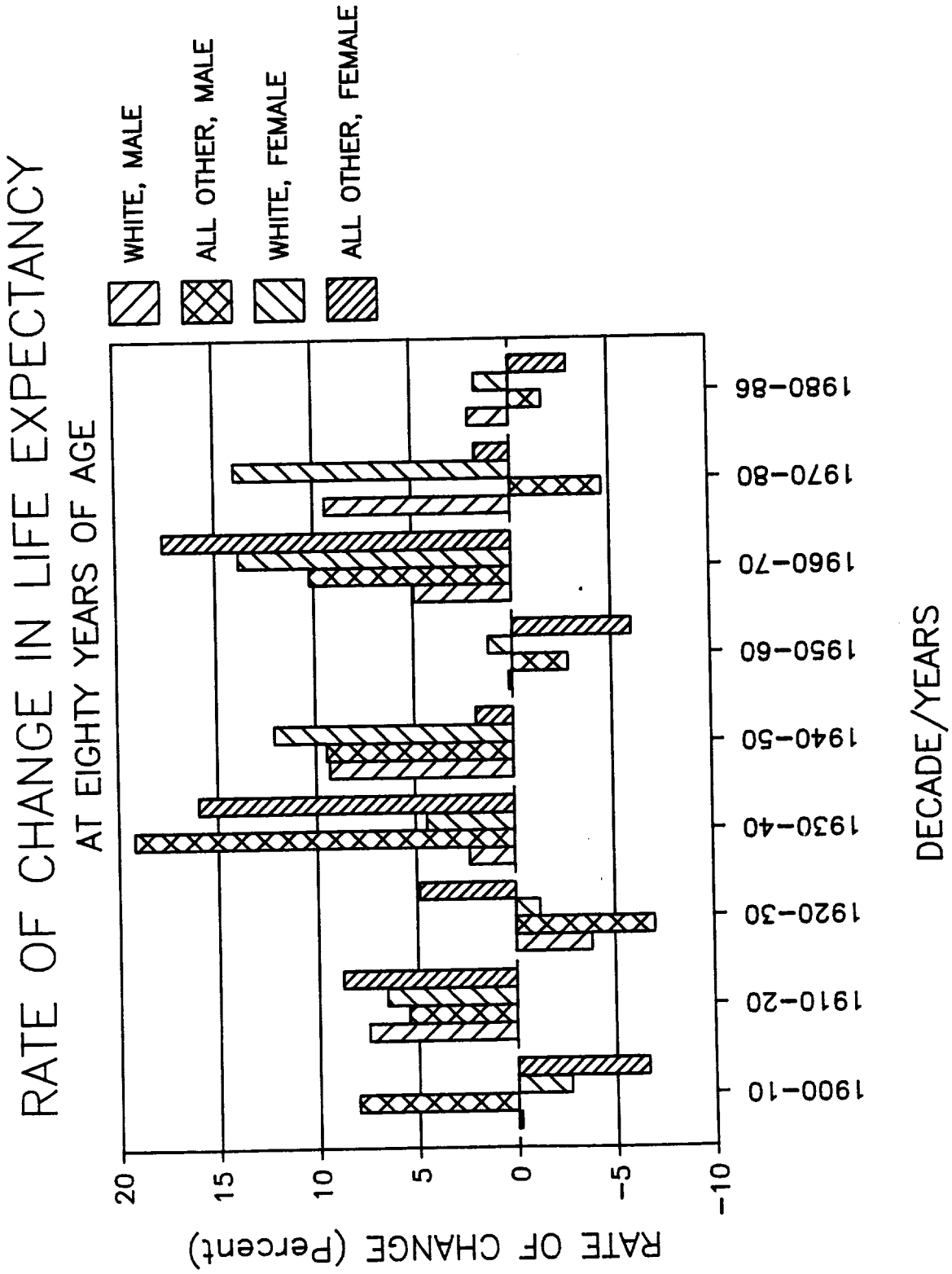
Source: U.S. Department of Health and Human Services, 1986.

Figure 8.3



SOURCE: U.S. Dept. of Health and Human Services, Vital Statistics of the United States: Life Tables, 1986.

Figure 8.4



Source: U.S.D.H.H.S., Lifetables, 1986.

decrease Black's overall life expectancy are a higher proportion of homicides and a greater incidence of AIDS (Minneapolis Star and Tribune, March 23, 1990). Blacks are also more likely to die from coronary heart disease, mostly because they have less access to ongoing or emergency medical treatment (Stipp, 1990).

Household Profile

A little over half (52%) of those age 65-74 were married couples in 1986, 29% were women living alone, 9% were men living alone and 1.5% lived in a nursing home or other group facility. Among those over age 74, 33% were married couples, 44% were single women, 11% single men and 6% lived in a group home (Waldrop, 1989; Plessner et al, 1988). Of those over age 85, 70% were female, 52% still owned their own homes, 30% lived alone and 23% lived in a group home (Plessner et al., 1988). In 1987, two-thirds of nursing home residents were over age 80, ninety percent were white and one-third had no immediate family (Otten, 1990). The average age of the 1.5 million nursing home residents is rising. With a growing number of people over age 80 - and even 100 - the future need for nursing home care is expected to rise, but not as rapidly as the demand for retirement residences, where people can live independently and have access to company, care and dining facilities (Pogrebin, 1988).

