# **Eating Patterns Among Migrant Families**

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In THE RICH farming area of Palm Beach County, Fla., near Lake Okeechobee, an estimated 20,000 migratory agricultural laborers harvest winter vegetables from November through May. During the summer months the majority travel up the Atlantic Coast, working on farms as far north as New York State.

The nutritional status of this group is affected by their cultural background, inadequate knowledge of the nutritive value of foods, and economic problems arising from low and irregular income and the pressure of large families. Methods of preparation and preservation of food and the kind of cooking facilities used are influenced by the type of housing available to them. Their choice of foods, methods of preparing meals, and likes and dislikes are similar to those of other Negro groups in southern States (1).

# The Project

The Palm Beach County Migrant Project was designed to develop public health techniques adaptable to the cultural and social patterns of migrant workers and to demonstrate the effectiveness of a multidisciplinary approach to the health needs of the workers at the

Miss Delgado, at the time of the dietary study of migrant laborers, was nutrition consultant for the Palm Beach County Migrant Project. Dr. Brumback is health director, Palm Beach County, West Palm Beach, Fla., and Miss Deaver is director of nutrition services, Florida State Board of Health, Jacksonville.

The project was financed by the Children's Bureau and administered by the Palm Beach County Health Department, under the supervision of the Florida State Board of Health.

Okeechobee migrant labor camp in Belle Glade, Fla.

The project team was composed of two public health nurses, a sanitarian, a health educator, a medical social worker, a nutritionist, a liaison worker, and a secretary. A pediatrician and a general practitioner provided part-time health services.

Plans for a dietary study on a selected group of families were prepared by the project team nutritionist, in collaboration with the director of nutrition services of the Florida State Board of Health and the regional nutrition consultant for the area. The objectives of the study were:

- To obtain information concerning the eating habits, buying practices, food customs and beliefs, nutritional adequacy of the diet, and the general nutritional status of the study group.
- To secure data that would provide a basis for discovering practical and usable educational techniques in nutrition.
- To use certain educational techniques in giving information about nutrition.
- To evaluate the techniques used.

This paper reports on the data obtained on eating habits, buying practices, food preparation, nutritional adequacy of diet, and nutritional status of a selected population in the project area. Subsequent reports will deal with other aspects of the study, including a 3-day dietary study of the children of the selected families.

## The Study Population

Most of the workers at the Okeechobee migrant labor camp are American Negroes from Georgia and Alabama. They spend approximately 7 months a year at the camp, living in wooden, concrete, or tin houses of from one to three 12- by 16-foot rooms. Their children attend the elementary school at the camp.

Because of limited time and staff, only 35 of the 350 families living at the camp were selected for the study. These families had been in the migrant labor stream for some time, had schoolage children, and had attended the well-family clinic at the Belle Glade Health Center.

The objectives of this well-family clinic are to determine the health status of the migrant group and the extent to which they will accept preventive health services. In selecting families to be invited to attend the clinic, the health center endeavors to obtain a cross section of the migrant community. The only specific requirement is that no obvious major health problems exist in the families selected. A fairly complete health history and evaluation of each family participating in the study was available to the migrant project staff.

# Forms and Records

A 24-hour recall diet record, a food inventory form, and a general information form were used to obtain information on the nutritional status of the study families. Information for the 24-hour recall record was obtained from the mother or other person responsible for planning and cooking the meals. A set of interview forms was pretested with one family to determine whether or not they understood the questions.

Five forms were developed for evaluating the data: record of intake of food groups, to show the average daily and weekly intake of food for each family; calculation of food intake, for analysis of nutrients; cost analysis form, to provide a cost breakdown of the foods purchased; weekly food plan, to show the food needs of both children and adults; and food-pricing record, to show average prices for the area.

# Interviewing Procedure

The project nutritionist obtained the assistance of the migrant project nurse responsible for the Okeechobee camp and the migrant project liaison worker in helping to explain the purpose of the study to the families.

Detailed information on foods eaten was obtained through home interviews. All inter-

viewing was done by the nutritionist of the migrant project. Six families were seen each week, starting with three families the first week. Each family was visited three times. Those seen on Monday morning were revisited the middle of the week and again on the following Monday morning. The same procedure was followed with families seen first on Tuesday, Wednesday, Thursday, Friday, and Saturday. Each day a new family was added to the ones visited a second time.

