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# FAMILY ECONOMICS REVIEW

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## HIGHLIGHTS / FALL 1978

1977-78 FOOD CONSUMPTION SURVEY

NEW MORTGAGE DESIGNS

INDEX OF MAJOR ARTICLES IN  
FAMILY ECONOMICS REVIEW

MEAT AND MEAT ALTERNATES

DIETARY GOALS—SECOND EDITION

Consumer and Food Economics Institute  
Science and Education Administration  
U.S. DEPARTMENT OF AGRICULTURE

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FAMILY ECONOMICS REVIEW

# THE 1977-78 NATIONWIDE FOOD CONSUMPTION SURVEY

by Robert L. Rizick

The U.S. Department of Agriculture (USDA) now has underway a nationwide study of the food consumption and dietary levels of households and of food and nutrient intake of individuals. Results will provide a new benchmark of the composition and adequacy of diets of various segments of the population.

The history of food consumption studies in this country extends back to the early days of the USDA. In 1894, Congress mandated the Department of Agriculture to undertake "human nutrition investigations," and 4 years later a writeup of several such studies appeared in the 1898 YEARBOOK OF AGRICULTURE.

The early fledgling studies were small-scale, intensive investigations, sometimes consisting of only a handful of respondents. Since the 1930's, however, the USDA has conducted five food consumption surveys on a national scale: 1935-36, 1942, 1948, 1955, and 1965-66. The current survey (1977-78) is the sixth.

In all six national surveys data were collected on the food consumption of the household as a unit. In the two latest surveys (1965-66 and 1977-78), data were also collected on the food intake of individuals in the household.

## Why New Information Is Needed

Change in the patterns of food consumption has been shown in every major USDA survey. During the years between the 1935-36 and the 1948 studies, great strides were made in the distribution and storage of food products, most notably in home refrigeration. Such changes affected the way people purchased and used food. Between the 1955 and 1965-66 studies, the availability and consumer acceptance of many new food products that offered convenience changed the cooking patterns in many American households. Mixes for the preparation of bakery products, such as cakes and muffins, and readymade bakery products are examples. Because of the decline in "baking from scratch," significant decreases were noted in the weekly household consumption of flour, sugar, and other basic baking ingredients.

We expect that the 1977-78 survey also will show changes in the pattern of food consumption, reflecting changes in our way of life, breakthroughs in food processing and packaging, and the introduction of many new products.

The last 10 years have seen many social changes in America. Some of these may prove to have a profound impact on our patterns of food consumption, often in contradictory ways. On the one hand, Americans have cultivated a taste for continental dining and food preparation. On the other hand, there has been an explosion of fast-food restaurants and takeout chains to meet growing demand for convenient and inexpensive food. There are some indications that family meals and food preparation are less significant as a part of family life than in the past. As the number of women employed outside the home has increased, time spent in meal preparation may have declined.

The period since the last national study has also seen an increase in consumer interest in food intake as it relates to disease, to weight control, and to general health. Some people are concerned about the safety of our food supply and have turned to "natural" and "health" foods. In response to this concern, "natural" foods have been introduced or reintroduced: Examples are the natural cereal products and specialty bread items.

The last 10 years have also seen breakthroughs in food processing and packaging as well as the introduction of numerous new products. One such breakthrough has come with the introduction of cooking bags for frozen produce and meats. While food bags are clearly a convenience, their use also affects the nutritional values of their contents. The proliferation of new products has been especially marked in the years since the last national survey. Many more "snack" food products are on the market. It is reasonable to expect that consumption of such foods is greater today than ever before. Often their forms, and possibly their calorie and nutrient contents, differ from foods they replace in diets of the past. Certain extenders of and

substitutes for meat appear to have gained in popularity because of sharp increases in food prices and moves toward "vegetarian" diets.

Since the last survey, a number of food programs have been initiated, revised, or expanded. Nutrition labeling has been introduced; efforts have been increased to educate school children and consumers about food and nutrition; nutrition programs have been introduced for the elderly, for women, and for infants and children. Under child nutrition programs, school lunches and breakfasts are provided free or at reduced prices to children of poor and near-poor families. And, perhaps most notable, the Food Stamp Program has been expanded greatly.

The survey will help show what impact these changes have had on family food consumption and on the nutritional quality of diets of family members.

### The Survey

The complete 1977-78 National Food Consumption Survey contains a nationwide survey, a bridging survey, and five supplemental surveys. Each survey consists of two parts—household food use and individual intake.

- **The 1977-78 National Food Consumption Survey (NFCS).** The basic nationwide survey is to yield data from a selfweighting area probability sample—a representative sample adequate to provide information from at least 15,000 households in the 48 conterminous States and the District of Columbia. Interviews were completed throughout a year's time—April 1, 1977 through March 31, 1978. In each of the four quarters 3,750 interviews were conducted.

Individual intake data were collected for all family members in the April-June quarter. In the other three quarters, all members of the household 18 years and under were interviewed, but only half of those 19 years old and older were interviewed.

- **The "bridging" survey.** During April-June 1977, 1,500 households were surveyed by the 1965-66 survey procedures. This will permit evaluations of differences between results from the 1965-66 and 1977-78 surveys that are associated with changes in methodology.

- **Alaska.** Data were obtained from 1,200 households and all members (urban only) during a 3-month period (January-March 1978).

- **Hawaii.** Data were obtained from 1,200 households and all members statewide during January-March 1978.

- **Puerto Rico.** Data were obtained from 3,000 households territorywide and all members during a 6-month period (July-December 1977).

- **Supplemental survey of the elderly.** Household data were collected from 5,000 households in the 48 conterminous States and the District of Columbia, with one or more members 65 years or older. Individual intake data were obtained through 24-hour recalls from all household members.

- **Supplemental survey of low-income households.** Data collected from 5,000 low-income households during the period November 1977 through March 1978. Low-income households were defined as either receiving food stamps or eligible to receive food stamps.

The 1977-78 National Food Consumption Survey data were collected and are being processed under contract by an experienced firm. The contractor will provide USDA with taped data that are ready for use. Under a separate contract, survey data will be further processed and tabulated for publication by USDA in a series of reports and statistical handbooks.

Although the survey is conducted under contract, USDA maintains strict controls over procedures and questionnaire content. The contract is being carried out under detailed specifications developed by USDA, including acceptable performance levels. All technical information used in data computations and codings is supplied by the Department. USDA food and nutrition specialists have participated actively in developing operating manuals, training programs, and computer software, as well as in monitoring the survey. During the past 40 years, USDA has developed expertise in carrying out national food consumption surveys and in working with survey contractors. Also, supervisory staff members are



able to draw upon personal experience gained in conducting smaller but comparable household surveys throughout the country for the Department.

The contract is funded and administered by the Science and Education Administration (SEA), U.S. Department of Agriculture. Funds have been transferred to SEA by other Federal agencies having special interests in results from the survey. Funds have been received from the Social Security Administration; Food and Drug Administration, and Administration on Aging, Department of Health, Education, and Welfare; the National Marine Fisheries Service, U.S. Department of Commerce; and the Food and Nutrition Service, USDA.

Operating procedures used in the supplemental surveys were, in general, the same as those used in the 1977-78 NFCS. The probability sample used in the 1977-78 NFCS was developed by stratifying U.S. households (1970 census) by nine regions and three urbanizations (SMSA central cities, other SMSA's, and nonmetropolitan). A total of 114 Primary Sampling Units (PSU's) were selected, each having about 600,000 households. Within the PSU's, 2,500 sampling segments were selected through area probability sampling. Each segment contained approximately 100 households in 1970. By use of predetermined starting points, every  $n^{\text{th}}$  housing unit is listed. In this manner, the sample in each segment was proportional to the current number of housing units—and reflects increases or decreases occurring since 1970.

Through randomization, households in each segment were allocated to four quarterly samples (and the "bridging" sample). Households then were scheduled for interview in a manner which facilitated interviewing at a uniform rate by day, week, and month throughout the 3-month period.

The sampling plan is predicated on a 75-percent completion rate, including a 7-percent vacancy factor. In 1965-66, the response rate for the household survey, including vacancies, was approximately 85 percent.

Several steps were taken in the 1977-78 sample to increase response above 75 percent. Interviewers made at least six attempts to contact urban households and five for rural ones. Each participating household was allowed to keep the set of stainless steel cups and

spoons that was used for measuring foods in the survey. Also, a cash payment of \$1 was made to each person completing the 2-day diary of individual food intake, in compensation for the extra efforts involved. In addition, normal actions of the interviewers to obtain cooperation were augmented, as required, through such means as long-distance calls, assignment of specially qualified interviewers, and arrangements for interviews outside of the home when in-house contacts were not feasible. At the end of each quarter, a sample of nonrespondent households was contacted. Household classification data were obtained and, when possible, a completed interview. Special efforts were undertaken to maximize cooperation.

The 1977-78 NFCS, like earlier USDA surveys, was designed to make effective use of qualified interviewers who may or may not have professional training in foods and nutrition. Emphasis was given to interviewer selection, training, and followup. Each interviewer was trained in an intensive 5-day session.

Prior to the interview, an introductory letter was sent to the sample housing unit. Soon thereafter, the interviewer contacted the household and made an appointment for an interview with the household member(s) responsible for food planning and preparation. The respondent was requested to keep unstructured notes that would assist in a recall of household food consumption at the time of the interview.

During the interview, information was obtained regarding the household, including a 7-day recall of food consumption. Upon completion, the interviewer began the 3-day food intake record for individuals, which included a 1-day recall (yesterday) and a 2-day diary (today and tomorrow). The interviewer obtained 1-day recalls of food intake from all eligible household members present—or from the homemaker, for young children. Concurrently, she trained household members in completing the intake diaries. She left the food-intake schedules at the household for completion, returning 2 or 3 days later to pick up the schedules. On her return, the interviewer reviewed the food-intake schedules for completeness and legibility and assisted in their completion, when needed.

The average interviewing time per household was approximately 2½ hours. A similar amount of time was required in the 1965-66 survey.

### Uses of the Data

The overall objective of the survey is to measure the current status of the U.S. diet, changes occurring since 1965-66, and elements involved in the establishment of these dietary levels. Data are to be provided in a form that is readily applicable to evaluations of the many economic, social, educational, regulatory, and other public policy considerations associated with people and the foods they eat.

The survey aims to link consumers with their foods in terms of (1) nutritional content and dietary adequacy, and (2) factors associated with acquisition, preparation, and use of these foods. Measures are derived at both the household and the individual level to permit evaluation of the interactions between individual consumers and (in most instances) the larger food consumption unit of which they are a part.

In the household phase of the survey, food consumption is measured in terms of final disposition (consumed or discarded) or "disappearance" during a 7-day period. Usage is measured in the form in which foods entered the kitchen and by source (purchased, home produced, received as gift or pay). Quantities and money values for items from the home food supply are for foods in the forms they are found in the marketplace.

In the individual food-intake phase, by contrast, foods are measured in the form of their end use. Quantities are for foods ingested—at home and away from home. Food items are identified by source, such as home food supplies, school lunch, or restaurant meal. Consumption is reported for a 3-day period, by day and eating/drinking occasion.

The USDA food consumption survey is part of a chain of national statistics extending from consumer expenditures through food and nutrition to health. The USDA survey is bounded on one side by the Consumer Expenditure Surveys of the Bureau of Labor Statistics and on the other by the Health and Nutrition Examination Surveys conducted by the National Center for Health Statistics, Department of Health, Education, and Welfare.

