Reprinted from
Trop. geogr. Med. 15 (1963) 422
Printed in the Netherlands
Elsevier Publishing Company,
Amsterdam

PATTERNS OF DIET, HEALTH AND SICKNESS IN A BLACK CARIB COMMUNITY*

NANCIE L. SOLIEN DE GONZÁLES

Institute of Nutrition of Central America and Panama (INCAP)

Guatemala, G. A.

Received March 10th, 1963

INTRODUCTION

The black Carib are a relatively little-known people among the populations of Central America. They differ physically and culturally from all other ethnic groups living in the area. They are the descendants of the Red Caribs who occupied the Lesser Antilles at the time of Columbus, and of Africans brought to the New World during the 17th and 18th centuries. Although they speak today a variant of Island Carib, an Arawakian language, neither their blood group frequencies nor their physical appearance show much trace of Indian admixture. It is difficult to distinguish them from West Indian Negro groups¹.

In 1957, the author cooperated with the Institute of Nutrition of Central America and Panama (INCAP) in a clinical survey of a sample of Black Caribs from Livingston, Guatemala. Supplementary laboratory studies and dietary surveys demonstrated that the health and nutritional status of the children over five and adults are superior to other rural low-income groups studied in Central America. No specific signs of malnutrition were encountered in the clinical examinations or blood analyses and the family dietary studies showed an adequate intake of all nutrients, including total calories, proteins and vitamins with the exception of vitamin A and riboflavin. But even in the case of these nutrients, the values were higher than those observed in poor rural Indian and mestizo groups ²⁻⁴.

In order to understand the observed differences in health between this population and others in the area, it is necessary to know something of the cultural and social factors involved. The purpose of this paper is to describe the community and to provide information concerning native beliefs and practices in the realms of diet, health and sickness. The facts presented here were obtained by the author during a field study conducted in Livingston from July 1956–1957. Additional information was collected in two shorter field trips made from INCAP in 1962.

Directed and non-directed interviews with ten key informants provided the bulk of the data. The informants varied in age, sex, social status and degree of acculturation. At one time or another during the field work, nine discussed aspects of the material presented with individuals from approximately a quarter of the Carib families in the town. Many items came to my attention during the course of the first field trip during which I lived in a Carib compound and participated in the daily round of activities. Observations were always checked with several informants in order to determine their validity.

^{*} INCAP Publication I-278. This field study was supported by the Henry L. and Grace Doherty Foundation.

DESCRIPTION OF THE COMMUNITY

In the last official census (1950), the population of the town of Livingston was recorded as 2,551 persons. The following ethnic groups live in the town: Black Caribs, Ladinos, Hindus, and Kekchi-speaking Indians. The first three groups are classified by the Guatemalan government as Ladinos, so no estimate can be given as to the relative size of each group in 1950. Comparatively few Indians, however, live within the town itself, so that a figure of 2,500 non-Indians is probably not too inaccurate. A census of the Black Carib portion of the population conducted in 1956 by the present author, showed that 1,762 persons of this ethnic group considered Livingston their place of residence, although only 1,531 were actually living there at the time of the census. Most of the others were in Puerto Barrios.

The town of Livingston is located on the north coast of Guatemala at the mouth of the Rio Dulce, which empties Lake Izabal, and is accessible only by launch from Puerto Barrios, a trip of about two hours. The town is still considered a port town of Guatemala although most of its exterior commerce is with the colony of Belize. One customs official, and a military garrison, are located in the town. Other government services include a postoffice and telegraph, a public health dispensary staffed by two auxiliary nurses aides, a social security dispensary, a kindergarten, a primary school for boys and one for girls. There are, in addition, several private businesses, including an ice plant, a cinema, two boarding houses, a drugstore, several taverns, four large stores and agents of a private concern handling the movement of goods via Lake Izabal. There are also smaller stores which sell a variety of small sundries.

The water supply is poor, there is one large public fountain and several wells. Many of the latter do not supply potable water, and many families must bring drinking water to their homes from the fountain, which is not centrally located.