The proportion of elderly who lived with their children declined from 31% to 9% between 1950 and 1970, and the opportunity for this will decline further after 2000 (U.S. Congress, 1985). Southeast Asians and Hispanics are exceptions to this trend; about one-quarter of these elderly women live with their adult children (Chase, 1990). In 2000, retiring women

will have an average of 3.2 children, but only 1.8 children by 2020. One-fourth of women age 65 in 2020 will have no children at all. Since women outlive their husbands by an average of 16 years, they need to find or retain suitable housing that allows them an independent and healthy lifestyle (U.S. Congress, 1985). This is increasingly possible with rising incomes and life expectancies.

In the 1980s, three-fourths of the elderly owned their homes; most continue to live in them. A 1989 poll conducted by the Wall Street Journal found that, when asked where they would really like to live, half of retired persons said they would prefer to live with their children, in apartments or in retirement communities (Carlson, 1989). Contrary to popular perception, housing costs take a large percent of income for the elderly, mostly because of their lower incomes. For example, those who owned a home with a mortgage and were between the ages of 25 and 64 in 1980 spent an average of 25% of their income on housing; those age 70 spent 37%. If the house was paid for, housing costs for those age 70 fell to 21% of income. Only 10% of all elderly had mortgage debt, averaging \$19,780 in 1980, but almost 20% had mortgage debt if their incomes were over \$30,000 annually. The average 1983 equity in homes owned by the elderly was \$59,000 (Duensing, 1988).

NEW ECONOMIC STATUS: INCOME, TRAVEL AND INDEPENDENCE

"Age only matters when one is aging. Now that I have arrived at a great age, I might as well be 20," --Pablo Picasso (at age 80).

Growing old is not what it used to be. Although the average income of the elderly is still less than that of the general population, their

spending power has been increasing at a more rapid pace. Being elderly in America is no longer synonymous with being poor. Figure 3.18 and Table 3.3 in Kinsey, (1990), illustrate this point as well as increases in net worth among the elderly. Between 1970 and 1987, real average income of the elderly rose absolutely, from \$13,907 to \$17,827 in 1983 dollars, and relatively, from 54% to 63% of average household income (Hurd, 1989). In 1987, the median household income of those age 65-74 was \$16,906, or 65% of the overall average median household income. For those over age 74, median income was \$11,261, or 43% of the average.

Among the elderly households, those with the least income were single women. In the mid-1980s, 44% of households over age 74 were single women. Their median income was \$7,314 - only 65% of that for all households over age 74. Even though there are 4.8 million more elderly women than men, fewer women (10.6 million) received Social Security income than men (11.8 million in 1985). The average benefit paid to women is 76% of that paid to men (Duensing, 1988).

About three-fourths of the differences in income between elderly men and women can be explained by pension income. In 1984, only 55% of workers participated in employer sponsored pension plans. Half of the working men and 39% of the women had vested pension plans. Employer sponsored pension plans or private plans, such as Individual Retirement Accounts or 401K plans, were more than twice as likely to be participated in by workers earning over \$3,000 a month (Lawler, 1988). Currently, in many pension disbursement plans, all income stops at the death of the retired worker. New regulations about pension disbursements specify that lifetime payments must be deliberately chosen over a joint survivor plan,

making it more likely that widows and widowers will continue to receive pension incomes after their spouse dies (U.S. Congress, 1985).

On a per capita basis, the income of elderly families is higher than other families, mostly because family size is smaller. In 1983, per capita income for the elderly living in families averaged \$9,080, 101% of that for non-elderly family members (\$8,960). For the elderly, unrelated individuals per capita income was 59% of that for similar others (\$10,040 verses \$16,900). These same percentage ratios were 94 and 47 in 1970. The relative income status of the elderly has improved by almost any measure one chooses to use (U.S. Congress, 1985).

Improvements in the economic status of the elderly is due, in large part, to increased Social Security benefits. In 1950, 16% of elderly received retirement benefits from Social Security; in 1985, 94% received such benefits. Between 1970 and 1983, the annual value of these benefits increased 46%, while wages and salaries increased 7% (U.S Congress, 1985).

Social Security provided 44% of elderly income in 1983, up from 37 percent in 1970. The percent of income from pensions remained about 15%, and income from assets increased slightly, to 29%. Public assistance income fell from 4% to 2%, and income from earnings fell from 19% to 9% (Duensing, 1988). Income-in-kind was estimated to increase the spending power of the elderly by as much as 30% (Trongern, 1978). Income from pensions and assets is expected to rise as more women have their own pension plans, and as private retirement savings increase. Nevertheless, it is estimated that in order to maintain comparable levels of support from the Social Security System, including medical care, by 2040 nearly 25% of the taxable payroll will be required, compared to 14% in 1984 (U.S.

Congress, 1985). The ratio of workers to the elderly receiving Social Security was 3.3 to 1 in 1989; it will be 2.1 to 1 in 2010 (Hurd, 1989). A change in regulations raising the age for maximum benefit eligibility to 67 and restructuring taxes for high income elderly are being phased in. These pension reforms will help alleviate some of the pressure on public expenditures. The real rate of growth in public pension expenditures is expected to be 2.5% between 1980 and 2020, compared to 6.2% between 1960 and 1980. By 2025, somewhere between 6.9% and 8.5% of gross domestic product will be needed for social pensions, compared to 6.3% in 1980 (Heller et al., 1989). The nation and its individual elderly will benefit by these reforms, allowing the healthy and active elderly to take advantage of their energy and knowledge by staying in the work force longer. It could reverse a trend towards earlier retirement, especially for men.