The objective of the USDA survey is to meet a wide and expanding range of needs for national data—on consumers, foods, and nutritional content of diets—that are not available from other sources. Planned uses of data from the 1977-78 NFCS provide an additional approach to evaluation of objectives for the survey. A partial list of projected uses of survey information that indicate the range and scope of the data collected follows:

#### 1. Economic and marketing information.

Results from the USDA survey will be used in improving forecasts of demand and prices for food and of utilization of marketing services by providing a new benchmark on U.S. food consumption patterns. In 1965-66, when the last benchmark was established, consumers were responding to what we now regard as long term stability in food supply-price relationships. Subsequently major changes have occurred in both the consumer and the food sector; the influences of these changes have not been measured. Specific uses of the data for economic and marketing purposes include:

- a. Determining aggregative shifts in domestic food consumption.
- b. Developing current elasticity coefficients for food consumption and expenditures and up-to-date measures of marginal propensities to consume—based on cash income measures as well as after-tax income.
- c. Evaluating trends in food consumption and expenditures associated with consumer-oriented elements such as household income, size, sex-age composition, education, lifestyle, and eating patterns.
- d. Determining changes in food consumption and expenditures in terms of individual food products, forms, convenience, new products, and market development.
- e. Developing new measures of food consumption away from home—what is eaten, where, when, and at what cost—that will facilitate evaluations as to future flows of food through these outlets.
- f. Estimating feasibility of research directed toward the development of new foods.

- g. Evaluating requirements for agricultural production, marketing facilities, and services.
- h. Providing to producers and agribusiness the information they need in evaluating consumption trends and projecting future demand for products and services.

2. **Food and nutrition programs.** Results from the 1977-78 NFCS will provide measures of the nutritional adequacy of diets of households participating in the Food Stamp Program. Data will show consumption patterns of food-stamp households and relationships between stamp purchases and receipts and total expenditures for food. Interrelationships of the Food Stamp and other food and nutrition programs will be explored to the extent feasible in regard to joint effects on food consumption and dietary adequacy. These measures, together with other data to be developed in income elasticities and marginal propensities to consume foods, should result in improved evaluations of cost-benefit relationships for food assistance programs.

Findings from the 1977-78 NFCS will permit a review and updating of the Thrifty Food Plan, the basis upon which food stamps are issued. Collateral studies of economies of scale in household food expenditures will be undertaken to determine changes, if any, that should be made in levels of issuance of food stamps to households of varying size.

Information on food consumption of low-income households in Alaska and Hawaii also will be used in evaluating the suitability of the Thrifty Food Plan in the Food Stamp Programs for those jurisdictions and changes, if any, that should be made. Similar information from Puerto Rico will be used in reexamining the adequacy of the current Puerto Rico food plan.

3. **Updating of USDA food plans.** Information from the forthcoming survey will be used in updating the market baskets (quantities of foods) used in the Department's Thrifty, Low Cost, Moderate Cost, and Liberal Food Plans. These plans, which use the Bureau of Labor Statistics (BLS) food prices for the market basket as "movers," provide current indicators of food price impacts on very low-, low-, middle-, and upper-income households of varying size and sex-age composition. The cost

of the Thrifty Food Plan is used in determining the total amount of food stamps to be issued to households of varying size. Costs of the Low Cost and Moderate Cost plans are used by BLS as the food cost components in their statistical series on costs of living for low- and middle-income urban working families and elderly couples. Costs of the USDA food plans also are used by welfare administrators in developing household budgets upon which levels of welfare grants are based.

4. **Regulatory programs.** Food consumption survey data are used in estimating the effects on diets of fortifications in foods, additives, pesticides, and other residues. Household food consumption surveys provide information on foods as purchased, which may be used in developing specifications for levels of fortification. Food intake data, by sex-age, income, and other consumer characteristics, provide the basis for deriving frequency distributions of intakes for different foods. From such distributions, estimates are made regarding safety levels, tolerances to be prescribed, or other actions to be taken. Use of the 3-day timespan, rather than the 1-day used in 1965, expands regulatory applications of the 1977-78 NFCS data.

5. **The elderly.** 1977-78 NFCS information will be used in evaluating the well-being of the elderly in terms of food consumption, expenditures, nutritional adequacy of diets, and barriers to attainment of good diets.

Special attention will be given to households where elder persons are living with others and the dietary interrelationships within such households. Relationships between food consumption patterns of the elderly and participation in Supplemental Security Income, Social Security, Food Stamp, and medical programs for elder citizens will be explored.

6. **Fisheries programs.** Information from the forthcoming survey will be used in evaluating current and future demand for fish and shellfish, determining nutritional contributions to the U.S. diet from different types of fisheries, and analyzing frequency of consumption by user characteristics. Information will be used in evaluating both possible problems affecting consumer safety and production, processing, and distribution of fisheries products.



# NEW MORTGAGE DESIGNS

by Carolyn S. Edwards

The ability to finance a home with a mortgage has brought home ownership into the reach of many families. Prior to the availability of the mortgage as we know it today, the purchase of a home was financed by a high interest, 5-to-6-year term loan covering about 50 percent of the value of the home. Periodic payments during the life of the loan covered only the interest on the total loan amount. At maturity, the borrower owed as much as when the loan was taken out. The entire principal was due as a balloon payment. The borrower could pay off the loan, refinance, or face foreclosure. During the Depression many borrowers were forced into foreclosure because they could not meet these payments and were unable to obtain refinancing. Federal actions in the midthirties pioneered the development of the fully amortized mortgage.

Today's standard mortgage, with a fixed, generally 30-year term, allows the borrower to pay off the principal and interest in smaller amounts over the life of the mortgage. The entire loan is paid off at maturity. Equal monthly payments, which make at least part of the family financial situation stable, include both principal and interest. The initial payments go mostly toward interest, and the reduction of principal—or amortization—is small in the early years.<sup>1</sup> Because interest is paid only on the unpaid balance of the loan, the interest portion of each monthly payment decreases over time, while the principal portion increases. The characteristic fixed rate of interest means that borrowers benefit from unanticipated inflation. They receive a loan that can be repaid in future, ever-cheapening dollars. Meanwhile, the value of the house increases with inflation.

<sup>1</sup> For example, on a 30-year, \$30,000 mortgage at 9 percent, amortization is greater in the last 5 years (\$11,358) than during the first 20 (\$11,250). Principal reduction in the first 5 years would only be \$1,317 (5). Italic numbers in parentheses refer to References at the end of this article.

Overall, however, families are not faring well in an inflationary economy, especially in the mortgage and housing markets. Trends in the cost of housing and the cost and availability of mortgage credit are making it more difficult to purchase a home, particularly the first one. Since the midsixties the economy has been characterized by periods of high and/or rising interest rates, rapid inflation, and restrictive credit policies. As a result, both lenders and borrowers suffered. Lenders must depend on *short-term* funds from savings accounts, Government agencies, or other short-term borrowing as sources for *long-term* mortgage loans. This maturity mismatch (making long-term loans from funds borrowed in the short term) becomes a particular problem when interest rates on securities such as U.S. Treasury bonds rise. Lenders experience disintermediation, or the outflow of deposit funds, because savers can obtain higher rates from other investments. Lenders are unable to adjust their savings account rates high enough to compete with these other opportunities, making it more risky and more expensive to offer mortgage loans.

Additional factors may combine to increase the mortgage finance problem: Consumers may decide to spend instead of save their money; the Government may tighten its money supply by making funds for lenders more expensive; and other holders of savings may withdraw from the mortgage market. Thus, the normal flow of money into the housing and mortgage markets is interrupted, and lenders tend to offer fewer loans and charge higher rates. If inflation is anticipated, lenders must charge even higher rates. Borrowers find they must pay high rates or cannot obtain funds at all. These higher financing costs along with the higher cost of buying and operating a home have combined to make owning a home increasingly difficult (1, 11, 12).

A great deal of legislative effort has been put forth and many programs established to deal with the cost and availability of housing and mortgage credit. Very little, however, has focused on the mortgage instrument itself. As



inflation continues and as housing and mortgage finance problems persist, attention has turned to an examination of the standard, fixed-rate mortgage. Some housing specialists believe that the inflexibility of the standard mortgage may be adversely affecting borrowers and lenders alike (1, 9, 14).

While the standard mortgage, in the past, has permitted many families to own homes, in today's inflationary economy many potential borrowers are priced out of the market altogether because they lack a required down-payment or because they cannot afford the monthly payments. The standard mortgage does not accommodate inflation or the changing patterns of real family income, as it ignores the rise in income which many buyers are likely to experience over the years. The amount of housing a family can purchase depends entirely on current income, even though the home will likely be occupied after future rises in income. The family pays a higher portion of income to cover its monthly mortgage payment during the early years, while in later years that portion declines as income rises in both real and inflated terms. The cost of housing is thus not spread evenly over time. This forces many families to postpone ownership or to scale down their housing consumption. It is not surprising that many families move quite often to adjust their housing to their changing needs and rising resources.

In addition, exclusive reliance on the one form of mortgage does not serve the diversity of needs that families experience through the life cycle. There is no flexibility to meet patterns such as the rising incomes of young couples, often with two incomes; the level income during middle stages; or the declining incomes of the retired and elderly. Neither are periods of income lapse or credit need accommodated.

Lenders, too, are faced with difficulties attributable partially to the standard mortgage. Because earnings on outstanding mortgages do not keep pace with increases in their costs of funds for new mortgages, lenders have been unable to supply the mortgage market as they might. Potential borrowers must pay an inflation premium that reflects the lender's estimate of the future rate of inflation. This can be an especially difficult burden on

borrowers during periods of concern over future patterns of inflation.

In the past few years substantial interest has emerged in new mortgage designs—alternative mortgage instruments (AMI's)—as partial remedy to the problems of housing finance (9). Initiative came, as would be expected, from the financial community. While a few State institutions inserted interest rate adjustment clauses in their standard mortgages as early as the 1960's, the first major initiative came from the Federal Home Loan Bank Board (FHLBB), the regulatory agency for federally chartered savings and loan associations (S&L's). The FHLBB proposed in 1972 and again in 1975 to grant institutions under its supervision the authority to experiment with new mortgage designs. These proposals, however, were vigorously opposed by congressional banking and consumer panels, labor unions, and consumer groups (18). Since these original proposals, however, congressional resistance has lessened, largely due to an increasing interest in ways to expand homeownership and to sustain an even flow of funds into the housing and mortgage markets.

The FHLBB, in 1974, authorized Federal S&L's to offer a variant of the standard mortgage. Also, the Housing and Community Development Act of 1974 granted statutory authority for an experimental finance program under which the Federal Housing Administration authorized and insured another variant on a limited, trial basis. This program was placed on a permanent basis in the Housing and Community Development Act of 1977. Several bills and resolutions have been introduced in both the House and the Senate supporting AMI's of various forms, and a study by the Congressional Budget Office addressed the potential of AMI's to improve housing affordability (2).

AMI activity in State-chartered savings and loan associations and mutual savings banks has become substantial. By the end of 1976, these lenders had authorized more than 200,000 AMI loans for an aggregate amount of approximately \$8.5 billion. The majority of these lenders were located in New England, Ohio, Wisconsin, and California (3). Some commercial banks in California are also offering AMI's, and support is growing (6, 15, 16).