A resident Catholic priest who has been in Livingston for 14 years has succeeded during the past six years in constructing a large cement-block church which houses 17 images of saints. There are also two Protestant churches, the majority of whose members are drawn from the Ladino and Hindu portions of the population. Interestingly enough, the Protestant sects have never seemed to appeal to the Black Caribs, either in Livingston or Belize; the overwhelming majority are Roman Catholics. Very likely, an important reason for this is the fact that indigenous beliefs and rites, which are still very strong, are more easily syncretized with Catholicism than with Protestantism. The Catholics are also more tolerant, although not exactly approving, of the native religious system. For example, the Carib who believes he must propitiate a given dead ancestor will conduct a native rite involving the sacrifice of chickens, offerings of food and drink, dancing, and other rituals; but he will follow this by requesting a mass for the same ancestor "just to make sure". Although the priest knows about the former ritual, he is satisfied if the Carib also attends church. Not only would the Protestants not permit such dual allegiance, but their rituals offer nothing comparable to the mass or the novena as offerings to the dead.

FOOD PRODUCTION AND FAMILY CONSUMPTION

Although there really is no true dry season, the heaviest rains occur from April or May through December or January, a total of eight to ten months. Fishing has long been the primary occupation among men, although unskilled labor has been an indispensable basis of their economy for at least fifty years. Horticulture has been and still is primarily the task of the women. The men assist in clearing and burning the fields, but the women are in charge of planting, cultivating (such as there is) and harvesting. The most important crops are bitter cassava, rice, plantains, coconuts, red beans, and various other tubers, such as yams, sweet potatoes, etc. Little of their harvest is sold. In addition to the above items, other necessary foods purchasable in the town include wheat flour, salt, sugar, lard, oatmeal and canned milk. Caribs seldom drink coffee, they prefer "teas" made of various locally grown leaves, barks and roots. These are consumed not only as a medicine, but also as daily fare. Spices most commonly used include anise and home-grown ginger. Meat, including chicken, pork, beef, and wild game, such as tepescuintle (Coelogenys paca) is occasionally eaten, but is not as common or as well liked as seafood. Green bananas, a highly prized item, are scarce at the present time, and usually must be secured in Puerto Barrios. Green corn is eaten occasionally as a vegetable, but it is not valued highly.

When in season, many fruits such as oranges, mangos, pineapples, and mamey are available. As among Indians and Ladinos, these tend to be eaten between meals as a kind of snack. Tomatoes and onions may occasionally be used to season rice or soups, but they are not as common among the Caribs as they are with other elements of the Guatemalan population. Coconut milk, made by pouring water over grated coconut meat and squeezing the mass dry with the hands, is used in many dishes, from soups to breads. Some people still extract the oil from the coconut by boiling and use this in place of lard.

Although there is no market in town, there are three small stalls, run by Indians, which sell

fresh produce, including onions, garlic, tomatoes, plantains, green corn, guisquiles (Sechium edule), guicoys (Cucurbita pepo), cabbages and fruits in season. These, however, are patronized more by the Ladino and Hindu population than by Caribs.

Finally, other foods eaten as snacks or refreshments include soft drinks, green coconut water, flavoured sugar water (sometimes eaten in the form of ice cubes), sugar cane stalks, candy made of coconut, burnt sugar and ginger, cake made of sweet potatoes, sweet breads, and hard commercial candies, Favoured drinks include home-made wines of sorrel (Hibiscus sabdariffa L.), pineapple, hiu (a fermented beverage made of the liquid expressed from fresh grated cassava or yuca), sweetened rice water, local (i.e. Guatemalan) commercially bottled wines, rums, brandies and beer.