Net worth peaks between the ages of 55 and 64. Median net worth was \$73,664 for those age households in 1987 (Table 3.3, Kinsey, 1990). After age 64, the median net worth was \$60,266, but average was over \$250,000. This implies a concentration of wealth among the elderly; only 14% had more than the average net worth. About 43% of the elderly's wealth is in private savings, with 18% in pensions (Hurd, 1989). Contrary to life cycle models of savings, accumulated wealth diminishes very slowly after retirement (Hamermesh, 1984).

Enhanced economic status of the elderly has occurred in spite of several trends that could have led them into poverty. 1) Men have been retiring earlier, diminishing lifetime earnings. In recent times, the average male spent 15 years in retirement; 80% of them voluntarily. Of

those who retire before age 62, only 44% did so voluntarily. The rest retired due to health conditions, being laid off, fired or bought out (Hausman and Paquette, 1987). Table 3.6 and 3.7 (Kinsey, 1990) show that men over the age of 45 have decreased their labor force participation since 1970. In contrast, women's labor force participation rates have increased. The lifetime participation rates of men and women are converging. Women's earnings have tended to hold up the incomes of older people as has indexed Social Security payments. 2) Increased longevity increases the number of years over which retirement income must be spread. Greater wealth and indexed Social Security income have alleviated this problem, but longer working lives will likely secure more income for the elderly in the future.

The Golden Generation

Increased economic status of the elderly has manifest itself in a rich market for products and services for older Americans. Many marketers think of the "golden generation" as starting at age 50 (Edmondson, 1987). The first baby boomers will be 50 in 1996. There are already noticeable changes in advertising targeting older people. New names and acronyms appear. For example, grown-up, mature people are known as "grumpies"; wealthy older people as "whoopies"; retired affluent professionals as "rappies"; and the mature, active, free, indulgent and affluent are known as the "Golden Mafia" (Polman, 1989).

Products and services to enhance the lifestyle of older people appear frequently. The highest income and wealthiest of all age groups, those age 50-64, will soon be the largest population group. They spend

about 7% more than average households on all goods and services, and 14% more on food. Older Americans spend less on food in restaurants, even though they have more leisure time to eat out (Lazer and Shaw, 1987). This is partially explained by eating out at inexpensive places. For example, McDonald's, a relatively inexpensive restaurant, did 30% of its business with those over age 50 in 1989 (Gerber, 1989).

Several have puzzled over a useful way to segment and, therefore, target the elderly market. A frequently used segmentation is the "mature", age 55-64, the "young-old", age 65-74, and the "old-old", over age 74 (Sherman and Shiffman, 1984). Some speculate that the biggest differences are between those still working and those retired, and that age is simply a proxy for other major changes in lifestyle that accompany empty nests and retirement.

One study found that, while young adults spent discretionary income acquiring possessions, those between 40 and 60 spent on "catered experiences". Those over age 60 spent money on "being experiences" that highlighted their sense of well being, identity and intelligence - experiences like interpersonal relationships, philosophical introspection and enjoying nature. They travel to meet new friends and to broaden their minds (Wolfe, 1987). Over 80% of luxury travel is done by people over age 55. They are experiencing new foods and acquiring new tastes (Gerber, 1989). Seventy-eight percent of people over age 60 have traveled out of the United States; most of them have visited at least 24 different states. Travel increases directly with income, education and age (Rounds, 1988).

Older consumers expect products to perform functionally. They want products that reinforce their status with their peers, and products and

services that provide gateways to other pleasurable experiences. They are sensitive to value; price matters only as it relates to affordability (Wolf, 1987).

Older shoppers are less price conscious than younger consumers. Comparing the buying behavior of cohorts of Americans shows that, given good health and adequate income, older consumers largely duplicate the expenditure patterns of younger people (Reinecke, 1964). Although some older studies found that the elderly responded positively to those firms that provided comfort needs such as places to sit, transportation, delivery services and clear, large labels, newer studies find these amenities to be less important. What is distinctive about elderly consumers is that they are more likely to make joint decision purchases (if married), use more printed media for information (relative to electronic media) and resent firms that remind them they are old. Many do not acknowledge senior citizen discounts or other "senior" benefits, because they do not perceive themselves to be as old as they are (Tongren, 1988).

Older Americans, now and in the future, are the healthiest, wealthiest and longest living in history. Expenditures by those over age 64 rose from 2.5% of Gross National Product (GNP) in 1960, to 5.9% in 1982, and is continuing to climb (Shrimper, 1986). Their preferences will be felt in the marketplace, not least of all in the market for food. But, they are not a homogeneous group. A nationwide survey of 600 elderly found that half could be classified as "nutrition concerned". These people still cooked most meals and rarely snacked throughout the day. One-third were classified as "fast and healthy". They used convenience

foods, but were concerned about fat and sodium. They also had the highest median income (\$21,593). The rest were called "traditional couponers" who distrusted advertising and were not interested in convenience or new information about food (Wascoe, 1989).

OLD FOOD HABITS MEET NEW FOOD NEEDS

Amount of Food and Food Expenditures

Aging bodies need fewer calories. As the body ages and physical activity slows, muscle mass is lost and often replaced by fat. Fat tissue burns fewer calories than muscle, so fewer calories are needed to maintain body weight. Consequently, the elderly eat less food, or, at least, fewer calories. It is estimated that elderly men and women need 15-20% fewer calories than when they were age 35, given equal amounts of physical exercise (Diggs, 1989; Monro, 1980). For every decade past age 20, caloric needs decrease 2% to 8% (Brody, 1989). A study at Tufts University found that elderly men ate 600 fewer calories per day than men age 35; elderly women ate 300 fewer calories. Both represent an almost 25% decline in calorie consumption (Munro, 1989, p. 14). As the population ages, aggregate per capita consumption of calories should decline.