AMI's are also stimulating extensive study by the academic community. One conference, involving 13 studies carried out at Massachusetts Institute of Technology with the support of the Department of Housing and Urban Development and the FHLBB, addressed theoretical and conceptual issues and reviewed international experience with AMI's (14). A major study initiated in 1976 by the FHLBB, the "Alternative Mortgage Instruments Research Study" (AMIRS), provides a comprehensive and systematic review and analysis of a number of proposed new mortgage designs: 21 papers done both by FHLBB economists and on a contract basis by universities and research firms covered analyses of current AMI status, potential demand, macroeconomic implications, and technical, legal, and consumer safeguard issues (3, 4). A conference in May 1978 funded by the Office of Consumer Education, Department of Health, Education, and Welfare, and the Cornell University Department of Consumer Economics and Housing focused on the effects of AMI's on consumers.

As a result of the interest from such a diversity of sources, many AMI designs have emerged, each representing a different combination of factors. For example, the term of the loan, interest rate, principal, or a combination of these can be allowed to vary; the payments of interest may be delayed or gains earned upon sale of the home shared with the lender; the principal and monthly payments can be tied to an index or prices; homeowners can be allowed to draw on the equity in their homes; or one interest rate can be used to compute the principal payments and another the interest obligations (17). Some are designed to favor lenders, while some are designed for greater benefit to borrowers. It is important that the new mortgage designs be evaluated with the interest of both groups in mind.

### Graduated Payment Mortgages

The primary objective of the graduated payment types of mortgages (GPM) is to reduce the initial monthly payments. The borrower is allowed to make payments in the early years of the mortgage term that are lower than would be required with a standard

mortgage, and to make up these lower payments in later years by making payments higher than would be required with a standard mortgage. The GPM has a fixed rate of interest, and the size of payments to be made is known in advance.

The size and frequency of the increases in payments are determined by a graduation rate that may be fixed or varied to meet individual circumstances. The graduation rate thus tilts the payment schedule that is characteristically level for the life of the standard mortgage. The graduation term determines how long payments increase—for the entire term of the mortgage or for a portion of it. For example, payments might increase by 2 percent annually for the entire term of the loan, or may increase by 5 percent annually for 10 years and then level off. Payments could even start high in the early years and decrease later for borrowers anticipating a decrease in income. Families anticipating substantial growth in income over a short period of time might therefore prefer a higher graduation rate and shorter graduation term.

The amount by which the payments can be initially reduced will depend upon the graduation rate and term and whether negative amortization—allowing the debt on the principal to increase in the early years—is acceptable.<sup>2</sup> If the borrower pays only the interest portion of the payment each month, the amount of the loan or principal does not decrease, and no equity is built up; but no negative amortization takes place either. However, if the initial payments are reduced to less than the full amount of the interest due on the loan, the unpaid interest is added to the amount of principal owed. In effect, the family is also borrowing the difference between its payments and the interest due and paying it off in the later years. Total borrowing costs are increased. Equity accumulation is delayed until payments begin to cover the principal as well as the interest, and negative amortization means that the debt actually grows as interest on the unpaid interest is added to the amount to be repaid.

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<sup>2</sup> Negative amortization is illegal under many State laws.

The standard GPM is characterized by a fixed graduation rate over the full term, so that payments rise for a fixed percent on a regular basis, such as monthly or annually, throughout the term of the mortgage. Negative amortization may or may not be involved. Several variations of the standard GPM have been designed with reduced graduation terms—payments increase only once or several times during the early years of the loan, with conversion to a fixed-payment, fully amortized basis thereafter. For example, in a two-step GPM there are only two levels in the mortgage payments instead of a whole series of steps. The flexible payment GPM's, which were authorized by the FHLBB in early 1974, are a form of two-step GPM's that allow payments in the first 5 years to cover only the interest portion of the payments. No negative amortization is allowed, however, so payment reduction is limited. Another GPM, the purchase assistance mortgage, uses a larger downpayment to reduce the initial mortgage payments, while still another, the flexible loan insurance plan (FLIP), places the downpayments in a savings account. This money and the interest it bears, rather than being applied to the principal to build up initial equity, is applied along with the reduced payments to cover the normal amount of payments in the early years. In other GPM's the overall term of the loan is extended to allow for lower initial payments (3, 5, 17).

Several modified GPM's were authorized on an experimental basis by Section 245 of the Housing and Community Development Act of 1974. Participating private lenders made loans insured by the Federal Housing Administration (FHA). Three plans had 5-year graduation terms with payments increasing annually by 2.5, 5, or 7.5 percent. Two had payments increasing annually by 2 or 3 percent for the first 10 years of the loan. These plans provided for between 9 and 25 percent reduction in the mortgage payments in the first year compared with the first year payment required of a comparable standard mortgage. Sometimes larger downpayments were necessary to be sure that the outstanding balance never exceeded the maximum insurable balance under FHA regulations. Legislation in 1977 broadened this authority and placed it on a permanent rather

than a temporary, experimental basis. Exemptions from State laws were granted where necessary because of the negative amortization involved (3).

The major advantage of the graduated payment mortgage is based on the fact that the amount of housing that can be purchased depends on the relationship between current income and the initial monthly mortgage payments. Thus, GPM's reduce the income required to support a given mortgage, permitting a family to afford a mortgage for which they would otherwise not be qualified. GPM's should, therefore, be attractive to younger families who might be priced out of ownership because of an inability to meet the higher initial monthly payments required with a standard mortgage, but who expect an increase in income in the future. The intention is to have the payments rise as income rises, and therefore enable a family to achieve a level of housing that would average out more closely with expected income. The result of the FHA experiment with GPM's indicated that these mortgages allowed qualifying incomes to be as much as 22 percent lower than what would otherwise qualify. Most buyers involved were first-time buyers, and people who were younger and had lower incomes than other borrowers with FHA-insured standard mortgages (3).

Critics of GPM's point out several problems. If lower inflation and higher unemployment ensue, incomes and house prices may not increase as expected. Some fear that GPM's sound too much like the mortgages of the 1920's and 1930's, with borrowers paying only interest and, therefore, not reducing the face amounts of their loans. If the GPM involves negative amortization, and property values do not increase with the outstanding balance of the loan, a family wishing to sell early in the term of the mortgage may be faced with owing as much as or even more than the face amount of the original loan. Others point out that delayed accumulation of equity in the home may lead to lack of concern for maintenance of the home, or possibly increases in defaults. Lenders are hesitant about GPM's. Because of the lower cash flow in the early years of the loan, their yield is slightly lower; some may require higher downpayments to offset fear of default.



From the point of view of both the borrower and the lender, careful consideration needs to be given both to the increase in income that the borrower can anticipate and to possible increases in the value of the property. To avoid having the family faced with excessive increases several years into the mortgage, the graduation scale must be appropriate to its particular situation. If income can be anticipated to rise at least as rapidly as increases in payments, and the value of the property increases in excess of the negative amortization, payments should not become excessive and little chance of default should exist. Reports from the AMIRS study recommended that GPM's be offered with limited graduation terms and rates and with an additional safeguard of a one-time option to convert to a standard mortgage (10).

### Variable Rate Mortgages

The most controversial of the AMI's are the variable rate types of mortgages (VRM), which allow the interest rate on a mortgage to rise and fall with changing money market conditions instead of remaining fixed for the term of the mortgage as with a standard mortgage. The rate is raised or lowered according to some predetermined reference index, shifting some of the risks of changing interest rates from the lender to the borrower.

The objective is to permit home mortgage lenders to smooth their earning patterns so that returns on their investments are more in line with the costs they face. By permitting home mortgage lenders to adjust what they earn on mortgage loans to reflect the cost of obtaining money for loans, VRM's might encourage lenders to make mortgage commitments when they might otherwise be unwilling.

Although the VRM removes the hedge against inflation that home buyers enjoy with the fixed rate mortgage, funds for new borrowers may become more available and at lower rates, since lenders will not need to increase interest rates to cover unanticipated inflation.

As interest rates rise or fall, changes in the mortgage could be implemented in several ways:

1. The monthly payments could be allowed to rise or fall. For example, a 9-percent,

30-year, \$30,000 mortgage would normally have monthly payments of about \$242. If the rate were allowed to increase by 0.5 percent per year and by 2.5 percent overall (a limitation now proposed), monthly payments would rise to \$252 in the 2d year, \$284 in the 5th, and \$294 by the 11th (10).

2. The term of the mortgage could be lengthened or shortened. While this may seem most desirable to the borrower, modest increases in the interest rate can lead to a situation where payments do not cover the interest and at least \$1 of principal—thus, no principal reduction or amortization is taking place and interest costs become excessive. For example, a 9-percent, 30-year, \$30,000 loan with monthly payments of \$242 would only allow an interest rate increase of up to 9.68 percent before the loan would not amortize. A 9.68-percent, \$30,000 loan with monthly payments of \$242 would require 215 years to amortize (5).

3. Both the level of the monthly payments and the term of the mortgage could be allowed to vary. This would lessen the magnitude of changes necessary in the monthly payments while overcoming the problem of extending the term too far, but adds some complexity (5, 17).

While there generally are restrictions on the frequency and magnitude of the changes allowed, the level and pattern of payments to be made over the entire life of the mortgage are unknown when the VRM contract is initiated, requiring a greater ability to be flexible with respect to housing costs on the part of the borrower. This uncertainty and fears that sharp increases in payments could force monthly payments beyond the borrower's ability to pay have been the source of a great deal of criticism of and resistance to VRM's.

Federally chartered savings and loan associations under the jurisdiction of the FHLBB are not authorized to offer the VRM. Many State-chartered financial institutions are expressly prohibited from VRM use under their respective State laws. In other States, usury laws make VRM use difficult, although some States are placing legal interest rate ceilings on a floating basis. However, in several States the use of VRM's by commercial banks and State-chartered savings and loan associations is

growing. At the end of 1976, 81 State-chartered institutions were offering VRM's (3). Mortgages with interest-adjustment clauses—essentially VRM's—have been used in the Midwest since the 1960's, particularly in Wisconsin. VRM's are prevalent in New England, and also in California, where some institutions write the majority of their mortgages in this form (8, 16). A combination of consumer safeguards restricting VRM use and inducements in the form of favorable terms, and sometimes lower initial interest rates, have probably added to consumer acceptance in California. Because interest rates have not varied substantially since VRM adoption there, though, evaluation of the impact of changed payments has been limited.

Variations of the standard VRM include the Canadian roll-over mortgage (ROM), so named because of its widespread use in Canada. Several States have begun to use this VRM. The ROM is characterized by periodic refinancing—generally every 5 years—at the current interest rate. While it is similar to a standard VRM in that the interest rate is adjusted to reflect current market conditions, it is essentially a standard mortgage, with a fixed rate of interest and known, fixed monthly payments for a specified period. The mortgage may be renegotiated once or several times. Monthly payments are calculated in the same manner as a standard 25- or 30-year mortgage, but may be changed every 5 years. At the end of the 5 years, the loan must be repaid or renegotiated. The ROM maintains the advantage of increased flexibility to the lender and offers the advantage to the borrower of 5 years of payments which are set in advance, allowing more certainty in financial planning than under the standard VRM. At the end of the 5 years the borrower may have several options to adjust the mortgage. The borrower who benefits from a lower initial rate, however, risks losing that advantage when the loan is renegotiated (3, 5, 17).