It is obvious from the above list of foods that the dietary pattern of the Black Caribs is far different from that found in other populations of Guatemala⁶. The typical breakfast, eaten between 7 and 8 a.m. (three or four hours after rising) includes white bread and sugared tea (made of wild grasses, or avocado leaves, or the leaves of the sour orange or Lipton's tea). This may be supplemented by left-over beans from the day before or with a small piece of fish. A small amount of powdered or condensed milk may be added to the tea (perhaps one teaspoon per person) for both children and adults if finances permit. The noon meal, eaten about II—II.30 a.m., almost always includes fish or some seafood (such as turtle, shrimp, crab, etc.) although the real basis of the meal is rice and beans (either black or red). Sometimes a sort of stew is made of fish, green bananas. a varity of root vegetables, and coconut milk. Green banana dumplings (cooked in coconut milk) and pounded plantain paste (again mixed with coconut milk) are favourite accessories. The pounded plantain is eaten as bread, bits being torn off and soaked in the stew broth. *Areba*, an unleavened bread made by grating, pressing, drying and baking the bitter manioc or cassave root, dipped into the broth, may also be eaten at this time. Supper, eaten at 5 p.m., is basically white bread and sugared tea, but may include fish (or only fish broth for the children), and any of the above-mentioned accessory items.

The children are usually served first, except for breakfast when the adults rise first. Both adults and children are generally given one deep dish or gourd into which all the various foods are placed together. Spoons and fingers are usually the only utensils used. The hands are invariably washed after eating, but only if they appear to be very dirty are they cleaned beforehand.

Children as well as adults observe rigid patterns of courtesy during mealtimes. There is little conversation, and fish bones are daintily "blown" from the mouth, not picked out with the fingers. Each person carries his or her dish to the kitchen, thanking the other persons in general, when he has finished his food. Children are not supposed to ask for more food, but if the child is very small or a favourite, he may seek and receive small extra bits from the plates of this mother or aunts. After the meal the dishes are washed in soapy water and the room is swept out, for there is no concern about dropping bits of food and fishbones onto the floor during the meal.

INFANT AND CHILD DIET

Breast-feeding begins shortly after birth, as soon as the mother and the child have been cleaned and made comfortable. There is no separate word for colostrum in the native language, and there seems to be no feeling that this substance should not be given to the child. No is any positive emphasis placed upon it; it is simply part of the breast-milk, that part which comes first.

A few hours after birth the child is offered a sucker made of anise and mugwort leaves wrapped in a cloth and soaked in a mixture of water, cooking oil, castor oil, and almond oil. The sucker is periodically dipped into the oil mixture and bee's honey and offered to the child "every little bit" during 15 days to two months (depending on the mother's judgment). The purpose of this is to "clean out the stomach" and to protect the child from the evil effects of "air".

Sometime during the first two weeks of life, children begin to eat a thick paste made of cassava starch, sugar and flavoring. This is fed to them with a spoon; each spoonful being followed by one of unboiled, unsweetened water (to wash down the starch). The children are allowed as much of this as they will eat, the quantity usually increasing with age up to about half a cupful at six months of age. Children vary in how "hungry" they are: some wish only a few teaspoons once or twice a day. Others

are "born with hunger" and start eating the first day after birth, consuming several tablespoons 2-3 times per day.

Although most mothers breast-feed their children for several months if possible, certain practices are involved here which are not usually found in other Guatemalan populations. For example, beginning at about two months of age, children are often given a "relief" bottle once or twice a day. Mothers say this is to "rest the pulmones (lungs) of the mother". This bottle may, if the family has enough money, contain milk made with one teaspoonful of dry powdered milk and four to eight ounces of water. If they do not have enough money, the liquid may be merely sweetened tea.