As far back as 1960, research showed that, all other things being equal, aggregate food expenditures also tend to decline as the population ages. The 1970 age distribution of the population was estimated based on 1950 data, and then analyzed to see how an aging population might affect food expenditures. They were projected to decline by \$500 million to \$1,178 million by 1970 due to the influence of the aging population alone

(Crockett, 1960). This is consistent with the elderly's declining incomes, lowered caloric requirements and eating less food away from home.

Regardless of age, food expenditures tend to decline after retirement. This decline averaged 14%, but was greater (33%) for those under age 62 who retired involuntarily. For those over age 62 and with Social Security income, the decline was less - between 4 and 13% (Hausman and Paquette, 1987). The earlier people retire, the sooner their income drops and the sooner they will decrease their food expenditures as they age. Social Security income acts as a buffer against this decline, but will not stop it. Table 8.2 shows a decline in food expenditures for elderly households in 1984 dollars. Between age 64 and age 75+, household expenditures on food in grocery stores declined 40%; they declined 67% for food away from home (Lazer and Shaw, 1987). Food expenditures increase as a percent of household budgets, however, since food expenditures decline only half as fast as incomes decline among the elderly (Shrimper, 1986).

In the future, however, several factors indicate an increase in food expenditures by the elderly, even though they will still spend less on food than their younger counterparts. First, the number of single, elderly householders will more than double in the next 45 years (Congressional Budget Office, 1988). Those who live alone do not realize the economies of scale in food purchases, so they spend more per person. Second, they will be demanding smaller or single-serving packages, which cost more per unit of edible food, but are also convenient and cut down on food waste in the household. Third, rising incomes and wealth of the

TABLE 8.2 FOOD EXPENDITURES & AGING

**(Average Annual Expenditures of
Households, in 1984 Dollars)**

	All <u>Households</u>	Households Headed by Older Americans			
		<u>Total</u>	<u>55-64</u>	<u>65-74</u>	<u>75+</u>
Number of Persons in Household	2.6	2.1	2.5	1.9	1.6
Total Expenditures	\$20,862	\$17,144	\$22,264	\$15,038	\$10,718
Food Total	\$3,280	\$2,900	\$3,602	\$2,714	\$1,865
Food at Home	\$2,300	2,129	2,536	2,027	1,518
Grocery Store	2,164	2,029	2,412	1,929	1,462
Convenience Stores	136	99	124	98	55
Food Away from Home	980	772	1,065	687	348

Sources: Lazer and Shaw, 1987; Bureau of Labor Statistics, 1984 Consumer Expenditure Survey.

elderly foretell higher per capita food expenditures. Caloric intake is 100-200 calories per day lower for low income elderly (Kohrs et al., 1989, p. 308). As incomes rise, more food is usually consumed. Also, demand for convenience and services will increase - services in the form of food packaging, ready to heat and/or serve food, meals eaten away from home and meals delivered to the home.

Food shopping is a major activity for many elderly. In 1978-79, a subset of elderly described as "frugal-utilitarian" were analyzed for their shopping behavior. They were mostly white, women, urban and Protestant; thirty-five percent received food stamps. They went to the grocery store once or twice a week. Four out of ten of this group saw grocery shopping as a pleasant activity. Their average expenditures were \$55 per trip to the grocery store and \$7 on FAFH. The percent of their food dollar spent on various types of foods was: meat and meat substitutes (25%), vegetables (12%), fruits (12%), milk and milk products (11%), beverages (12%) and flour products (6%) (Axelson and Penfield, 1983). These results differ somewhat from those of Gallo, Salathe and Boehm (1979), who looked at elderly food expenditures in 1972-73. In that earlier time period, the elderly spent less of fruits and vegetables and more on milk, flour and cereal products.

In rural America, over 51% of the elderly went to a grocery store at least twice a week. They usually spent about a half hour in the store; less than half drove their own cars to the store. Attitudes towards shopping explained less than 4% of the frequency or duration of the trips to the grocery store, implying that these were necessary trips (Meiner and Helstley, 1985). Opportunities for home delivered food at a

reasonable price may expand, but the social function of shopping should not be underestimated for the elderly.

In one midwestern state, 10% of the elderly reported difficulty with grocery shopping (Chase, 1990). Difficulties arose due to diminished physical strength needed for handling carts, lifting heavy loads, or reaching and stooping. Failing eyesight made it harder to read labels. Grocers need to be alert to the special needs of the elderly and provide appropriate service, but must be careful not to insult them or make them feel old.

Health Concerns

Axelsson and Penfield (1983) found that expenditures on FAFH was inversely related to those who have high "nutritious-healthful" scores. This implies that those who have strong attitudes about nutrition and health are more likely to eat at home. Those who rated high on "social activity" scales spent more on groceries. It was found earlier by Clancy (1975) that those who had high social participation had significantly better diets. Low incomes, physical inability and loneliness contributed to poorer diets (Diggs, 1989). In fact, recent research on gerontology suggests that many of the conditions thought to characterize old age, not counting degenerative diseases such as Alzheimer's, are the result of poor nutrition and little exercise. Those who have active physical and intellectual lives, and believe that they matter to other people, have been found to largely escape signs of senility altogether (Travis, 1987).