Other variations of VRM's have been widely studied but are generally not being proposed for use because of their complexity or problems of implementation. The differential VRM attempts to take inflation into account so that the payments rise at about the same rate as the price level by making adjustments to

the payments based on comparisons between different interest-rate indexes.

Some VRM designs are based on two interest rates. Generally, a single interest rate is used to calculate the interest owed on the outstanding balance and to determine the monthly payments. It is not necessary, however, that only one rate be used for both these functions. The use of two rates could allow for the more responsive yield needed by lenders, yet provide a more stable payment pattern for the borrower. By using two rates, by allowing one or both to vary, and by allowing other mortgage features such as the term and payments to vary, many more mortgages can be designed; this is the basis of several variations of the VRM. With the dual rate VRM, a short term interest rate would be used to compute interest on the outstanding balance, but a long term interest rate would be used to compute the monthly payment. This would combine the advantages of more responsive yield to the lender and less variability in the payments for the borrower. The constant payment factor VRM uses two interest rates, but holds the rate used to determine monthly payments (the payment factor) constant. The objective with this VRM is again to provide a more flexible yield to the lender, but an even more stable borrower payment pattern than the standard or dual rate VRM's. The use of two interest rates can also be used to design VRM's which lessen some of the difficulties involved in providing VRM's with level payments (3, 5, 17).

As a result of the FHLBB study, a number of consumer safeguards specific to VRM's are being proposed (10).<sup>3</sup> These include proposals that:

1. Lenders be required to disclose, before loan origination, the maximum amount that payments could become at the time at which the rate could first be raised, as well as the maximum that the payments could ever become.

2. The index used to adjust the interest rate should be a reliable measure of market interest

<sup>3</sup> The proposed safeguards are generally the same as or more conservative than current California VRM regulations or regulations proposed by the FHLBB in 1975 (10).

rates, beyond the influence of lenders applying it, clearly explainable, and as free as possible from the influence of unusual circumstances.

3. The maximum allowable rate changes should be held at 0.5 percent per year and 2.5 percent overall.

4. Changes could be made only on the anniversary of the contract; decreases would be mandatory, while increases would be at the discretion of the lender (unused increases could be used later directly or to offset a decrease).

5. A 45-day notice of an increase would be required.

6. Prepayment would be allowed without penalty whenever the current contract rate rose above the initial rate.

7. The borrower may have the option of extending the maturity of the loan up to 40 years rather than accept payment increases.

8. For the Canadian rollover mortgages, the lender would assure the borrower that refinancing would be available and would charge expenses involved in the renegotiation of the mortgage, such as loan fees and title insurance, only once.

VRM's appear to be strongly favored by the financial community (6, 15). These AMI's have met with strong resistance, particularly where few restrictions on their implementation were imposed and borrowers had no choice between mortgage forms. Without restrictions and safeguards, VRM's could place substantial hardship on borrowers, leading to defaults and closing even more potential buyers out of the housing market.

VRM's will require substantial consumer education. The potential VRM borrower needs to know (13):

1. Initial and maximum possible interest rates, the magnitude and frequency of allowable interest rate changes, and how these changes will be implemented—by changes in payments, in term, or both.
2. Initial and maximum possible payments and/or term, and the magnitude and frequency of allowable payment and/or term changes.
3. Length of advance notification.
4. Prepayment rights.
5. Index to be used.

VRM's are not, however, necessarily bad for all consumers. A number of price and nonprice features are being offered in VRM contracts as incentives to consumer acceptability. These include lower initial interest rates, lower closing costs, interest on escrow accounts, a line of credit, and deletion of prepayment penalties. The assurance that the loan may be assumed by a qualified buyer or transferred to another home may be particularly advantageous features for families who might move. For some consumers a VRM may be better than no mortgage at all if funds are particularly difficult to obtain, and for others, increases in interest rates may offer income tax advantages (3, 7).

### Reverse Annuity Mortgages

One form of AMI that is stimulating a great deal of interest despite its complexity is the reverse annuity type of mortgage (RAM). Generally, the RAM is a loan, secured by a house, that is used to purchase an annuity, which provides a source of future income. Whereas standard and alternative mortgages involve committing future income to acquire an asset in the present, RAM's enable the families whose mortgage has been largely or completely paid off to commit equity in an asset owned in the present to receive income in the future. The former enables the accumulation of wealth; the latter allows the use of wealth already accumulated (3).

RAM's are specifically designed for the elderly and retired who often find themselves with low and fixed incomes, but with substantial assets tied in the equity in their homes. To take advantage of this asset, however, they must sell and move. This requires a break with the emotional ties of what may have been a long-standing family home; it also poses the uncertainty that the proceeds of the sale will cover their expenses for their remaining years. Many, therefore, remain in their homes, often unable to adequately maintain the home or handle rising costs such as property taxes. RAM's enable these homeowners to use the accumulated equity in their homes as a source of income without having to sell and leave their homes. At the same time some equity is still retained, increases in the value of their homes



may still be enjoyed, and bequests may still be made. RAM's may thus be used to even out the pattern of lifetime earnings for a family, or provide the only means by which a family could remain in its home.

Because there are many ways wealth can be liquidated, many forms of RAM's can emerge. This means that there is a great deal of potential for designing RAM's flexible to individual circumstances, but it also leads to a great deal of complexity and possible confusion. There are basically two types of RAM's, split equity and nonrepayable loans. Split-equity contracts allow the owner to remain in the home until death, while giving up rights to the proceeds when the home is sold. The lender essentially purchases the home through regular payments to the borrower. In the purest sense, then, because they involve actual sale of the property and no mortgage loan, split-equity contracts are not truly RAM's.

Nonrepayable RAM's may take many forms, but all generally involve the purchase of an annuity contract with funds received from interest-only mortgage loans. Basically, the lender, using the house as collateral, purchases an annuity contract. The annuity is then paid to the homeowner each month, after deducting the mortgage interest payment to the lender. The mortgage principal, which was used to obtain the annuity, is repaid to the lender after the death of the homeowner. With nonrepayable types of RAM's, no repayment of principal is required during the borrower's life unless the property is sold.

RAM's appear very promising, but they present substantial problems and complexities which will require continued study and development. They are being recommended for future use, but with considerable attention on an individual basis until guidelines and safeguards can be developed (3, 4, 10).

### Other AMI's

Many other types of AMI's with many variations have been proposed and studied. As with some of the various GPM's and VRM's, these are not generally being recommended for development and adoption at this time. Some are very complex; others would involve major legal, tax, or administrative problems for implementation or would not offer an

acceptable balance between advantages and disadvantages for both borrowers and lenders. Some, however, may continue to be considered and should be included in a discussion of AMI's.

Under the price level adjusted mortgage (PLAM), the outstanding balance and/or the payments are adjusted to reflect trends in inflation. Payments vary directly with the price level and are thus rising in nominal terms but constant in real terms. If incomes and prices move together, the proportion of income devoted to housing will not change. The PLAM's directly address the problem of inflation, but would be very complex to introduce (3, 5, 17).

The deferred interest mortgage (DIM) involves a lowered initial interest rate and thus lower initial payments for a specific period of time. (It is essentially a two-step GPM.) If the house is sold at the end of that time, the lender receives the deferred interest plus a fee from the proceeds of the sale. Assuming property values continue to rise, this should present no problem to the household. If the house is not sold, the borrower must refinance, generally with a standard mortgage at the current market rate for the remaining balance. The borrower can either reimburse the lender, or the deferred interest and fee can be amortized over the remaining term. The DIM could enable the borrower to reduce initial payments or purchase a more expensive home, and it could be particularly attractive for mobile families.

Some AMI's represent a combination of other AMI's. For example, the PLAM might be offered with either a single or dual rate VRM feature, or the GPM and VRM could be combined in such a way as to capture the features of the GPM that are beneficial to the borrower with the VRM features which aid the lender. Still other AMI's may involve sharing the appreciation or equity in the home with the lender or government agency and allowing for reduced interest rates or payments (3, 5, 17).

AMI's are not being viewed as a panacea to housing finance problems; the objective is not to replace the standard mortgage but to expand the number and range of alternatives available. Based on the premise that one mortgage cannot meet the diverse needs of borrowers and

lenders, the GPM, VRM, Canadian rollover, and reverse annuity mortgages have been recommended for adoption for all mortgage lenders on a nationwide basis. Consumer safeguards that apply to all AMI situations, as well as those that apply to particular instruments, are

included in the recommendations. These safeguards emphasize disclosure and choice, to insure that borrowers will be aware that a choice is available and that they be presented with information adequate to base their decisions upon (4, 10).

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# INDEX OF MAJOR ARTICLES PRINTED IN FAMILY ECONOMICS REVIEW, 1966-78<sup>1</sup>

<i>Title</i>	<i>Author</i>	<i>Issue</i>
<b>BUDGETS</b>		
<b>Clothing</b>		
Clothing Quantity Budgets for Individuals	Britton, V.	Fall 1974
USDA Clothing Budgets: Annual Costs	Britton, V.	Summer 1974
USDA Clothing Budgets: 1975 Costs	Britton, V.	Summer 1975
<b>Cost of Raising a Child</b>		
Child-Rearing Costs at Two Levels of Living, by Family Size	Pennock, J. L.	December 1970
Cost of Raising a Child	Pennock, J. L.	March 1970
<b>Food</b>		
The Appropriate Family Food Plan	Peterkin, B.	Fall 1976
Bargain Hunting: Meat and Meat Alternates	Peterkin, B.	Fall 1978
Comparing Costs of Fresh Vegetables and Fruits	Peterkin, B.	December 1969
Cost of Food at Home and the New Consumer Price Index	Kerr, R. L.	Summer 1978
The Cost of Meats and Meat Alternates	Peterkin, B.	Fall 1974
Cost of Milk and Milk Products as Sources of Calcium—an Update	Isom, P.	Summer 1976
The Cost of Poultry, Whole and Parts	Peterkin, B.	Winter 1974
Cost of the Lean in Ground Beef	Cromwell, C.	Winter 1974
Economical Meals for a Month	Cromwell, C., and McGeary, B.	Fall 1975
The Effect of Consumer Credit on Food Expenditures	Courtless, J.	March 1971
Food for the Baby...Cost and Nutritive Value Considerations	Peterkin, B., and Walker, S.	Fall 1976
Food Plans and Family Budgeting	Peterkin, B.	Spring 1975
How Food Dollars Were Divided, 1965 and 1975	Cromwell, C., and Kerr, R.	Summer 1977
The Part of Income That Goes for Food	Peterkin, B.	Winter 1974
Textured Soy Protein as a Ground Beef Extender	Odland, D., and Adams, C.	Summer 1976
<b>Household Work</b>		
Time and Its Dollar Value	Walker, K. E., and Gauger, W. H.	Fall 1973
Time Spent in Household Work by Homemakers	Walker, K. E.	September 1969
Time Used by Husbands for Household Work	Walker, K. E.	June 1970

<sup>1</sup> Not a complete list. Excludes most Food and Agricultural Outlook Conference materials. Also, when

two or more articles on one subject were printed, only the most recent was included in this Index.