The initial visit was devoted to a brief explanation of the study, establishment of confidence and rapport, starting the general information form, and beginning the food inventory and 24-hour recall record. The general information form was completed during the second and third visits. The inventory was checked at the midweek visit and completed at the last visit.

As a rule, the families were helpful and cooperative. They showed the nutritionist all groceries on the shelves and in the refrigerator or icebox, the dishes, silverware, and cooking utensils.

Except in three families, the mother was the person interviewed. In these families, the older daughters were interviewed because the mothers were working and the daughters were cooking the meals. The 24-hour recall and general information forms were filled out during informal conversations. The interviewer tried not to ask too many questions but rather led the mother or daughter to discuss meals and food preparation themselves.

# Cooking Schedules and Foods Eaten

The 24-hour diet recall and general information records showed that most families cooked twice a day when they were all working and three times a day when the mother stayed at home. Usually they carried some of the food from the morning meal to the field and reheated some of it when they came home late in the afternoon. They cooked meats, such as chicken, pork chops, ribs, sausage, or fish, very early in the morning. All cooked grits in the morning and sometimes rice, biscuits, combread, and potatoes. Most families had eggs, along with the grits, and fried white bacon or sausage.

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The following examples give the daily menus for families cooking twice and three times a day:

Cooking Done Twice a Day

Breakfast (6:00 a.m.): Fried chicken, rice, gravy, biscuits, sausage, and grits.

Lunch (11:30 a.m.):

Adults (in the field): Cookies or sandwich and soft drink.

Children (at home): Spaghetti, 1 can for 4 children; milk, ½ pint per child.

Dinner (7:00 p.m.): Black-eyed peas with white bacon, rice with neckbones, and white bread.

Cooking Done Three Times a Day

Breakfast (6:00 a.m.): Grits, eggs, white bacon, toast, and butter.

Lunch (11:30 a.m.): Stew meat, rice, snap beans, white potatoes, light bread, and cola drink.

Dinner (7:00 p.m.): Spareribs, macaroni and cheese, light bread, and chocolate milk.

Women who were heads of households said they cooked a large breakfast so that they could stay longer in the field without eating too much lunch. Sometimes they bought fish sandwiches, hot dogs, cookies, peanut and chocolate candy, and soft drinks at the field, and some carried cooked food to eat there. For small children remaining at home or attending school, the mothers left canned foods, such as pork and beans or spaghetti, and bread, cold cuts, peanut butter, mayonnaise, and jelly for preparing sandwiches. Sometimes the children heated some of the food cooked in the morning and ate it at lunchtime.

For the evening meal most families are cornbread, black-eyed peas with bacon or pigs' feet, and vegetables such as peas, cabbage, and corn. Beverages prepared from commercial powders, iced tea, and small amounts of milk were served at this meal. Neckbones and pigs' feet, ears, and tails were eaten almost every day.

Canned tomatoes, peas, and corn were used to some extent. The most common fresh vegetables were green beans and cabbage. Turnip greens and collards were grown in small gardens around some of the houses. Canned foods such as spaghetti, pork and beans, beef stew, and chicken were popular. Spiced ham, peanut butter, mayonnaise, and jelly sandwiches were consumed mostly at lunchtime. Crackers, sweet cookies, sweet rolls, and soft drinks were also used to a large extent for lunch and be-

tween meals. Rice and white bread were used extensively.

The fresh fruits most commonly seen were bananas, grapes, and apples. Canned peaches were well liked; dried prunes were seen on rare occasions. Citrus fruits were used whenever economic conditions would permit. Some families used canned grapefruit and orange juice, and some bought tangerines, oranges, and grapefruit when they were in season and prices went down. Citrus fruit is not grown plentifully in this section and is often available only in stores.

Very little milk was purchased. Fresh homogenized milk was consumed in small quantities, and some buttermilk was used. Dry skim milk was used by families who had been taught its value. Evaporated milk was used mostly for infant formulas. Cheddar cheese was eaten in small amounts.

Dried lima beans and black-eyed peas were the most common legumes eaten. Red kidney beans, pinto beans, and great northern beans were used less commonly and only by a few families. Grits were the favorite cereal and were eaten daily, often two or three times a day. Next in order of consumption were rice, oatmeal, and dry cereals, such as cornflakes. Dry cereal might be eaten in the morning or between meals.