The National Institute on Aging found that 16% of those over age 65 had nutritionally poor diets, when compared to one quarter of those over

age 75. This was mainly due to inexperience with food preparation and lack of motivation. Single, elderly men were most likely to have poor diets (Brody, 1990).

Health related food problems that increase with age are those related to reducing calories and fat in the diet. With increased evidence that fat, especially saturated fat, increases the chances of heart disease and decreases life expectancy, we can expect that an aging population will decrease fat consumption. It is difficult to say exactly what the effect will be, however, because it is known that, although people become more risk averse during middle age, they tend to take greater chances as they get older (Jones-Lee et al., 1985). For example, a man on a low fat diet at age 55 was heard to say, "If I live to be 80, I am going to indulge in all the red meat, butter and ice cream I can eat." Apparently, after reaching a certain age, life expectancy is sufficiently short to warrant risky behavior for the sake of pleasure.

Diet studies show that over half of the elderly consumed the recommended daily allowances for seven specified nutrients. They were most likely to be low on calcium, magnesium and vitamin B6. Those elderly who met the recommended daily allowances spent more for food at home, used larger quantities of most kinds of food, ate a greater number of foods and selected foods with higher nutrient-to-calorie ratio (Hama and Chern, 1988; Ingersen and Hama, 1995). Since the need for calories diminishes with age but the need for vitamins and minerals apparently does not, the need for nutrient dense foods and/or low calorie foods will increase. Non-caloric sweeteners and fats will probably find a good market among the elderly.

Other health related food considerations are related to special diets for common diseases, such as high blood pressure or osteoporosis. Eating solid foods was reported to be a problem for 6 percent of elderly over age 65, and 14% of those over age 85 (Chase, 1990).

The improved longevity and health of the elderly do not necessarily go hand in hand. Though the "young" elderly (those under 75) tend to be healthier and more active, the larger the number over age 85, the more likely they are to be physically disabled and ill. Dementia illnesses by age are estimated to be 1% at age 65, 2.5% at age 70, 5% at age 75, 12% at age 80, 20+% at age 85, and over 40% at age 90. Nursing homes hold 6.4% of those 74-84, and 21.6% of those over age 85 (Otten, 1984). Food sold to and served in group quarters for the very old is likely to increase.

Debilitating diseases and other aging conditions are now thought to be unique to certain cohorts that had similar historical experiences. New generations of elderly are turning up new patterns of preferences and behavior. For example, it is hypothesized by gerontologists that osteoporosis is a generational artifact - characteristic of a cohort of older women who, as young girls, rarely exercised and did not develop full bone strength (Travis, 1987). It could turn out that many of the now accepted features of aging will disappear over the next 20 years, to be replaced by new characteristics and new food habits.

Consumers are accepting that diet may be a way to lengthen life and slow down the aging process. In a telephone survey, the elderly were found more likely to engage in diet behavior associated with better health (Table 8.3). One-third to two-thirds of elderly reported taking

TABLE 8.3 PERCENTAGE OF ELDERLY VERSUS NONELDERLY COMPLYING WITH HEALTH-IMPROVING BEHAVIORS^a

Behavior ^b	65 and over (%)	Under 65 (%)
Have dental checkups	54	77
Avoid salt	65	50
Avoid fat	74	52
Consume fiber	69	58
Avoid cholesterol	58	40
Avoid sugar	60	50
Consume calcium	58	49
Maintain recommended weight	25	23
Exercise regularly	23	36

^a Adapted from Bausell (1986).

^b All comparisons are statistically significant ($P < 0.001$) except weight maintained.

Source: Kohrs et al., 1989, p. 319.

vitamin and mineral supplements. Those who did had more income and education (Kohrs et al., 1989, p. 313).

"We are on the cusp of an era where the healthy, active, older adult will choose foods that help maintain good health," (Gerber, 1989). If that is true, then food processors and retailers have a clear signal about important marketing strategies. Enthusiasm for this should, perhaps, be tempered by the results of a recent survey of retired people who were asked if they would be willing to pay extra for foods low in salt, cholesterol, sugar, fat or calories. Sixty percent said they would not be willing to pay anything for these types of foods, but 18% were willing to pay a moderate amount or more (Carlson, 1989). This, again, points out the diversity in the food market, even among the elderly. Eighteen percent of 35 million people is still a market of 6.3 million, willing to pay more for healthy foods. That is a good sized market niche.

Types of Food

Elderly people have been found to eat more than the average amount of fresh fruits and vegetables, cereals, bakery products, poultry, pork and oils. They eat less than the average amount of red meat, milk, soft drinks, prepared food and alcohol. They eat less food away from home (Buse and Fleischer, 1982; Salathe, 1979). Those over age 74 ate substantially less beef, citrus, legumes, nuts and beverages, but more non-citrus fruits and juices (Shrimper, 1986).

Those who are especially aware of diet and health linkages ate more whole-wheat bread, frozen fish, lean beef, winter squash, margarine, tea and 2% fat milk (Kohnrs, 1989, p. 319).

A recent New York Times poll showed that 30% of the elderly do not eat snacks, 38% of those who do snack eat sweets and ice cream (compared to 53% of those age 18-29), and 27% of snackers eat fruit, juices and vegetables (compared to 15% of those age 18-29) (Lawler, 1988, p. 5).

Designing new food products for the elderly market has led to several widely popular items. For example, decaffeinated coffee, sugarless jams and candies, bran cereals and seltzer water were all originally targeted at older consumers. The food industry is learning what appliance manufacturers already know: designing for the least able results in everybody else being able to use it, too (Gerber, 1989).