## CLOTHING AND TEXTILES

## New Developments

Flammability Standards for Sleepwear: A Cost-Benefit Analysis	Polyzou, A., and Dardis, R.	Fall 1977
New Developments in Clothing and Textiles	Polyzou, A.	Summer 1977
Nonwoven Fabrics: An Overview	Harries, N. G.	Summer 1975
Textile News: Fabric Flammability	Harries, N. G.	Fall 1974
Textile News: The Energy Situation	Harries, N. G.	Summer 1974

## Spending

Stretching the Clothing Dollar	Britton, V.	Fall 1975
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## ENERGY

Consumer Appliance Decisions: Using Energy Labels	Ruffin, M. D.	Summer 1978
Electric Power: A Crisis Ahead?	Doss, M. J.	September 1972
Energy Conservation in and Around the Home	Pifer, G.	Spring 1974
Energy Extension Service	Liersch, J. M.	Summer 1978
Energy Expenditures and Appliance Ownership of Farm-Operator Households	Ruffin, M. D.	Winter 1977
Energy Prices and Their Impact on Families	Ruffin, M. D.	Fall 1974
Household Energy Adjustments	Smith, R. B.	Spring 1977
In-Home Energy Monitor: A test of Consumer Response	Hutton, R. B.	Summer 1978

## FAMILY FINANCE

## Credit

A Simplified Method of Finding the Annual Interest Rate on Installment Credit	Homes, E. G., and Jaeger, C. M.	September 1966
Bankruptcy and Its Alternatives	Hoerman, C. M.	Summer 1977
Consumer Installment Credit	Jennings, C. L., and Tippet, K. S.	Fall 1977
Credit Unions	Edwards, C. S.	Fall 1977
Family Adjustments to Debt Payments	LeFebvre, J., and Tippet, K. S.	December 1972
Family Use of Credit	Smythe, K. D.	March 1970
The Management and Use of Credit Cards	Hoerman, C. M.	Summer 1977
Some Considerations in Family Credit Decisions	Smythe, K. D.	June 1969

## Other

Education as an Investment	Magrabi, F. M.	December 1971
Factors to Consider in Selecting a Savings Account	Rudd, N.	Summer 1973

## FAMILY FINANCE—continued

## Other—continued

Financial Assets: The Changing  
Family Portfolio

Rudd, N.

Summer 1973

Variable Annuities—Retirement  
Income With Growth Potential

Rudd, N.

Fall 1974

What Price Increases Mean for  
FamiliesMork, L. F., and  
Magrabi, F. M.

Winter 1974

## FOOD

## Convenience

Convenience and the Cost of Plate  
Dinners and Skillet Main DishesCromwell, C., and  
Odland, D.

Summer 1974

Convenience Foods—1975 Cost Update

Traub, L. G., and  
Odland, D.

Winter 1976

Nutritive Value and Cost of  
“Fast Food” Meals

Isom, P.

Fall 1976

## Nutrients

Potassium in Common Foods

Murphy, E. W., and  
Mangubat, A. P.

Summer 1973

Zinc in Foods

Willis, B. W., and  
Mangubat, A. P.

Spring 1975

## Other

The Dietary Goals and Food on the table  
Dietary Goals for the United States  
Establishing and Implementing  
Dietary GoalsPeterkin, B.  
Shore, C. J.  
Leveille, G. A.Winter-Spring 1978  
Fall 1978  
Winter-Spring 1978

Food Safety in the Home

Jones, J., and  
Weimer, J.

Summer 1976

Nutrition Labeling for the Consumer  
Unit Pricing and Open Dating  
U.S. Dietary GoalsPeterkin, B.  
Taylor, E. F.  
Hegsted, D. M.Summer 1973  
June 1972  
Winter-Spring 1978

## Preservation

Food Canning by U.S. Households  
Home Canning  
Home Food Preservation in U.S.  
HouseholdsRedstrom, R.  
Davis, C.  
Redstrom, R.September 1970  
Spring 1977  
June 1971Home Gardening and Incidence of  
Freezing and Canning

Kaitz, E. F.

Spring 1977

Home Gardening and Preservation  
of Fruits and Vegetables

--

Spring 1977

## Special Diets

Dietary Guidance for Food Stamp  
Families

Peterkin, B.

Winter 1976

Organic Foods—an Update  
Vegetarian DietsCromwell, C.  
Raper, N. R.Summer 1976  
Summer 1974

## HOUSEHOLD EQUIPMENT

## Freezers

Freezer Food Concerns	Lawyer, J. H.	Spring 1974
Homefreezer Management Survey: I. The Families and Their Freezers	Redstrom, R.	September 1966
Homefreezer Management Survey: II. Some Characteristics of Freezer Use	Restrom, R.	March 1967
Homefreezer Management Survey: III. More on freezer Use	Redstrom, R.	June 1967
Homefreezer Management Survey: IV. Advantages and Disadvantages of Freezer Ownership; Defrosting Practices; Costs	Restrom, R.	September 1967

## Laundry

The Cost of Doing Laundry at Home	Mork, L. F.	Fall 1975
Detergents and Our Water	Alter, H.	June 1971
Figuring the Cost of Doing Laundry at Home	Mork, L. F.	December 1970

## Service-Life

Service-Life Expectancy of Household Appliances	Tippett, K. S., and Ruffin, M. D.	Summer 1975
Service Life of Appliances by Selected Households	Tippett, K. S.	Summer 1978

## HOUSING

The Cost of Buying a Home	Mork, L. F.	September 1969
Expenditures for Improving and Repairing the Family Home	Krassa, L. G.	Spring 1975
Housing in Multiunit Buildings	Krassa, L. G.	Summer 1975
A Lower Mortgage Rate?	Mork, L. F.	September 1971
Mobile Homes	Krassa, L. G.	December 1972
New Mortgage Designs	Edwards, C.	Fall 1978
Rental Housing in the United States	Krassa, L. G.	Winter 1974

## LEGISLATION

The Magnuson Moss Warranty Act	Marr, J.	Summer 1978
National Health Insurance: Issues for Consumers to Consider	Kline, K. L.	Fall 1974
No-Fault Insurance	Doss, M. J.	December 1971

## POPULATION

The Fastest Growing Minority: The Aging	Brotman, H. B.	March 1972
Other Families: Families Without Spouses	Kline, K. L.	Summer 1974
The Outlook for the Labor Force	Klein, D. P.	Winter-Spring 1978
Young Adults	Mork, L. F.	Summer 1974



## SURVEY DATA

## Consumer Expenditure Survey 1960-61

Clothing Expenditures for Individuals	Britton, V.	March 1968
Clothing Expenditures of U.S. Families	Britton, V.	September 1966
The Effect of Family Size on Expenditures	Mork, L. F.	March 1967
Family Expenditures for Medical Care	Pennock, J. L.	March 1966
Farm Family Spending for Insurance, Gifts, and Contributions	Ellis, M. J.	June 1966
Home Production and the Family's Food	Pennock, J. L.	September 1966
How Families Spend Their Food Dollars	Peterkin, B., and Clark, F.	March 1966
Purchases of Various Types of Clothing for Men, Women, and Children	Britton, V.	September 1968
Sources of Expenditure Data	Pennock, J. L.	December 1970

## Household Food Consumption Survey 1965

Better Diets Possible by Shifting Food Expenditure Pattern	Ward, C.	December 1970
Breakfast Patterns of Boys in the North Central Region	Pao, E.	December 1970
Changing Food Consumption in the United States	Adelson, S. F.	September 1967
Changing Patterns of Family Food Spending	Clark, F.	December 1966
Changing Patterns of Potato Consumption	Clark, F., and Peterkin, B.	June 1968
Diets of Low-Income Families	Eagles, J. A.	March 1969
Diets of Men, Women, and Children	Swope, D. A.	March 1969
Distribution of the Food Dollar by Families in Four Regions and in the Low-Cost Food Plan	Chassy, J.	December 1970
Expenditures for Food Away From Home	LeBovit, C.	December 1967
Family Diets Costing Less Than the Economy Plan	Peterkin, B.	September 1971
Food Expenditures in the South	Steele, P.	December 1968
Food Patterns of the Elderly	Pao, E.	December 1971
Food Prices Paid by Large and Small Families	Peterkin, B.	December 1972
Food Spending Patterns of Southern Black Households	Ward, C.	Fall 1975
Food Use in Farm and Urban Households in 1955 and 1965	Peterkin, B., and Rauschert, M.	September 1968
Household Food Spending Affects Diet Adequacy	Ward, C.	June 1972
Household Use of Convenience Foods	Bivens, G. E.	December 1967
Money Value and Adequacy of Diets Compared With the USDA Food Plans	Peterkin, B., and Clark, F.	September 1969
Nutrients From a Dollar's Worth of Food, Northeast Region	Peterkin, B., and Ward, C.	June 1968

## SURVEY DATA—continued

## Household Food Consumption Survey 1965—continued

Quality of Diets in U.S. Households in Spring 1965	Adelson, S. F., and Peterkin, B.	March 1968
Ready-to-Eat Breakfast Cereals in U.S. Diets	Peterkin, B.	December 1970
Seasonal Variation in the Money Value of Food Consumed at Home by Urban, Rural Nonfarm, and Farm Households	Beloian, A. M.	September 1971
Seasonal Variations in U.S. Diets	Beloian, A. M.	March 1971
Use of Apples by U.S. Households	Swope, D. A.	September 1969

## Other Surveys

Expenditures and Value of Consumption as Measures of Level of Living	Pennock, J. L., and Mork, L. F.	June 1970
Expenditures and Value of Consumption of Farm and Rural Nonfarm Families in North Carolina	Mork, L. F., and Pennock, J. L.	September 1970
Gifts and Handed-Down Clothing Important in Family Wardrobes	Britton, V.	September 1969
The 1977-78 Nationwide Food Consumption Survey	Rizek, R. L.	Fall 1978
Transportation and Farm-Operator Households	Hoerman, C. M.	Winter 1977

## WOMEN

Employment and Earnings of Women	Rudd, N.	Fall 1973
Mothers in the Labor Force	Ruffin, M. D.	Fall 1973
Women and Credit	Tippett, K. S.	Fall 1973
Women and Homeownership	Krassa, L. G.	Fall 1973
Women 65 Years of Age and Over	Mork, L. F.	Fall 1973

## MISCELLANEOUS

Sources of Government Data Useful in Family Economics Research	Jennings, C. L.	Spring 1977
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## HOUSING DEVELOPMENTS

### HUD Statistical Yearbook, 1976

The 1976 STATISTICAL YEARBOOK has been issued by the U.S. Department of Housing and Urban Development (HUD). The Yearbook contains statistical and financial information on HUD programs and on the characteristics of program recipients. One section includes results of the 1975 Annual Housing Survey. The Yearbook is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, for \$5 (Stock No. 023-000-00414-3).

### Housing and Community Development Act of 1977

The Housing and Community Development Act of 1977, which became law in October 1977, contains provisions that should help families purchase and maintain their homes.

Title III of the act, "Federal Housing Administration Mortgage Insurance and Related Programs," contains the most far reaching of those provisions.<sup>1</sup> Specifically, this title raises to \$60,000 the maximum loan amount a buyer can obtain using Federal Housing Administration (FHA) insurance. This action is especially important in high-cost areas of the country where first mortgages have been rising above the previously allowed maximum of \$45,000. The act also lowers the downpayments required for FHA loans to 3 percent on the first \$25,000 and 5 percent on the additional amount. These two provisions make

FHA loans more attractive and more easily available to moderate income buyers—especially young, first-time buyers with limited savings.