Sliced white bread was popular and, because of lack of time for baking, other ready-prepared breads were widely used. Cornmeal and self-rising flour were used in preparing breads at home. Occasionally the diet included biscuits and commercial or homemade cakes and pies.

Margarine, butter, lard, vegetable shortening, oil, and mayonnaise were used for frying and for preparing various dishes. Jellies, preserves, and marmalades, and sugar, sirup, candies, and soft drinks were almost always included in the weekly grocery lists. Coffee, tea, and cocoa were sometimes used, but powdered and soft drinks were preferred.

# **Buying Practices and Food Preparation**

The majority of the families shopped for groceries on Saturday. A few mentioned Friday and Sunday as days to shop. The mothers

and older daughters usually bought the groceries, but sometimes the husbands and older sons did the shopping. Many families traded in chainstores when money was available. When money was scarce, they traded in small stores at the housing camps or at farms on credit. The families with refrigeration shopped weekly; the one without refrigeration shopped daily. A few vegetables, such as beans, cabbage, celery, and corn, were obtained free from farms or from small gardens close to home.

The women usually did the cooking, although on rare occasions their husbands helped. Frying and barbecuing were the most common methods of cooking meats and fowl. Vegetables and legumes, such as dried lima beans and black-eyed peas, were cooked in water with ham hocks, white bacon, pigs' feet, ears, tails, or neckbones for added flavor. Neckbones were a preferred food. Cornbread and hoecake made from self-rising flour were cooked almost daily in skillets on top of the stove. Biscuits were baked in small portable ovens on top of the stove. Cakes and pies were baked on Saturdays and Sundays.

Association with other cultural groups—Jamaicans, Bahamians, Cubans, and Puerto Ricans—has brought new ideas in food preparation to these families, and some of them had learned to prepare new dishes from these other groups.

# Kitchen Equipment

Thirty-four families had some kind of refrigeration: 29 owned electric refrigerators that they themselves had purchased; 5 had iceboxes provided by the housing project. Twenty-four families had bottled-gas stoves with ovens, and 11 had 3- or 4-burner kerosene stoves, 3 of them equipped with small portable tin ovens.

All the families owned dishes, glasses, cups, silverware, cooking spoons, eggbeaters, percolators, dishpans, buckets, and can openers. Drawings of serving spoons and plates were made by the interviewer to get an idea of the size of food portions consumed by various members of the family. Servings varied in size. Plates and serving spoons of various sizes were used. Some families used a large cooking spoon for serving food, while others used a tablespoon.

None of the homes had running water inside the house. Water for drinking, cooking, dishwashing, and other household purposes was obtained from faucets outside the house and was carried in by male members of the family. The water was kept in buckets, frequently with a dipper inside which was used as a drinking cup by all members of the family.

# **Evaluation of Diets**

The family diets were analyzed on the basis of food values given in the food composition tables of the U.S. Department of Agriculture

Table 1. Percentage of families meeting National Research Council nutrient allowances

Nutrient	Fraction of allowances met					
	Total	3/4	1/2-3/4	Below ½	None	
 Calories	20	40	34	6		
Protein	37	11	46	6	Č	
Calcium	14	8	52	26	(	
[ron	34	23	26	17	0	
Vitamin A	$\mid 32 \mid$	0	26	42	(	
$\Gamma$ hiamine	42	29	23	6	0	
Vitamin C	3	11	17	66	3	
Riboflavin	20	20	34	26	0	

Table 2. Percentage of families meeting U.S.

Department of Agricultural Allowances, by
food groups

Fraction of allowances met					
Total	3/4	1/2-3/4	Below ½	None	
0	. 0	3	97	0	
0	0	0	37	63	
9	۰		10		
	-	•	48	34	
5	5	8	14	68	
2	12	6	60	20	
43	38	8	11	0	
94	2		0	<b>2</b>	
	2		74	$egin{matrix} 2 \\ 2 \\ 0 \end{bmatrix}$	
	15		5		
88	8	2	2	0	
66	23	5	3	3	
	Total  0 0 2 5 2 43 94 8 80 88	Total 3/4  0 0 0 0 0 2 8 5 5 2 12 43 38 94 2 80 15 88 8	Total 34 ½-34  0 0 3 0 0 0 2 8 8 5 5 8 2 12 6 43 38 8 94 2 2 8 94 2 2 8 94 2 14 80 15 0 88 8 2	Total	

(2) and "Food Values of Portions Commonly Used" (3). In a large percentage of the study group, consumption of certain nutrients was below half the amounts recommended by the Food and Nutrition Board of the National Research Council (4). Among these were vitamin C, in 69 percent of the families; vitamin A, in 42 percent; and riboflavin and calcium, in 26 percent. In only 6 percent, however, did the protein and calorie consumption fall below half the recommended allowance (table 1).