Children are not generally given other solid food until the age of 10-18 months, the time for such supplementation depending upon the individual child and his

TABLE I

NUMBER AND CUMULATIVE PERCENTAGE OF CHILDREN WEANED
AT DIFFERENT AGE LEVELS AMONG BLACK CARIBS, LIVINGSTON,
GUATEMALA, AUGUST, 1962.

| Age in months | No. | Children fully weaned % |
|---------------|-----|-------------------------------|
| 6 and under | 10 | 7.5 |
| 12 and under | 68 | 51.5 |
| 15 and under | 92 | 69.7 |
| 18 and under | 113 | 85.6 |
| 21 and under | 118 | 89.4 |
| 24 and under | 129 | 97.7 |
| over 24 | 3 | |

reactions. If he does not show ill effects after trying a new food, or if he is very aggressive and demands a food, his mother will have no compunctions about giving it to him. After the starch paste, the first foods given are bread soaked in tea or in fish broth or bean broth, rice, mashed potatoes, pounded plantain, grated cooked green bananas, and boiled root vegetables. At about two years, or sometimes before, a child may be given small pieces of fish, the bones of which have been carefully removed. If the child remains healthy, he may be given small pieces of certain kinds of fish whenever available. But other children may not be given fish until they are three to four years old. It is said by some that fish, pork and beef swell up the stomach and may cause worms to "rise", ** Areba* or cassava bread, is also said to be bad for very small children; it gives them diarrhea if eaten in large amounts. It is interesting to note that the Caribs do not classify all fish in the same category in regard to their suitability for children. "Big" fish, such as tarpon, jack, snapper and shark, should not be eaten by children until they are three to five years old.

Weaning is usually accomplished by the age of two, but most often before this time, and there is great variation in the time of final weaning (see *Table I*). The younger mothers interviewed appeared to favour an earlier age, often under one year. A number of different concepts in regard to the suitability of mother's milk are heard. Some women say that the mother's milk is the best food for the child, but they qualify this by adding "if it agrees with him". Thus, one informant stated that she had never been nursed by her mother because two earlier children had died while nursing, and it was assumed that the mother's milk had caused it. She added that sometimes in such

cases another woman will nurse the child, but that in her case she had been given a bottle of milk. Her mother and father later confirmed this statement.

Several women expressed the idea that nursing is "hard" on the mother, that children need a lot of food from infancy, and that nursing would have detrimental effects on both mother and child. That is, the child needs more than just breast milk from the first week of life, and the mother would be too exhausted if she tried to supply the infant's total needs in this way.

The Caribs recognize that other ethnic groups have different customs, but they feel that Carrib children have different needs ("they are born hungry"), and that their children are healthier as a result of their feeding regime. All informants emphasized the great value of the widely used cassava starch paste.

If the mother's milk supply seems adequate in terms of quantity and quality, however, she will probably continue nursing the child for a year or 18 months. Some women nurse an older child right through a pregnancy, weaning only upon birth of the succeeding child. Others feel that they should wean during the early months of pregnancy. The latter is probably a more recent idea acquired from Ladinos, and is as yet not too common. It is said that in no case should a child be allowed to nurse longer than two years, because the child who nurses "too long" will bleed from the nose. One informant expressed the opinion that, after so long a time, children were only sucking blood from the mother's breast and not milk.

The weaning process is not viewed as a traumatic one in this culture. The child is simply denied the breast one day, and if he shows a desire to nurse he is offered toys or bits of food to distract him. Occasionally, a child is sent off to live with a grand-mother or other relative for a few days or weeks until he forgets the breast. No bitter substances are applied to the nipples to discourage the child, nor is he ever physically punished if he cries for the breast.

Magical devices are rife in this culture, and to calm the spirit of the child women place plain water in a white glass beside the bed each Tuesday and Friday night after weaning for two months or so. This will satisfy the spirit, and thus the child will forget more easily.

Although it is apparent, therefore, that the Caribs recognize that weaning may be a minor crisis in the life of the child, nevertheless there is not much concern over it, and several informants told me that children of 18 months or so do not want to nurse any longer, that in effect they wean themselves. It was also commonly reported that children fed relief bottles frequently preferred the bottle to the breast, and in this way also "weaned" themselves.

