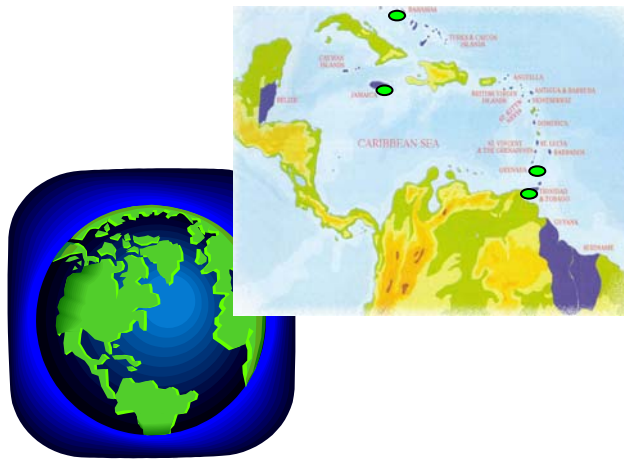


FINAL REPORT

COMBATING CARDIOVASCULAR DISEASES THROUGH NUTRITION IN THE CARIBBEAN



Project implemented by:
CARIBBEAN FOOD AND NUTRITION INSTITUTE
**PAN AMERICAN HEALTH ORGANIZATION/
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EXECUTIVE SUMMARY

Background

The Caribbean Food and Nutrition Institute (CFNI) supported by the Caribbean Cardiac Society (CCS) conducted qualitative research in four Caribbean countries (Bahamas, Grenada, Jamaica, Trinidad and Tobago) using focus group discussions to gather information on diet and physical activity and their perceived link to Cardiovascular Disease. The results of this qualitative research will be useful in informing the Caribbean Food and Nutrition Institute on the contents and pedagogical approaches that need to be adopted in the editing of a manual on Nutrition and Physical Activity for the Prevention and Management of Cardiovascular Disease in the Caribbean.

The objectives of the study were to:

- 1. investigate the specific needs for physical activity and dietary education in the prevention and management of cardiovascular disease in the Caribbean.*
- 2. identify specific contents for a physical activity and dietary manual for the prevention and treatment of cardiovascular disease in the Caribbean.*

Methodology

Twenty Focus group discussions were conducted among adults above the age of 20 years in the Bahamas (5) Grenada (6) Jamaica (3) and Trinidad (6). The discussions took place during the period June to August, 2003. A total of 166 persons participated in the discussions and group sizes ranged from 6-12.

Discussions were guided by a pre-tested Interview Guide which consisted of ten questions under the following broad areas:

- Understanding of the term “Cardiovascular Diseases”*
- Foods and their relationship to cardiovascular diseases*
- Obesity and physical activity and relationship to CVD*
- Sources and preferences of health information*

Results and Discussion

Responses from across the four countries indicate that there is a good understanding of the term 'cardiovascular diseases'. Understandably, the term was more deeply understood by health care professionals and participants who had tertiary level education. It may be useful to use common terms such as heart disease when targeting the general public.

The understanding of what conditions make up the disease category was less clear. In general, participants across countries tended to include health conditions (hypertension, stroke) risk factors (high cholesterol, diabetes) and symptoms (chest pains) as health conditions included in CVD. This 'lack of knowledge' should be addressed in any education program designed to address CVD.

Generally, participants had a good handle on the causes of CVD as well as on strategies for prevention and management. Notwithstanding, there was some amount of ambiguity about the role of exercise and diet, in that, participants were unable to clearly state what was considered a 'healthy diet' or how exercise actually prevented CVD. One gets the impression that participants have 'surface' knowledge of all the pertinent issues but the knowledge is not deep enough to empower them to take action.

Overall, participants were able to identify foods and food products which, if consumed in excess, could contribute to the development of CVD. However, two issues need highlighting. Firstly, it appears that starchy foods are still seen as being problematic either in causing cardiovascular disease or in 'making one fat'. This is so despite the education messages encouraging the population to consume more complex carbohydrate foods such as ground provisions. Secondly, participants seemed not to view 'processed foods' as problematic in relation to cardiovascular disease. This can be deduced from their 'selective non-mention' of these foods as possible causes or ones to avoid to prevent cardiovascular disease.

All categories of participants appeared to know that there is a difference between fats and cholesterol but they were unclear as to what the difference is. Participants, generally, also knew that there was saturated and unsaturated fats but could not explain the differences. They, however, gave the view that saturated fats were more harmful than unsaturated ones.

It was the general feeling that all foods high in fat, whether from plant or animal origin, are also high in cholesterol – avocado and coconut being examples of foods high in cholesterol. This confusion could be as a result of incomplete or unclear messages being passed on to the public.