In evaluating the diet (5), it was found that 22 families (63 percent) ate no green or yellow vegetables, and 13 families (37 percent) ate less than half the recommended allowance. Seventeen families (48 percent) fell below half the recommended allowance in consumption of citrus fruits and tomatoes, and 12 families (34 percent) ate nothing from this food group. Thirty-four families (97 percent) fell below half the recommended allowance for milk and milk products (table 2).

### **Food Costs**

A price record was kept of foods bought from a large store and from a small store patronized by the study families. Prices were collected in the two stores during the period February—April 1959. An average cost was computed and a cost analysis of the diets was made (table 3). From \$18 to \$22 per week, about half their weekly earnings, was spent for food by the 18 families which had from 7 to 9 members each.

According to Department of Agriculture standards, from \$35 to \$47 would be required to feed families of this size a low-cost adequate diet. However, this would mean that all food would be purchased, whereas some of the food eaten by the study families was obtained without cost, for example, food which was brought home from the fields.

## **Medical and Dental Findings**

No physical examinations were made as part of the nutrition study, but reports of examinations made in the health department clinics showed an apparent relationship between the dietary and medical findings. Families with lower intakes of necessary nutrients had diagnoses of rickets, marasmas, kwashiorkor, obesity, emaciation, nutritional anemia, and malnutrition, as compared with persons in the remainder of the group. Many of the children in the families with lower intakes of nutrients were pale and underweight, and eight adults were markedly obese. Two women gave a history of miscarriages.

A detailed dental study of both adults and children by the bureau of dental health, Florida State Board of Health, revealed that 84 percent of the persons examined had dental caries, and 35 percent had lost permanent teeth.

The dental study also showed 40 persons with dry and cracked lips, 14 with spongy gums, 27 with gums that bled easily, 21 with slight gingivitis, and 16 with signs of severe gingi-

Table 3. Summary of information on 35 migrant families,<sup>1</sup> Okeechobee migrant labor camp, Belle Glade, Fla.

Number of families	Members per family			Average weekly earnings	Average weekly expenditure for food
2	12 11 10 9 8 7 6 5 4	2 yrs20 yrs 6 mos18 yrs 8 mos18 yrs 2 yrs14 yrs 1 yr20 yrs 1 yr13 yrs 3 yrs22 yrs 1 yr13 yrs 1 yr13 yrs 1 yrs12 yrs 11 yrs	2 2 2 2 2 1 1 1 1	\$40 40 40 47 43 36 76 44 30 54	\$32 20 33 22 19 18 18 15 10

<sup>&</sup>lt;sup>1</sup> Both husbands and wives work in the fields; the men sometimes engage in construction work. The wages vary at certain times.

vitis. These findings indicate a definite relationship between dental caries and problems of the gums and lips and a low intake of protective foods.

As stated in the clinic records and by the mothers at the time of interview, most of the babies and children had been taking vitamin preparations on prescription from an early age.

### Comments

Although the study group was composed of only 35 of 350 families in a Negro population with migratory characteristics, in all probability their eating habits and nutritional problems are similar to those of cultural groups of the same racial characteristics and economic and social conditions living in camps in other areas. The families studied may be somewhat above the average since they were selected from among the apparently well families included in the family clinics. They had been exposed to education as to dietary and other measures they might take to keep well, and were "educable," as indicated by their acceptance of clinic care.

The most common diet deficiencies revealed by the study were low intakes of milk, green and yellow vegetables, citrus and other fruits, eggs, and white and sweet potatoes. Legumes and meats were eaten in fair quantities; sweets, fats, and flour consumed were above the recommended amounts in some cases.

Fish were well liked and were a good source of protein, and they could be had at no cost to families who enjoyed fishing. Pork chops, ham, and steak were eaten when money to buy them was available. Pointing out differences between prices of these and other items could be helpful in teaching the group to use the more expensive foods in lesser amounts, and to purchase cheaper sources of protein. This would leave money for such foods as citrus and other fruits, green and yellow vegetables, including sweet potatoes, and milk, which were consumed in amounts below recommended allowances.