DIET OF THE WOMEN IN PREGNANCY

Many restrictions are placed on the mother's diet during pregnancy, and the women vary little in their beliefs concerning this. A woman should not eat the following foods: beans, eggs, pounded plantains, green bananas, white cheese, cassava and cassava bread, dishes containing coconut and "big fish". The big fish mentioned are always the same, and are those listed above as being dangerous for small children. These include jack, tarpon, snapper and shark. All these foods are said to inhibit the proper development of the foetus. On the other hand, pregnant women may and

should eat rice, gruels, potatoes, guisquiles, cabbage, milk, white bread, small fish, beef, pork, and chicken.

Immediately after birth the new mother is given a mixture of cooked camomile, cloves, pericon (Tagetes lucida, Tagetes schiedeana), allspice and honey for afterbirth pains. She may then eat chicken and chicken broth, broth made of small fish, rice and French bread. In order to stimulate milk production, the mother drinks an infusion of rice water with two leaves of the sour orange. A drink made with cassava or cornstarch, especially if mixed with cow's milk, is considered good for this purpose, as is a gruel made of ripe bananas cooked with coconut water.

DIET IN LACTATION

During this period a woman gradually returns to a more normal diet, but some items are forbidden throughout the entire period of nursing. After one month the mother may begin to eat dishes with coconut milk, and after two months she may eat pounded green plantains. After four months, she may eat green bananas and ripe plantains, and after seven months she may eat white cheese. Big fish and beans should be avoided until weaning. Pineapple, avocado, mango, jocotes (Spanish plum) and raw bananas also should not be eaten, although oranges and lemons are permitted.

Those items which must be avoided only in the early months are all said to inflate the stomach of the nursing child, giving him gas and occasionally diarrhea. The big fish are bad because they make the milk rancid, and the fruits should be avoided for fear of making the child vomit and have diarrhea.

SICKNESS AND DISEASE IN INFANCY AND CHILDHOOD

Birth is invariably attended by a midwife who cuts the cord, ties it with thread, cares for the mother, and disposes of the afterbirth by burying it, either within the house itself or occasionally just outside and adjacent to one wall. There is a belief that if the placenta is buried "right-side-up" the child will prosper, but if "upside down", the mother will not be able to conceive again. The stump of the umbilicus is laid against an old machete blade and burned or cauterized with a hot stick.

If the navel does not heal well or becomes inflamed, misbehaviour of the father of the child is thought to be the cause. He is not supposed to do any work which makes him sweat or to have intercourse with another woman while the navel is healing. If infection does occur, it may be healed by securing a dirty, sweaty shirt or piece of underclothing from the father and holding it against the inflamed parts. After the cord dries and falls off, the father is free from his magical ties to the child and may work and behave as usual.

The dry cord is wrapped in cloth and kept by the mother in a safe place, for it is thought that the child's early welfare depends on the safekeeping of this stump. An infusion made by soaking the cord in water is reputed to have medicinal qualities in relation to certain diseases. Finally, the stump dries up and powders away. By this time, however, the child is usually an adolescent and is freed from most magical threats to childhood.

Infants and children are susceptible to a variety of diseases, some of which are identical to those found elsewhere in latin America, and others of which appear to be

unique among Black Caribs. Fear of the evil eye is especially strong, and many precautions are taken to protect the newborn infant from it. At birth a red ribbon or string is tied round the neck or wrist of the child, and at the age of one week crosses are made with household bluing on the forehead, the inside of the elbows, the stomach and the soles of the feet as an magical protection. Later when the child can crawl, charms consisting of small leather or cloth bags containing rue, hair of the mother, garlic, lime and an alligator's tooth are hung about its neck. Tiger's claws and alligator teeth are charms used throughout life to guard against black magic of all kinds.

Symptoms of sickness caused by the evil eye include swelling of the stomach, difficulty in urinating, sadness and general pains. If the person who gave the "eye" is known, cure is relatively simple. The responsible party is summoned and asked to rock the child, look at it, and rub its body with olive oil. If the person is unknown, the child may be cured by burning a mixture of camomile, garlic, cloves, rue, anise, rosemary and four pieces of the roof of the house, taken from each of the four corners in a brazier. The child is then placed in a hammock or in its mother's skirt and passed through the smoke.