Food Away From Home

Virtually all studies of food expenditures show that the elderly spend less money and a smaller percentage of their food budgets on food away from home (Buse and Fleischer, 1982; Sexauer and Mann, 1979; Salathe, 1979; Gallo et al., 1979; Dunn, 1985; Shrimper, 1986). This is consistent with the elderly's overall propensity to eat less, with their lower relative incomes, increased need for special diets and concerns about how diet affects health. It is inconsistent with increased leisure time and a propensity to look for activities that consume time and provide for social contacts. The elderly have typically consumed items that use time and allow them to get out of the house (Rothenberg, 1988). For example, they preferred to go out for movies rather than use a VCR. They turned shopping into exercise and pleasure; they preferred bank tellers to ATM machines because of the personalized interaction, and they wanted products that were uncomplicated and required little effort to use. This

implies that eating out in restaurants should be attractive as a way to get out of the house, to receive personal service, and, potentially, to contact friends and neighbors. It also implies that new home cooking technology, or foods prepared or packaged in new and complex ways, may not be readily adopted by the elderly.

Observing numerous elderly eating out and socializing leads one to look beyond the message given by average FAFH expenditures among elderly households. Eating away from home is highly dependent on income and on marital status. Upper income, single, elderly men and women spent 44% and 25% respectively of their food budgets on food away from home (FAFH) in 1972. Single, elderly men and women with lower incomes spent only an 11% and 15% respectively (Sexauer and Mann, 1979). Dunn (1985) found little variation in the number of meals eaten away from home among various age groups, but they did decline slightly after age 55. Others predict that an aging population will be very good for the restaurant business (Kiplinger, 1990). The jury is out, but the authors believe that the elderly will be eating away from home more in the future.

HELP FOR THE NEEDY

In 1987, 11% of people over age 64 lived in households where the income was under the poverty line (\$5,255 per year, or \$438 per month for an elderly individual, and \$6,630 per year, or \$553 per month for an elderly couple). This contrasts with a 30% poverty rate for the elderly in 1967, and 37% in 1959 (Lawler, 1988). Most of the elderly who were in poverty were living alone, three-fourths were women and one-third were minorities. Of those over age 65, 7% of men and 12.8% of women were in

poverty. Of those over age 85, 15% of the men and 20% of the women were in poverty unless they were Black women, forty-seven percent of whom were in poverty (Otten, 1984). The chances that an elderly person will live alone increases with their income, since they can afford to support a separate dwelling. Over three fourths of those who had incomes over \$7,500 (in 1983 dollars) lived alone if they did not live with their spouse, whereas only one-third of those with incomes under \$2,500 lived alone (CBO, 1988, pp. 18-19).

One of the main reasons for a decrease in poverty among the elderly is the Social Security system. In 1983, a couple's benefit was \$744 per month, 48% more than the "poverty line" for an elderly family of two. On the other hand, the average widow's benefit was \$393 per month, 98.9% of the poverty line for a single, elderly person (U.S. Congress, 1985, pp. 166-167). Ninety percent of federal outlays for the elderly have no eligibility criteria based on income from other sources. This means that the really poor may not be helped as much as if they were targeted for help, but it also means that the average aid to the elderly is much greater than it would otherwise be. Much of the income-in-kind includes medicaid and medicare. In 1983, medicare spent \$1,800 per elderly person on medical care. If the income-in-kind is added to the cash income of the elderly, the poverty rate would drop from 14% to between 3.3% and 9%, depending upon how the income-in-kind is valued (U.S. Congress, 1985, p. 168). Adding the value of food stamps and housing benefits reduces the poverty level by only about 2%, regardless of how it is valued.

Many who are not below the poverty line are close to it. Twenty-one percent of those over age 65 fall below 125% of the poverty line. Forty-

two percent fall below 200% of the poverty line (Lawler, 1988). Therefore, almost half of those over age 65 in 1986, had income less than \$10,510 for individuals, or \$13,260 for couples, which was 65% of the average income in all single person households and 45% of the average income in all two person households (USDC, Statistical Abstract, 1988, 1987). People in these income brackets have been called the "'tweeners" (Smeeding, 1984). "'Tweeners" are not in poverty, but their incomes are less than twice the poverty line. They are at risk of falling into poverty at any time, mainly because they lack protection in medical insurance, housing subsidies and other in-kind help that their poorer counterparts receive. They also have few resources from which to generate additional income (Lawler, 1988).

The Older Americans Act of 1985 established nutrition programs to provide at least one hot meal per day, 5 days a week, to people over 60 and their spouses (regardless of age). These meals must provide one-third of the Recommended Daily Allowances of nutrients established by the National Academy of Sciences. Federal money is provided to subsidize the serving of these meals in congregate dining facilities in urban and rural settings throughout the country. Seventy seven percent of those age 64-75 and 9% of those over age 75, participated in service center meals. Those who participated in this program had improved nutritional status (Kolers et al., 1989, p. 317-328).

Other food programs designed for the poor elderly are the Expanded Nutrition Program (ENP), and food stamps. The ENP delivers meals to about 3 percent of the home-bound elderly over age 74 (Kohrs, 1989, p. 328). These meals contributed 50-60% of the daily nutrients to the recipients

(Asp, 1988). The number of meals served increased 12% in 1975, and 37% in 1987. As more older elderly people live alone at home, this service is likely to expand further (Balsam and Rogers, 1988). A large number of services for the single elderly living at home will likely be in demand at all income levels, including such services as home delivered meals, homemaker assistance, and home nursing services.