Since buttermilk was well liked, the use of dry skim milk to prepare it could be stressed. The possibilities of using dry milk powder with other familiar foods, such as adding it to cornmeal for making combread, to hamburger meat. and to chocolate powder or juices that are liked by the children should also be encouraged.

The high consumption of fats, sweets, flour, and soft drinks could be responsible in part for the obesity of some adults in the study group.

The need for education concerning nutrition and basic health is evident. However, consideration should also be given to housing, cooking equipment, hours of work in the field, time spent at home, number of children in the family, earning capacities, rental expenses, utilities, and transportation facilities, which directly affect an education program in health and nutrition. The amount of money available for food indicates that very careful planning and budgeting are necessary if migratory families are to have adequate diets. Since none of them showed evidence of planning ahead, it will take persistent efforts over a period of time to bring about changes in their buying habits.

These families need basic information on all aspects of nutrition and food preparation, and this can only be achieved by a well-rounded, integrated program, with all agencies, both official and voluntary, which deal with these families working toward improvement of their health, educational, and social conditions. These agencies would include the health department, the schools, the agricultural extension service, and the welfare department.

## Summary

A study of the diet patterns of a group of Negro migrant families living in a labor camp in Belle Glade, Fla., revealed a lack of certain groups of protective foods. It also pointed up the need for better use of the foods available and for a wiser selection of foods purchased in relation to the amount of money spent.

The most significant findings of the study were the following:

- 1. Low consumption of milk and milk products. However, due to the extensive use of self-rising flour, the calcium content of the diets was higher than expected. Riboflavin content of the diets was low.
- 2. Low consumption of green and yellow vegetables and low vitamin A content of the diets.

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- 3. Low consumption of citrus and other fruits and low vitamin C content of the diets.
- 4. Greater consumption of proteins than of the above-mentioned groups of foods. However, the amounts of animal protein eaten by the larger families were too small to meet the dietary requirements for the family as a whole. Legumes were consumed in amounts above those recommended by the Food and Nutrition Board of the National Research Council. This raised the iron content of the diets.
- 5. Consumption of starches, fats, and sweets in excess of the recommended amounts. However, the calorie allowance in the diets of 80 percent of the families is low.

### REFERENCES

- (1) Grant, F. W., and Groom, D.: Dietary study among a group of southern Negroes. J. Am. Dietet. A. 35: 910–918, September 1959.
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- (4) National Academy of Sciences-National Research Council: Recommended dietary allowance. NAS-NRC Pub. No. 589 (Revised). Washington D.C., U.S. Government Printing Office, 1958.
- U.S. Department of Agriculture: Nutrition—up to date—up to you. Bulletin, 1955.

# **Training Courses**

Dental Education. A short course for clinical dentists employed in public health agencies will be offered at the University of North Carolina School of Public Health from July 24 to August 4, 1961. Additional details may be obtained from Charles M. Cameron, Jr., M.D., University of North Carolina, Chapel Hill.

Medical Care Administration. The University of Michigan School of Public Health is conducting a training institute on Administration of Medical Care for the Needy from July 10 to July 21, 1961. Collaborating in this institute are the School of Social Work of the University of Michigan, the American Public Welfare Association, the American Public Health Association, the Bureau of Public Assistance of the Social Security Administration, and the Public Health Service.

The institute is designed for State and local public welfare and public health personnel with administrative responsibility for the needy. Together they will study the planning, administration, and evaluation of these programs; discuss the relationships of these programs to community health services and medical care programs for the entire population; explore ways by which health and welfare departments may work together; and consider new approaches to the provision of medical care.

Additional information may be obtained

from S. J. Axelrod, M.D., University of Michigan School of Public Health, Ann Arbor.

Hospital Administration. The Sloan Institute of Hospital Administration at Cornell University will hold its fourth annual Hospital Administrators Development Program from June 25 to July 21, 1961.

The 4-week program will consist of an intensive course of lectures, readings, and discussions divided into three seminars dealing with medical care, the administrative process, and trends in hospital administration.