Children are also susceptible to the sickness called *humo*, which is caused by the spirit of the sea. For this reason, they are not allowed to bathe in the sea, and indeed, there are some adults too who fear bathing in sea water. It is believed that even smelling certain large fish may give the children this sickness, for it is said that the spirit of the sea resides in fish such as tarpon, shark and snapper. The symptoms include attacks or convulsions, diarrhea, swelling, changes in hair colour and a rash or large boils with pus which break out all over the body. When the boils are close together, the skin peels off.* Children so affected are expected to die unless treated by the *buwiye* or shaman. It is stated that the sickness can be prevented by cooking a small piece of the fish and rubbing it on the arms, neck, soles of the feet, and inner elbows of the child. When the child is old enough to eat the fish (three to five years), he is no longer susceptible to the smell.

Other spirits may enter a child when he is playing alone at mid-day or after five o'clock in the evening. The Caribs believe in four classes of spirits: (1) spirits of nature, i.e. of the rivers, forest, etc.; (2) spirit personalities such as La Siguanaba, El Sombre-rón, etc.; (3) spirits of the recently dead, especially those who died before their time; and (4) spirits of the long-dead.

The spirits of nature control the fate of the various phenomena concerned. If the fish are not biting well, the spirits of the sea must be placated; the spirit of the forest must be soothed before clearing a section for planting, etc. These spirits may cause harm to individuals who approach them alone at certain times of the day or night. Many feel that it is never wise to bathe in the sea or in a running stream. Others fear walking by themselves through the forest at high noon or at midnight, the two most dangerous times of the day. On the other hand, not all Caribs believe in these spirits. As one informant put it, "if you don't believe in them, they can't hurt you".

The spirit personalities encountered among the Caribs are apparently identical to those reported from other parts of Latin America. Many of them are thought to be merely mischievous breaking dishes, pinching women, etc. Others are feared to some

^{*} It is interesting to note that this description corresponds to the clinical characteristics of advanced kwashiorkor. No other Guatemalan population studied recognizes this as a specific disease entity.

degree, but in general this class of spirits is not of primary concern to the Caribs. They cannot be placated or handled in any way. If you meet one of them you may suffer, but no informant admitted seeing one of them. Stories about these spirits usually concern other persons whom the informant has "heard" about.

Among the Caribs, the spirits of the dead are, in general, the most greatly feared. The first group, called pantu (from Spanish espanol) are spirits of persons who died before the age of 60, de repente (suddenly). This phrase usually implies that black magic has had a part in the death. Natural death during the prime of life is simply not recognized. If a person is sick or has an accident, it is nevertheless felt that magic has been employed in some form to cause the sickness or accident. The spirits of such persons do not rest, but walk about seeking revenge. They may actually be seen, especially at night. If a person walks in a group, or with a lighted cigarette, or is protected by charms, these spirits will not bother him, but if he is caught unaware he may actually be killed.

The larger group of spirits of the dead are called *Gubida*, which is the same term used for "ancestors". These spirits never appear on earth, but they appear to certain of their descendants, primarily through dreams. They usually come to bother those descendants or the children of such persons whom they liked particularly during life. They appear in dreams to ask favours of the living, such as masses, food, drink, clothes, or a bath. The Caribs perform various rituals in order to placate these spirits, for if they are not satisfied, they may bring sickness and even death to the family or to the animals and crops of the family 10. During life, old people often maintain control over their younger relative by threatening to bother them after death.

It is impossible at this time to discuss all the various beliefs and practices involving magic and spirits among the Black Caribs, but this short and incomplete description has been included here in order to emphasize the fact that the entire world of these people is ridden by fear of the supernatural. When sickness of any kind strikes, their first reaction is to look for foul play either from spirits or living enemies.