Seven percent of those over age 64 received food stamps in 1983, at a face value of \$482 annually (CBO, 1988). Food stamps has been found to significantly increase the amount of food eaten at home, thereby improving the nutrition of the elderly.

CONCLUDING REMARKS

The number of older people in the United States and around the world is increasing rapidly. The great bulge in the numbers over age 65 will not start until 2011, but a bulge in the over age 50 market will be upon us by 1996. This age group is the richest of all age groups, and it is healthier and more active than ever.

Implications for food consumption are mixed. The elderly spend more per capita on food, but less per household. They need fewer calories, so their demand for food is expected to decline. Their food expenditures will likely increase as they travel more, eat out more, purchase more convenient foods than in the past, and more foods that cater to special health concerns. They are known to consume less meat, milk, citrus, legumes, nuts and beverages.

As lives are extended through improved diet and health care, new patterns of living and eating will evolve. More very old people will live

in group homes, increasing the demand for institutional food. Still more will need food or meals delivered to private homes. Most will be self sufficient and demand quality food to eat at and away from home.

REFERENCES

- Asp, Elaine. "Home Delivered Meals: Food Quality, Nutrient Content and Characteristics of Recipients", Journal of American Dietetic Association, 88, January 1988, p. 55-59.
- Axelsson, M.L. and M.P. Penfield. "Factors Associated with Food Expenditures of Elderly Persons Living Alone", Home Economics Research Journal, 12: December 1983, pp. 228-236.
- Balsam, Alan L. and B.L. Rogers, "Service Innovations in the Elderly Nutrition Program: Strategies for Meeting Unmet Needs", Tufts University of Nutrition, Medford, Ma., A Report to AARP, July, 1988.
- Bausell, R.B. "Health-seeking Behavior Among the Elderly", Gerontologist 26: pp. 556-559.
- Brody, Jane. "As the Body Ages, Its Needs for Various Nutrients Changes", Minneapolis Star and Tribune, June 14, 1989.
- Brody, Jane. "Personal Health", New York Times, February 8, 1990.
- Buse, Reuban C. and A. Fleischer. "Factors Influencing Food Choices and Expenditures", Economic Issues, 68, University of Wisconsin, Madison, WI: Department of Agricultural Economics, 1982.
- Carlson, Eugene. " 'Graying' Market May Not Be So Golden", Wall Street Journal, December 27, 1989.
- Chase, Richard A. "Minority Elders in Minnesota", St. Paul, Minnesota: Wilder Research Center, March 1990.
- Clancy, K.L. "Preliminary Observations on Media Use and Food Habits of the Elderly", The Gerontologist, 15, 1975, pp. 529-532.
- Congressional Budget Office, Congress of the United States. Changes in the Living Arrangements of the Elderly: 1960-2030, Washington D.C., U.S. Government Printing Office, March 1988.
- Crockett, Jean A. "Population Change and the Demand for Food", Demographic and Economic Change in Developed Countries, National Bureau of Economic Research, Princeton: Princeton University Press, 1960, pp. 456-495.
- Diggs, Mitchell. "Seniors' Diets Often Fail to Meet Nutritional Needs", Minneapolis Star and Tribune, July 7, 1989.
- Duensing, Edward E. America's Elderly: A Sourcebook, New Jersey: Rutgers University: Center for Urban Policy Research, 1988.
- Dunn, W. "The Meat and Potatoes of Eating Out", American Demographics, 7:1, 1985, p. 35.

- Edmondson, Brad. "Inside the Empty Nest", American Demographics, November, 1987, pp. 24-29.
- Fein, Esther B. "A Time to Be Born, A Time to Die", Minneapolis Star and Tribune, August 16, 1989.
- Gallo, Anthony E., L.E. Salathe and W.T. Boehm. "Senior Citizens: Food Expenditure Patterns and Assistance", Washington D.C.: U.S. Department of Agriculture, ESCS, Agricultural Economic Report No. 426, June, 1979.
- Gerber, Jerry. "How the Aging Explosion Will Create New Food Trends", Food Technology, April, 1989, pp. 134-150.
- Hama, Mary and Wen S. Chern. "Food Expenditures and Nutrient Availability For Elderly Households", The Journal of Consumer Affairs, 22:1, Summer 1988, pp. 3-19.
- Hamermesh, Daniel S. "Consumption During Retirement: The Missing Link in the Life Cycle", Review of Economics and Statistics, 66:1, February 1984, pp. 1-7.
- Hausman, Jerry A. and Lynn Paquette. "Involuntary Early Retirement and Consumption", in Gary Burtless, ed., Work, Health and Income Among the Elderly, Washington D.C.: Brookings Institute, 1987. pp. 151-175.
- Heller, Peter S., R. Hemming and P.W. Kohnert. "Aging and Social Expenditures in the Major Industrial Countries, 1980-2025", Washington, D.C.: International Monetary Fund, Occasional Paper 47, September 1986.
- Hurd, Michael D., "The Economic Status of the Elderly", Science, V. 244, May 12, 1989, pp. 659-664.
- Ingerson, Linda W. and M.Y. Hama. "Value of Food Used in Households with Elderly Members", Family Economics Review, Vol. 4, 1985, pp. 11-19.
- Jones-Lee, M.W., M. Hammerton and P.R. Philips. "The Value of Safety: Results of a National Sample Survey", The Economics Journal, 95: March, 1985, pp. 49-72.
- Kinsey, Jean. "U.S. Demographic Trends and Their Relationship to Food Markets", Department of Agricultural and Applied Economics, University of Minnesota, Staff Paper P90-14, March 1990.
- Kiplinger Editors. The Kiplinger Agricultural Newsletter, Washington D.C., February 9, 1990.