Participation will be limited to about 25 persons selected from among the applicants. Total cost to participants will be \$100, including tuition, supplies, room, and most of the meals. Additional details may be obtained from Prof. Frederic C. LeRocker, director, Sloan Institute of Hospital Administration, Cornell University, Ithaca, N.Y.

Water Pollution Conference. Public health hazards of microbial pollution of water will be the subject of the Rudolphs Research Conference at Rutgers University, June 19–21, 1961. Three sections of the conference will deal with the public health problem, indicator organisms and their significance, and disinfection—theory, objectives, and accomplishments. For further information communicate with Dr. H. Heukelekian, Chairman, Department of Sanitation, Rutgers University, New Brunswick, N.J.

# Program Notes

Nearly three-fourths of Baltimore families who need "mother substitutes" during the day use relatives or workers who come into the home. Approximately 20 percent of these families arrange out-of-home care with a relative or at a private home; only 1 in 34 families use day nurseries. The city health department recommends that health information for mother substitutes should reach relatives and day workers who provide such care.

### **«**

The American Hospital Association has urged its 6,500 member hospitals to adopt a uniform drug formulary system for prescribing drugs by their generic names rather than by trade names. The action was taken by the AHA House of Delegates at its last convention.

### **«** »

The sale of potassium permanganate without prescription was banned by the Food and Drug Administration effective October 23, 1960. The action was taken after reports in medical journals revealed more than 1,000 cases of misuse of the drug in attempted abortions.

## « »

The sale of raw milk for public consumption has been banned by New York State beginning April 1, 1961.

### **«**

A 4½-year study of 800 pupils in the first four grades of two schools in Baton Rouge, La., reported by Dr. Louis L. Rusoff, nutritionist at the State university, revealed children who drank a half-pint of fluoridated milk a day had 76 percent fewer cavities. The benefit showed in permanent teeth which appeared after the children began drinking fluoridated milk.

Since persons over 60 and children 6 and under accounted for more than half of the fatalities in the District of Columbia in 1960, the Department of Motor Vehicles is planning educational programs directed at these age groups. The campaign includes posters, radio announcements, traffic death scoreboards, and safety films.

### « »

All major health and welfare agencies in Monroe County, Rochester, N.Y., have a countywide home care plan providing comprehensive nursing, social, rehabilitative, and other supportive services to patients at home under direction of their private physician.

Proceedings of the Workshop on Home Care Programs, jointly sponsored by the American Hospital Association, American Medical Association, Public Health Service, Blue Shield Medical Care Plans, and Blue Cross Commission, are available for \$1 a copy.

## « »

The 1960-61 "Directory of Social and Health Agencies of New York City" has been released by Columbia University Press. The publication provides comprehensive but brief information about welfare and health agencies serving New York City and includes civic, educational, and religious organizations if they offer services in social welfare or closely related fields.

## **«**

Bucks County is the first in Pennsylvania. to develop a master plan for present and future sewerage and water needs.

Municipalities in the State have been notified that it is unlawful to construct sewers without a prior permit from the Sanitary Water Board. Pennsylvania is the first State to require its 5½ million drivers, and all new applicants, to pass periodic physical examinations to hold their licenses. Each year 750,000 drivers will be picked at random for examination. The program will take 10 years to complete.

### « »

The second issue of *Medicine at* Work is devoted to a crusade against cacography (poor handwriting).

#### **(( )**

An information booklet for speakers at the New York State Annual Health Conference to be held in Rochester, N.Y., June 5-8, 1961, requests two copies of papers 3 weeks in advance so that the text may be "accurately quoted."

### **«**

W. W. Towne, chief of field operations for the PHS Sanitary Engineering Center, estimates there are more than 1,000 sewage lagoons in operation throughout the Nation "without threat to community health."

### « »

Nine nations have lower infant death rates than the United States. Sweden is lowest with 15.8 deaths per 1,000 children under 1 year, followed by the Netherlands, Australia, Norway, and Switzerland. In 1958 the United States had 27.1 infant deaths per 1,000 live births.

### « »

Safety seat belts have been offered by Chrysler Corporation to its dealers on a nonprofit basis with the recommendation the belts be made available to owners of all makes of cars on a similar basis.

New York State showed injuries and deaths were 60 percent lower in 400 automobile accidents involving people using seat belts than in 400 similar accidents where seat belts were not used.

At least 100 employees of the U.S. Forest Service have been saved from death or serious injury because they were using the belts.