In general, most Caribs today have some faith in modern medicine, and they are eager for better health services. On the surface it appears that they are very sophisticated in this respect, but in actual fact they visit doctors after they have first seen the buwiye or shaman. Several informants have expressed to me their disdain of modern doctors who do not understand the ways of the supernatural. They point out that the buwiye, after his magic rituals always advises them to go to the doctor for further examination (or to the priest for a mass or confession, etc.), but this "professional courtesy" is not reciprocated. They feel that to a certain extent this indicates a greater sophistication on the part of the buwiye.

SUMMARY

Previous surveys have indicated that adults and children over five among the Black Carib of Livingston, Guatemala, are healthier and better nourished than other rural low-income groups of Central America. In order to better understand this, various social and cultural facts pertaining to diet, health, and sickness among the Black Carib are presented.

In spite of the fact that the general standard of living among these people is low, the diet is adequate. A cultural tradition of fishing, gathering and gardening exploits,

a relatively favourable natural environment, and wage labour by the men provides sufficient cash to purchase items not locally produced. Nevertheless, culture patterns dictating the diet of infants under two suggest possible deficiencies in this age group.

When sickness strikes, a supernatural cause is always suspected. Fear of witch-craft, malevolent evil spirits of various sorts, and jealous dead ancestors governs much of everyday life, and magic rituals to prevent or counteract physical harm are rife. Although there is a growing faith in modern medicine as a means of curing some diseases, a basic difference in values between the Black Caribs and modern medical personnel makes the former look at the latter with a certain amount of condescension.

RESUMEN

Patrones de dieta, salud y enfermedad en una comunidad de negros caribes. Estudios anteriores han indicado que los adultos y niños mayores de cinco años pertenecientes a los negros caribes de Livingston, Guatemale, son más saludables y mejor nutridos que cualquier otro grupo rural de bajo nivel socio-económico de Centro América. Con el fin de poder comprender lo anterior se presentan varios factores sociales y culturales concernientes a la dieta, salud y enfermedades de este grupo de población.

A pesar de que el nivel de vida de este grupo en general es bajo, la dieta es adecuada. Una tradición cultural de pesca, siembra y cosecha permite la explotación de un ambiente natural relativamente favorable y el trabajo asalariado de los hombres provee suficiente dinero para la compra de artículos que no son producidos localmente. Sin embargo, los patrones culturales que aplican a la dieta de los niños menores de dos años, sugiere la posibilidad de deficiencias en este grupo de edad.

Guando alguien enferma, la causa siempre se atribuye a algo sobrenatural. Miedo a las brujerías, espíritus malignos de varias clases y celos de los antepasados muertos, guían el ritmo de su vida diaria, y los rituales mágicos, para prevenir o contrarestar daño físico, también son comunes. Aun cuando existe una creciente fe en la medicina moderna como medio para curar algunas enfermedades, una diferencia básica entre los valores de los negros caribes y el personal médico moderno, permite que los primeros vean a los segundos con cierto aire de superioridad.

REFERENCES

¹ N. L. Solien, Thesis Ann Arbor, 1958.

² J. Méndez, C. Tejada and M. Flores Amer. J. Clin. Nutr., 10 (1962) 403.

3 N. S. SCRIMSHAW, J. MÉNDEZ, M. FLORES, M. A. GUZMAN AND R. DE LÉON, Amer. J. Clin. Nutr., 9 (1961) 206.

4 M. FLORES, Arch. venez. Nutr., in press.

⁵ Sexto Censo de Póblacion, Dirección General de Estadística, Guatemala, 1950. ⁶ M. Flores, Proc. 3rd International Congresses of Dietetics, London, 1961, p. 23.

⁷ J. Freedman, Health Information Digest for hot Countries, 6 (1957) 1.

⁸ R. Adams, *Publicaciones especiales del Instituto Indigenista Nacional*, No. 17, Ministerio de Educación Pública, Guatemala, 1952.

9 N. S. DE GONZÁLEZ, J. Pediat., in press.

10 D. M. TAYLOR, Viking Fund Publication in Anthropology, No. 17, Wenner-Gren, New York, 1951.