- Kohres, Mary Bess, D.C. Dzajka-Narins and J.W. Nordstrom, "Factors Affecting Nutritional Status of the Elderly", Chapter 11 from Nutrition, Aging, and the Elderly, H.N. Munro and D.E. Danford, (eds.), Plenum Press, New York, 1989, pp. 305-333.
- Lazer, William and E.H. Shaw. "How Older Americans Spend Their Money", American Demographics, September 1987, pp. 36-41.
- Lawler, Edward F. "New Perspectives on Poverty in Old Age", The Public Policy and Aging Report, Chicago, Il: Policy Research Associates, Inc., 2:1, January/February 1988.
- Meiners, Jane and M.E. Heltsley. "The Rural Elderly: Shopping Patterns and Attitudes", Proceedings of the 25th Annual Western Regional Home Management/Family Economics Educators Conference, Scottsdale, AZ, November 1985.
- Minneapolis Star and Tribune, "White Life Expectancy Grows While Blacks' Lag", March 23, 1990.
- Munro, H.N., "Major Gaps in Nutrient Allowances", Journal of the American Dietetic Association, 76: pp. 137-141, 1980.
- Munro, Hamish N. "The Challenges of Research into Nutrition and Aging: Introduction to a Multifaceted Problem", Chapter 1 from Nutrition, Aging, and the Elderly, H.N. Munro and D.E. Danford, (eds.), Plenum Press, New York, 1989, pp. 1-21.
- Otten, Alan L. "Even More Americans Live Into 80s and 90s, Causing Big Problems", Wall Street Journal, July, 30, 1984, p. 1 and 10.
- Otten, Alan L. "Decision Makers Often Fail to Spot Key Changes Behind the Statistics", Wall Street Journal, December, 6, 1985, p. 26.
- Otten, Alan L. "People Patterns", Wall Street Journal, January 3, 1989, p. B1.
- Otten, Alan L. "People Patterns", Wall Street Journal, February 20, 1990.
- Plessner, Donna R., M.A. Siegel, N.R. Jacobs, Ed. Growing Old in America, Plano, Texas: Information Aids, Inc., 1988.
- Pogrebin, Robin. "Among the Elderly, Togetherness is Selling", New York Times, August 28, 1988.
- Polman, Dick. "Fiftysomething? It's Hip to be Old, New Ads Croon", Des Moines Register, August 26, 1989.
- Rothenberg, Randell. "Time-savers Don't Lure Older Buyers, Sellers Find", Minneapolis Star and Tribune, June 29, 1988.

- Rounds, Timothy Q. "Where In the World Have You Been?", American Demographics, May 1988, pp. 30-33.
- Salathe, Larry. "Demographics and Food Consumption", National Food Review, Washington D.C.: U.S. Department of Agriculture, ESCS, 1979, p. 8.
- Sexauer, Benjamin and J.S. Mann. "Food Expenditure Patterns of Single Person Households", Washington D.C.: U.S. Department of Agriculture, ESCS, Report No. 428, 1979.
- Sherman, E. and L. Schiffman. "Applying Age-Gender Theory from Social Gerontology to Understand the Consumer Well-Being of the Elderly", Advances in Consumer Research, Vol. II, T. Kinnear, ed., Provo, Utah: Association for Consumer Research, 1984, pp. 569-573.
- Shrimper, Ronald, "Effects of Increasing Elderly Population on Future Food Demands and Consumption", in Food Demand Analysis, ed. Oral Capps, Jr. and Benjamin Senauer, Blacksburg, VA: Southern Regional Research Committee and Farm Foundation, August 1986, pp. 163-176.
- Smeeding, Timothy, "Non-money Income and the Elderly: The Case of the 'Tweeners'", Madison, Wi.: University of Wisconsin Institute for Research on Poverty, 1984.
- Stipp, David. "Science is Pushing Heart Disease's Toll Farther Into Old Age", Wall Street Journal, January 24, 1990.
- Tongren, Hale N. "Imputed Income Expands the Consumer Credit Market", Journal of Consumer Credit Management, Winter 1978, pp. 82-87.
- Tongren, Hale N. "Determinant Behavior Characteristics of Older Consumers", The Journal of Consumer Affairs, 22:1, Summer 1988, pp. 136-157.
- Travis, Carol. "Old Age is Not What it Used to Be", The Good Health Magazine, September 27, 1987, p. 25.
- Wessel, David, "One Sure Fact: Baby Boomers Are Aging", Wall Street Journal, January 3, 1989, p. B1.
- United State Congress, Economic Report to the President, 99th Congress, House Document No. 99-19, February 1985, pp. 159-186.
- U.S. Department of Commerce, Bureau of the Census. Statistical Abstract of the U.S.: 1988, 108th edition, Washington D.C.: U.S. Government Printing Office, 1987.
- U.S. Department of Health and Human Services, Vital Statistics of the United States, 1986: Life Tables, Volume II, Section 6, No. 88-1147, Hyattsville, Maryland, October 1988, pp. 13.

Waldrop, Judith. "Inside America's Households", American Demographics,
March 1989, pp. 20-27.

Wascoe, Jr., Dan, "Survey Studies Elderly in All Shades of Gray",
Minneapolis Star and Tribune, December 6, 1989.

Wolf, David. "The Ageless Market", American Demographics, July 1987, pp.
26-29, 55-56.