Other provisions of Title III include an increase in the loan ceiling for mobile home and home improvement loans, and an extension of the maximum length of loans for some mobile home units and for home improvements. Also, the experimental program which enabled HUD to offer a graduated payment plan with FHA-insured mortgages was placed on a permanent basis. Graduated payment mortgages are aimed at helping younger, first-time homebuyers by allowing for lower monthly payments during the early years of ownership.

The act also deals extensively with community development and housing assistance programs and provisions relating to neighborhood conversion and housing rehabilitation. Title IV expands powers of Federal Savings and Loan Associations and should allow for greater investments in single-family homes and multi-family buildings, and for larger home improvement loans. Title VIII, entitled the Community Reinvestment Act, encourages public and private sector cooperation in local community investment. Rural housing, housing counseling, and provisions for the elderly and handicapped are also among issues that are addressed by the new act.

### Interest Rates for FHA and VA Loans

Effective June 1978 the maximum allowable interest rate for Federal Housing Administration (FHA) and Veterans Administration (VA) single-family home mortgage loans was increased from 9 to 9-1/2 percent.

This increase brings these rates in line with other competitive rates and, along with the new provisions of the Housing and Community Development Act of 1977, should increase the availability of financing for moderate-income buyers.

<sup>1</sup> The act is omnibus legislation that contains nine titles (sections). These titles cover community development, housing assistance programs, FHA mortgage insurance, lending powers of Federal Savings and Loan Associations, rural housing, national urban policy, flood and riot insurance, community reinvestment, and other provisions. A summary of the act (Public Law 95-128) is available from the Office of Public Affairs, Department of Housing and Urban Development, 451 7th Street, SW., Washington, D.C. 20410. (Ask for HUD-380-2-PA, October 1977.)



Effective May 25, 1978, Federal credit unions (CU's) will be authorized to finance the purchase of mobile homes with maturities of 15 instead of the previously allowed 12 years. This is part of the expanded authority granted Federal CU's with the April 1977 amendments to the Federal Credit Union Act of 1934. (See

FAMILY ECONOMICS REVIEW, Fall 1977 issue, p. 13.)

Final regulations authorizing Federal CU's to make residential real estate loans, powers also granted in the April 1977 legislation, have also been released. Effective May 8, 1978, qualified credit unions will be authorized to offer 30-year mortgages on one-to-four family dwelling units that serve as the principal residence of the member.

## CONSUMER AWARENESS OF CREDIT COSTS

Preliminary results of a consumer awareness survey conducted in 1977 for the Federal Reserve Board indicate that Truth in Lending has contributed significantly to increased consumer awareness of credit costs. Survey results, which were compared with two earlier surveys conducted for the Federal Reserve Board in 1969 and 1970,<sup>1</sup> show that although awareness of annual percentage rates charged for consumer credit increased sharply in the first 15 months after Truth in Lending went into effect, there have been significant further increases over the last 8 years (see table). In 1977, 55 percent of the consumers surveyed were aware of the annual percentage rates charged for closed-end credit; 65 percent were aware of rates charged for retail revolving credit; and 71 percent were aware of rates charged for bank credit cards.

There was considerable variation in both the level of awareness and the extent of improvement among the users of different types of closed-end credit. Users of credit for the purchase of new automobiles and home improvements had the highest rates of awareness in 1977—71 and 67 percent, respectively—and the largest improvement in awareness since 1969. Users of credit for the purchase of used automobiles had the lowest level of awareness in 1977—38 percent—and the smallest improvement.

The awareness of annual percentage rates charged on closed-end credit was higher among customers of credit unions (66 percent), finance companies (58 percent), and banks (52 percent), than among those who obtained their credit from retail dealers (42 percent).

<sup>1</sup> See "1970 Survey of Consumer Awareness of Credit Costs," *Family Economics Review*, June 1971, p. 26.

Source: Board of Governors of the Federal Reserve System, 1978, *Annual Report to Congress on Truth in Lending for the Year 1977*, 19 pp., plus appendix A and B.

Awareness of annual percentage rates charged for consumer credit by characteristics of consumers using credit, 1969, 1970, 1977

Group	Closed-end credit			Open-end credit					
				Retail revolving			Bank credit card		
	1969	1970	1977	1969	1970	1977	1969	1970	1977
	<u>Percent</u>								
All consumers .....	15	38	55	35	56	65	27	63	71
Education:									
Some high school or less	9	26	41	20	30	45	16	40	51
High school .....	18	38	54	32	54	61	19	51	65
Some college or more ....	18	51	65	48	69	76	39	77	80
Age:									
Under 35 years .....	15	40	55	40	65	69	35	68	76
35-49 years .....	15	41	58	39	62	73	27	63	75
50 years or more .....	13	36	49	27	42	56	21	59	65
Income: <sup>1</sup>									
Less than \$7,500 .....	6	24	33	19	27	43	11	61	59
\$7,500-\$12,499 .....	15	29	49	28	43	55	23	54	60
\$12,500-\$17,499 .....	16	37	56	37	57	58	29	57	66
\$17,500 or more .....	18	48	64	43	65	77	33	68	78

<sup>1</sup>Income categories for 1969 and 1970 were adjusted to 1977 dollars using the Consumer Price Index. Slight adjustment of categories was made in 1977 to accommodate the scales used by the interviewers.

Source: Board of Governors of the Federal Reserve System, 1978, Annual Report to Congress on Truth in Lending for the Year 1977, 19 pp., plus appendix A and B.

# BARGAIN HUNTING: MEAT AND MEAT ALTERNATES

by Betty Peterkin

With food prices on the rise, food shoppers are especially alert for food bargains. The meat counter is a good place to start. Usually foods found there—meat, poultry, and fish—cost more than other foods that make up meals. Selecting with care at the meat counter can result in worthwhile savings.

The best buys are the cuts, grades, and types of meat, poultry, and fish that provide cooked lean meat for the lowest cost. Costs of 3-oz servings of cooked lean meat based on average retail prices in U.S. cities, April 1978, illustrate the potential savings from careful selection (table 1). For example, beef liver and hamburger cost about half as much as equal-size servings of chuck roast of beef and fish fillet. Chicken and turkey (from the whole bird) cost less than half as much as pork loin roast and round beefsteak. The amount actually served, of course, may be more or less than the 3 oz for which costs are shown in the table, depending on personal preference or on the size of pieces, such as chicken parts, chops, or steaks.

In addition to replacing expensive meat, poultry, and fish items with cheaper ones, the budget-minded shopper can replace some meats with alternates such as eggs, dry beans and peas, and peanut butter. These foods are suitable replacements because they provide protein and most other nutrients for which meat, poultry, and fish are valued. Cheese can also be used. It can be counted on for the same nutrients except iron and is a good source of calcium while meat is not. Protein of vegetable origin, such as dry beans and peanuts, generally is rated lower in quality than the protein from animal sources. Because of this it is a good idea to have a little milk, egg, or meat at meals with these foods.

## Cost of Protein From Meats and Alternates

One way to determine good buys among meats and meat alternates is to compare the costs of quantities of them that provide equal amounts of protein. Table 2 shows the cost of

quantities required to give 20 g of protein—about one-third of the recommended allowance for a day for a man. Costs for bread and milk are shown, too. Although these foods are not generally used to replace meat in meals, they provide worthwhile amounts of protein in most diets.

Foods are listed in table 2 in order by increasing cost of 20 g of protein in April 1978. These costs do not include the expense of fuel needed for cooking. Dry beans, peanut butter, beef liver, eggs, chicken, hamburger, and turkey are the least costly protein sources of the meats and alternates listed. Protein from certain chops, steaks, and roasts, and from frozen fish fillets costs twice as much or more. Bacon, pork sausage, and bologna are also high-cost items mainly because large amounts of them are required to provide 20 g of protein.

How much of a food it takes to give 20 g of protein, in table 2, along with the cost, is important information for the meal planner. While a small serving of cooked lean meat from beef, pork, lamb, veal, turkey, or fish provides 20 g of protein or more, well over a serving of some meats and meat products is required: 10 slices of bacon, 3½ frankfurters, or four to six 1-oz slices of luncheon meats, for example. Amounts of other foods needed to provide 20 g of protein are also larger than the usual serving—more than a cup of cooked or canned dry beans, 5 tablespoons of peanut butter, 3 oz of American process cheese, or 3 eggs. It takes over 8 slices of bread or 2-1/3 cups of whole milk for 20 g of protein. Obviously, smaller amounts of these foods will be used with other foods that give protein. Many popular main dishes are combinations of expensive and less expensive sources of protein. Examples are frankfurters and beans, luncheon meat sandwiches, and bacon and eggs.

The food energy (calorie) value of the quantity of meats and alternates to provide 20 g of protein, also shown in table 2, may be helpful, especially to people who are trying to control their weight. Avoiding the use of large



amounts of high-calorie items, even if such items are economical sources of protein, and counting on lower calorie foods most of the time to provide the protein, vitamins, and minerals needed can be an aid in controlling weight.

### Changes in Food Costs Since 1974, 1976

The best buys among meats and alternates may change, of course, as prices change. For example, U.S. average retail prices of certain items declined between April of 1974 and 1978, while others increased sharply (table 3).

April 1978 prices of some beef items—chuck roast and liver—had not returned to the high levels of 1974. However, prices of the more expensive beef steaks and roasts in April 1978 exceeded 1974 levels. Of those items compared, fish prices increased the most—30 to 60 percent—between 1974 and 1978. Most pork items were up 30 to 40 percent from 1974; however, most of these increases occurred between 1974 and 1976. Comparatively small price increases occurred for poultry and luncheon meats between 1974 and 1978.

The price of dry beans, unusually high in 1974, was about 30 percent lower by 1976 and

Table 1. Cost of 3 oz of cooked lean meat from specified meat, poultry, and fish at April 1978 prices

Food	Price per pound <sup>1</sup>	Part of a pound for 3 oz of cooked lean meat	Cost of 3 oz of cooked lean meat
Beef liver .....	\$0.82	0.27	\$0.22
Hamburger .....	1.03	.26	.27
Chicken, whole, ready-to-cook	.65	.48	.31
Turkey, ready-to-cook .....	.81	.40	.32
Chicken breasts .....	1.18	.35	.41
Pork picnic .....	.96	.46	.44
Ham, whole .....	1.39	.35	.49
Chuck roast of beef, bone in	1.11	.45	.50
Ocean perch, fillet, frozen .	1.82	.29	.53
Ham, canned .....	2.33	.25	.58
Haddock, fillet, frozen .....	2.03	.29	.59
Rump roast of beef, boned ...	1.86	.34	.63
Round beefsteak .....	1.96	.34	.67
Pork loin roast .....	1.52	.50	.76
Veal cutlets .....	3.26	.25	.82
Pork chops, center cut .....	1.96	.45	.88
Sirloin beefsteak .....	2.14	.43	.92
Rib roast of beef .....	2.06	.45	.93
Porterhouse beefsteak .....	2.63	.52	1.37
Lamb chops, loin .....	3.54	.46	1.63

<sup>1</sup>Average retail prices in U.S. cities, Bureau of Labor Statistics, U.S. Department of Labor.

Table 2. Cost of 20 g of protein from specified meats and meat alternates at April 1978 prices

Food	Market unit	Price per market unit <sup>1</sup>	Part of market unit to give 20 g of protein <sup>2</sup>	Cost of 20 g of protein	Food energy (calories) <sup>3</sup>	Items ranked for economy as sources of protein <sup>4</sup>		
						April 1978	April 1976	April 1974
Beans, dry .....	1b	52.4	.24	\$0.13	300	1	1	3
Peanut butter .....	12 oz	75.2	.23	.17	460	2	2	1
Bread, white enriched <sup>5</sup> .....	1b	35.9	.51	.18	620	3	3	2
Beef liver .....	1b	81.8	.24	.20	170	4	4	9
Eggs, large .....	doz	79.4	.25	.20	250	5	5	4
Chicken, whole, ready-to-cook	1b	65.1	.37	.24	<sup>6</sup> 160	6	7	5
Hamburger .....	1b	102.6	.24	.25	230	7	6	7
Milk, whole fluid <sup>7</sup> .....	½ gal	86.7	.29	.25	370	8	8	6
Turkey, ready-to-cook .....	1b	80.6	.35	.28	120	9	9	11
Chicken breasts .....	1b	118.2	.25	.30	<sup>6</sup> 130	10	11	8
Pork picnic .....	1b	95.7	.32	.31	130	11	12	12
Tuna, canned .....	6.5 oz	78.1	.44	.35	240	12	10	10
American process cheese .....	8 oz	92.8	.38	.35	320	13	13	13
Chuck roast of beef, bone in	1b	110.7	.35	.39	150	14	14	21
Ham, whole .....	1b	139.4	.29	.40	130	15	16	14
Round beefsteak .....	1b	196.1	.22	.43	110	16	15	17
Rump roast of beef, boned ...	1b	185.7	.26	.48	130	17	18	23
Liverwurst .....	8 oz	80.8	.60	.48	430	18	19	22
Frankfurters .....	1b	137.0	.36	.50	490	19	17	20
Pork loin roast .....	1b	151.8	.33	.51	170	20	22	16
Salami .....	8 oz	102.6	.50	.52	360	21	20	24
Sardines, canned .....	4 oz	59.1	.94	.56	210	22	23	15
Ham, canned .....	1b	233.3	.24	.56	210	23	25	19
Sirloin beefsteak .....	1b	213.8	.28	.60	120	24	24	25
Ocean perch, fillet, frozen .	1b	182.3	.36	.66	<sup>6</sup> 240	25	21	18
Bologna .....	8 oz	91.9	.73	.67	500	26	28	29
Rib roast of beef .....	1b	206.3	.33	.68	150	27	27	26
Pork chops, center cut .....	1b	195.7	.35	.68	160	28	29	27
Veal cutlets .....	1b	326.3	.21	.70	100	29	30	34
Haddock, fillet, frozen .....	1b	203.3	.35	.72	<sup>6</sup> 170	30	26	28
Pork sausage .....	1b	159.6	.52	.83	530	31	32	30
Porterhouse beefsteak .....	1b	263.0	.34	.89	130	32	31	33
Bacon, sliced .....	1b	187.9	.52	.99	450	33	34	32
Lamb chops, loin .....	1b	354.1	.31	1.09	110	34	33	31

<sup>1</sup>Average retail prices in U.S. cities, Bureau of Labor Statistics, U.S. Department of Labor.

<sup>2</sup>One-third of the daily amount recommended for a man.

<sup>3</sup>Food energy (calories) provided by amount to give 20 g of protein. Calorie values assume that meats are baked or broiled, unless otherwise specified, and that separable fat and drippings are not eaten.

<sup>4</sup>Rank was determined based on the cost of 20 g of protein from various items for each of 3 periods.

<sup>5</sup>Bread and other grain products, such as pasta and rice, are frequently used with a small amount of meat, poultry, fish, or cheese as main dishes in economy meals. In this way the high quality protein in meat and cheese enhances the lower quality of protein in grain products.

<sup>6</sup>Fried.

<sup>7</sup>Although milk is not used to replace meat in meals, it is an economical source of good quality protein. Protein from nonfat dry milk costs even less than protein from whole fluid milk.

Table 3. Change in prices of meats and meat alternates, April 1974 to 1978 and 1976 to 1978<sup>1</sup>

Food	Change in price		Food	Change in price	
	April 1974 to April 1978	April 1976 to April 1978		April 1974 to April 1978	April 1976 to April 1978
	<u>Percent</u>			<u>Percent</u>	
Beef:			Poultry:		
Chuck roast, bone in	-11	20	Chicken, whole, ready-to-cook	17	7
Hamburger	1	20	Chicken breasts	21	8
Liver	-22	6	Turkey, whole, ready-to-cook	6	8
Porterhouse steak	28	15			
Rib roast	33	20	Fish:		
Round steak	10	11	Haddock, fillet, frozen	36	29
Rump roast	6	7	Ocean perch, fillet, frozen	66	40
Sirloin steak	21	14	Sardines, canned	56	13
			Tuna, canned	36	24
Pork:			Other:		
Bacon, sliced	51	10	Bread, white enriched	5	2
Chops, center cut	31	6	Beans, dry	-33	-2
Ham, canned	33	3	Cheese, American process	23	9
Ham, whole	28	0	Eggs, large	2	2
Loin roast	36	7	Milk, whole, fluid	8	5
Picnic	14	1	Peanut butter	29	8
Sausage	37	7			
Other meat:					
Lamb chops, loin	66	23			
Veal cutlets	-5	8			
Luncheon meat:					
Bologna	20	14			
Frankfurters	14	15			
Liverwurst	8	4			
Salami	11	11			

<sup>1</sup>Average retail prices in U.S. cities, Bureau of Labor Statistics, U.S. Department of Labor.



remained at this lower level in 1978. Prices of American process cheese and peanut butter were 20 to 30 percent higher in 1978 than in 1974, while other items priced—bread, eggs, and milk—were up less than 10 percent from 1974 levels.

Despite food price changes, the relative economy of meats and meat alternates as sources of protein was much the same in April 1978 as 2 and 4 years earlier (table 2). The food shopper using the cost of 20 g of protein as a guide would have found the same foods among the least costly. Dry beans, beef liver, and turkey were somewhat better buys compared with other items in April 1978 than in 1974. However, they were among the better buys in both periods.

### How To Compare Costs Using Local Prices

The costs of meats and meat alternates in this article are based on average prices in U.S. cities in April 1978. Local prices, which may be somewhat different, can be used with the part of a pound or market unit required to provide a 3-oz serving of cooked lean meat (table 1) or 20 g of protein (table 2) to figure comparable costs. To do this, multiply the local price by the part of a pound or other market unit shown. For example, in table 1 the price of turkey, \$0.81 per pound, times the part of a pound required for a 3-oz serving, 0.40 pound, equals the cost of a serving, \$0.32. If the local price of turkey were \$0.90, the cost of a 3-oz serving would be \$0.36 ( $\$0.90 \times 0.40 = \$0.36$ ).

## DIETARY GOALS FOR THE UNITED STATES

by Carole J. Shore

The second edition of the "Dietary Goals for the United States," published in January 1978 by the Senate Select Committee on Nutrition and Human Needs, responds to many of the questions raised about the original goals published in February 1977.<sup>1</sup> In many respects the second edition is like the first: Goals are proposed for the same dietary substances and, except for salt, the levels proposed are essentially unchanged (see box). The second edition introduces a new goal concerning weight control and suggests ranges for selected dietary substances in addition to the specific levels suggested by the first edition.

Original goals did not mention excess calorie consumption or excess alcohol intake as poor nutritional practices. The new goals state: "To avoid overweight, consume only as much energy (calories) as is expended; if overweight,

decrease energy intake and increase energy expenditure." Footnotes have been added to explain that the average energy contribution of alcohol in diets of adults is approximately 210 calories per day.

In the second edition the total carbohydrate goal is at 58 percent of the energy intake, as it was in the original report. Goals for carbohydrate and sugar are clarified in the second edition by identifying two types of sugars, "naturally occurring" sugars and refined or processed sugars. "Naturally occurring" sugars are those obtained from fruits, vegetables, milk, and whole grains. The new goal recommends increased consumption of only complex carbohydrates and "naturally occurring" sugars. The goal aimed at decreasing sugar consumption is clarified in the second edition to include only "refined and processed" sugars.

The goal for salt was relaxed from 3 g daily to about 5 g daily because the higher allowance "is a more appropriate level of salt intake to recommend at this time for the general population."

<sup>1</sup> See *Family Economics Review*, Winter-Spring 1978, for a discussion of these goals.

## COMPARISON OF DIETARY GOAL RECOMMENDATIONS

Dietary substances	First edition dietary goals	Second edition dietary goals
Food energy	No recommendation.	To avoid overweight, consume only as much energy (calories) as is expended; if overweight, decrease energy intake and increase energy expenditure.
Carbohydrate and sugar	<p>1) Increase carbohydrate consumption to account for 55 to 60 percent of the energy (caloric) intake.</p> <p>2) Reduce sugar consumption by almost 40 percent to account for 15 percent of total energy intake.</p>	<p>1) Increase the consumption of complex carbohydrates and "naturally occurring" sugars from about 28 percent of energy intake to about 48 percent of energy intake.</p> <p>2) Reduce the consumption of refined and processed sugars by about 45 percent to account for about 10 percent of total energy intake.</p>
Fat and fatty acids	<p>1) Reduce overall fat consumption from approximately 40 percent to about 30 percent of energy intake.</p> <p>2) Reduce saturated fat consumption to account for about 10 percent of total energy intake; and balance that with polyunsaturated and monounsaturated fats, which should account for about 10 percent of energy intake each.</p>	No change.
Cholesterol	Reduce cholesterol consumption about 300 mg a day.	No change.
Salt	Reduce salt consumption by about 50 to 85 percent to approximately 3 g a day.	Limit the intake of sodium by reducing salt to about 5 g a day.

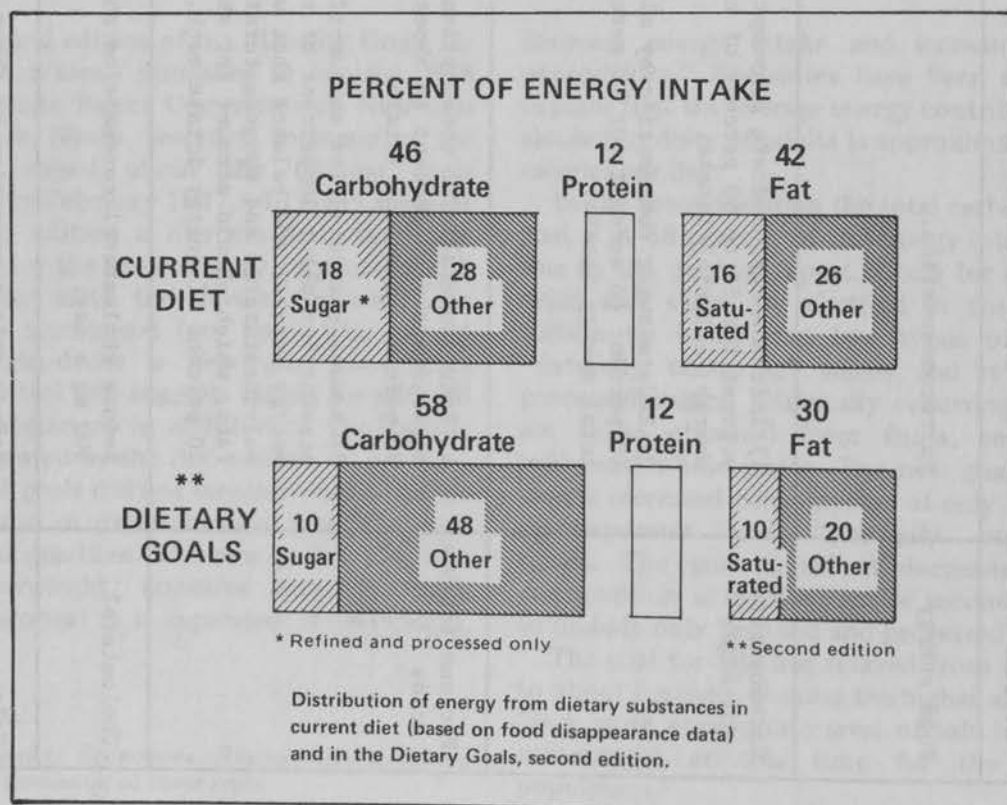
Committee members retained the goal of reducing cholesterol consumption to about 300 mg daily, but they noted the debate over the relationship between dietary cholesterol and heart disease, and affirmed the value of eggs as "an excellent, inexpensive source of protein, vitamins, and minerals, particularly for children, premenopausal women, and the elderly." The Committee said its recommendation intends neither eliminating egg consumption nor specifying an amount of eggs to consume.

Recommendations of the Committee with respect to the use of meat, poultry, fish, and dairy products were changed. The original goals suggested that Americans "decrease consumption of meat and increase consumption of poultry and fish." This edition urges Americans to "decrease consumption of animal fat and choose meat, poultry, and fish which will reduce saturated fat intake." Unlike the original report which suggested substituting nonfat milk for whole milk, this edition states, "Except for young children, substitute lowfat milk for whole milk, and lowfat dairy products for high fat dairy products."

As shown in the chart on page 32, current sources of food energy, such as fat, protein, complex carbohydrate, and sugar, would change if the second edition of the Dietary Goals were adopted. Increased carbohydrate and naturally occurring sugar consumption and decreased fat consumption would result.

The Consumer and Food Economics Institute is reviewing the goals as presented in the second edition in terms of diets to meet the goals for men, women, and children. However, because the levels of dietary substances specified as goals in the second edition are essentially the same as in the first report, diets to meet the new goals are expected to be similar to those presented in the 1978 Winter-Spring issue of FAMILY ECONOMICS REVIEW, pp. 11-29.

Sources: Select Committee on Nutrition and Human Needs, United States Senate, 95th Congress, 1st Session: February 1977, *Dietary Goals for the United States*, Committee Print, December 1977, *Dietary Goals for the United States*, 2d Edition, Committee Report.





## SOME NEW USDA PUBLICATIONS

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- FOOD AND YOUR WEIGHT. G 74. Revised November 1977.
- CHEESE IN FAMILY MEALS—A GUIDE FOR CONSUMERS. G 112. Revised September 1977..
- BEEF AND VEAL IN FAMILY MEALS: A GUIDE FOR CONSUMERS. G 118. Revised February 1978.
- HOW TO BUY CANNED AND FROZEN FRUITS. G 191. Revised July 1977.
- HOW TO BUY DAIRY PRODUCTS. G 201. Revised January 1978.
- CONTROL OF INSECTS ON DECIDUOUS FRUITS AND TREE NUTS IN THE HOME ORCHARD—WITHOUT INSECTICIDES. G 211. Revised October 1977.
- WHAT TO DO WHEN YOUR HOME FREEZER STOPS. L 321. Revised February 1978.
- FOOD FOR THRIFTY FAMILIES. [Unnumbered.] Revised March 1978.
- QUICK-QUIZ. [Unnumbered.] 1978. (Booklets adapted from a computerized quiz at the USDA exhibit at the Museum of Science and Industry, Chicago, Ill.)
  - GOOD NUTRITION.
  - SCHOOL LUNCHEES AND FOOD STAMPS.
  - HOW TO COOK.
  - WHAT FOOD COSTS.

## FOOD AWAY FROM HOME

Consumers spent \$52 billion in 1976 for food away from home. This represented 30 percent of expenditures for all food—up from 26 percent in 1966. Conversely, the share of all food going for food at home dropped from 74 to 70 percent during the same period.

In 1975, almost 39 percent of food away from home was eaten in conventional restaurants, lunchrooms, and cafeterias, or was catered. This represents a decline from 45 percent 10 years earlier. Refreshment places—mostly fast-food establishments—increased

their share of the away-from-home food market from 10 to 26 percent between 1965 and 1975. The share going to hotels and motels remained the same at 5 percent, while the share for other outlets such as schools, stores, and recreational places declined.

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Source: U.S. Department of Agriculture, Economics, Statistics, and Cooperatives Service, 1978, Perspectives: Eating out—fast foods, *National Food Review*, NFR-1, pp. 33-34.

Cost of food at home estimated for food plans at 4 cost levels, June 1978, U.S. average<sup>1</sup>

Sex-age groups	Cost for 1 week				Cost for 1 month			
	Thrifty plan <sup>2</sup>	Low-cost plan	Moderate-cost plan	Liberal plan	Thrifty plan <sup>2</sup>	Low-cost plan	Moderate-cost plan	Liberal plan
	<u>Dollars</u>				<u>Dollars</u>			
FAMILIES								
Family of 2: <sup>3</sup>								
20-54 years .....	26.20	34.30	43.00	51.60	113.40	148.50	186.70	223.60
55 years and over .....	23.50	30.60	37.90	45.30	101.90	132.60	164.30	196.40
Family of 4:								
Couple, 20-54 years and children--								
1-2 and 3-5 years .....	36.80	47.60	59.50	71.20	159.30	206.10	258.00	308.90
6-8 and 9-11 years ....	44.20	57.30	72.00	86.30	191.60	248.40	312.30	374.10
INDIVIDUALS <sup>4</sup>								
Child:								
7 months to 1 year .....	5.20	6.30	7.80	9.20	22.50	27.50	33.70	39.80
1-2 years .....	5.90	7.50	9.30	11.00	25.40	32.40	40.20	47.80
3-5 years .....	7.10	8.90	11.10	13.30	30.80	38.70	48.10	57.80
6-8 years .....	9.00	11.60	14.60	17.50	39.20	50.40	63.30	75.80
9-11 years .....	11.40	14.50	18.30	21.90	49.30	63.00	79.30	95.00
Male:								
12-14 years .....	12.10	15.40	19.40	23.20	52.50	66.90	84.00	100.50
15-19 years .....	13.40	17.20	21.50	25.90	57.90	74.40	93.40	112.20
20-54 years .....	13.10	17.20	21.70	26.10	56.70	74.40	94.20	113.30
55 years and over .....	11.70	15.20	18.90	22.70	50.50	65.80	81.90	98.50
Female:								
12-19 years .....	10.90	13.90	17.20	20.60	47.10	60.20	74.70	89.10
20-54 years .....	10.70	14.00	17.40	20.80	46.40	60.60	75.50	90.00
55 years and over .....	9.70	12.60	15.60	18.50	42.10	54.70	67.50	80.00
Pregnant .....	13.50	17.30	21.30	25.20	58.50	74.80	92.10	109.40
Nursing .....	14.30	18.30	22.80	27.10	62.00	79.30	98.80	117.30

<sup>1</sup>Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for each plan were computed from quantities of foods published in the Winter 1976 (thrifty plan) and Winter 1975 (low-cost, moderate-cost, and liberal plans) issues of *Family Economics Review*. The costs of the food plans were first estimated using prices paid in 1965-66 by households from USDA's Household Food Consumption Survey with food costs at 4 selected levels. USDA updates these survey prices to estimate the current costs for the food plans using information from the Bureau of Labor Statistics' "Estimated Retail Food Prices by Cities" from 1965-66 to 1977 and "CPI Detailed Report," tables 3 and 9, after 1977.

<sup>2</sup>Coupon allotment in the Food Stamp Program based on this food plan.

<sup>3</sup>10 percent added for family size adjustment. See footnote 4.

<sup>4</sup>The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person--add 20 percent; 2-person--add 10 percent; 3-person--add 5 percent; 5-or-6-person--subtract 5 percent; 7-or-more-person--subtract 10 percent.

## CONSUMER PRICES

Consumer Price Index for all urban consumers  
(1967 = 100)

Group	June 1978	May 1978	Apr. 1978	June 1977
All items .....	195.3	193.3	191.5	181.8
Food .....	213.8	210.3	207.5	193.6
Food at home .....	213.9	209.7	206.5	191.9
Food away from home .....	217.8	215.8	214.0	200.6
Housing <sup>2</sup> .....	202.0	199.9	198.3	189.0
Shelter .....	208.9	206.6	204.7	190.3
Rent .....	163.6	162.7	161.5	152.9
Homeownership .....	225.3	222.5	220.4	203.9
Fuel and other utilities <sup>2</sup> ..	217.5	215.5	213.9	201.8
Fuel oil, coal, and bottled gas .....	295.1	295.6	296.6	283.1
Gas (piped) and electricity .....	236.5	232.5	229.2	213.0
Household furnishings and operation <sup>2</sup> .....	177.6	176.0	175.0	177.1
Apparel and upkeep .....	159.9	159.8	158.4	153.9
Men's and boys' apparel ..	157.8	157.7	156.7	153.8
Women's and girls' apparel	150.0	150.7	149.0	146.0
Footwear .....	163.8	163.4	161.7	156.8
Transportation .....	185.5	183.2	181.1	179.2
Private .....	185.0	182.6	180.3	178.7
Public .....	187.2	187.4	187.3	183.2
Medical care .....	217.9	216.9	215.7	201.8
Entertainment <sup>1</sup> .....	176.2	176.2	175.6	--
Other goods and services <sup>2</sup> ..	181.0	180.4	179.8	158.4
Personal care .....	181.1	180.3	179.1	170.6

<sup>1</sup>New series.

<sup>2</sup>Series has been changed to include additional items. For details, see News, U.S. Department of Labor, Bureau of Labor Statistics, "The Consumer Price Index--January 1978," pp. 15-17, USDL-78-145.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

## WORK DISABILITY IN THE UNITED STATES: A CHARTBOOK

"Work Disability in the United States: A Chartbook," issued by the U.S. Department of Health, Education, and Welfare, Social Security Administration, presents data on the socioeconomic and medical status of the disabled. The chartbook provides information on the age, race, education, and marital patterns of the disabled. In addition, there are statistics on the

type of disability, limitations of activity, medical care use and payment, and employment and income of the disabled.

The chartbook is for sale for \$1.60 by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (Stock No. 017-070-00302-8)

## CONTENTS

	Page
The 1977-78 Nationwide Food Consumption Survey . . . . .	3
<i>Robert L. Rizek</i>	
New Mortgage Designs . . . . .	8
<i>Carolyn S. Edwards</i>	
Index of Major Articles Printed in <b>FAMILY ECONOMICS REVIEW</b> , 1966-78 . . . . .	17
Housing Developments . . . . .	23
Consumer Awareness of Credit Costs . . . . .	24
Bargain Hunting: Meat and Meat Alternates . . . . .	26
<i>Betty Peterkin</i>	
Dietary Goals for the United States . . . . .	30
<i>Carole J. Shore</i>	
Food Away from Home . . . . .	33
Work Disability in the United States: A Chartbook . . . . .	35

## Regular Features

Some New USDA Publications . . . . .	33
Cost of Food at Home . . . . .	34
Consumer Prices . . . . .	35

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