*Participants were generally unclear as to how the body uses food. Consequently they developed ‘vivid imaginings’ re the metabolic path way. For example, it was felt that black pepper was detrimental to the arteries and could therefore cause CVD: “Black pepper works the same way as when it is put in brake fluid to bind a leak. A similar thing happens in the body and it clogs the arteries”. Cold water and cold drinks were also seen to contribute to CVD in a similar devious fashion: “cold drinks with ice affect the diaphragm and squeeze an already damaged heart”. Further, “cold drinks interfere with the metabolic rate by **reducing it**”.*

Overall, there was a clear understanding of the types of food preparation practices that added extra fats to foods, which could in turn contribute to CVD. It is important to build on this knowledge by teaching people how to use alternative food preparation methods to prepare tasty meals without the addition of too much fat.

Discussants across all four countries had a good understanding of foods and food products which were protective of CVD. The general idea was that fruits, raw vegetables, whole grain products, high fibre foods were protective. Again, there was some confusion regarding the mechanism by which these foods work to protect the body. Foods high in fibre such as provisions (dasheen, cassava), grains, fruits and vegetables were said to “move the bad cholesterol out of the body” or as one participant puts it “fibre keeps the cholesterol down”.

In all countries most participants were clear that a combination of the lack of exercise and the excess consumption of certain foods and drinks led to obesity. In a minority of cases genetics and hormonal influences were mentioned. The issue of fat distribution was discussed in only a minority of cases but in such instances the greatest risk was thought to be when fat is stored around the chest, stomach and abdomen. There was no paucity of suggestions from participants as to what to do to prevent obesity, suggesting that generally the public has information as to how to prevent obesity. The problem seems more to be with putting this knowledge into practice.

The general confusion as to the differences, if any, between ‘physical activity’ and ‘exercise’ is an issue which needs urgent attention. Education messages which urge the population to engage in increased physical activity must be clear as to what constitutes physical activity and how physical activity can be increased. Messages must also ensure that ‘planned exercise’ is explained in the context of overall physical activity and not as a separate entity.

Although the benefits of exercise, generally, and the role of exercise in preventing CVD, specifically, were well understood there appeared to be several ‘perceived obstacles’ preventing individuals from participating in these activities. Most of these obstacles revolved around unsafe environments, lack of self efficacy among individuals and lack of support. Efforts aimed at increasing physical activity among the population should pay careful attention to these perceived obstacles.

Focus group participants received health information from a variety of sources chief among them being health professionals and the print and electronic media.

When asked how they would like to see information about keeping the heart “healthy” presented, most participants wanted something visual – television and video presentations, interactive radio programs, drama, song or calypso and active practical workshops. Participants were also interested in user-friendly education materials that are easy to read (big print), illustrative (includes glossy pictures), colourful and contains information on food preparation, calories, portion sizes and types of physical activity.

Recommendations

Based on the results the following are put forward as recommendations for consideration when developing education materials on physical activity and diet for the prevention and management of cardiovascular diseases in the Caribbean:

- 1. Medical terms such as “cardiovascular disease” should be clearly explained when targeting the general public.*
- 2. For a clearer understanding of what constitutes CVD it will be necessary to provide information on the “health conditions”, the “risk factors”, and the “symptoms”.*

3. *Provide clear information on the role of **starchy foods** in a healthy diet. Efforts should be made to remove the ‘negative perceptions’ surrounding these foods.*
4. *Offer clear explanations as to what is fat and what is cholesterol and the relationship between the two. Provide clear examples of food sources of these compounds. Avoid giving ‘partial’ information or making the mistake that “they will not understand”.*
5. *Provide some simple pictorial representation of how the body uses food – perhaps showing the changes in the actual food to the metabolite which is used by the body.*
6. *Build on the knowledge base of the population. Provide guidance on how to use less common methods of food preparation to prepare nutritious and tasty meals which are low in fat.*
7. *Develop efficacy skills to enable individuals to move from the knowledge level to behaviour.*
8. *Provide clear messages as to what constitutes ‘physical activity’, what constitutes ‘exercise’ and the relationship between the two. Offer practical advice on how to increase physical activity at the individual level.*
9. *Empower the population to advocate for policies and programmes that would support increased physical activity at the community level.*
10. *Provide education materials that have the following characteristics: user-friendly; easy to read; illustrative; and, colourful.*
11. *Develop and offer educational programmes that are ‘away from the mundane’. Suggestions include video presentations; interactive radio and television programmes incorporating drama and music.*

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Special thanks to, the **focus group participants** from the Bahamas, Grenada, Jamaica and Trinidad and Tobago who volunteered their time to attend the sessions and provided valuable information, without which this project could not have been completed.

INTRODUCTION

Over the last 20-25 years there has been an epidemiological transition in the pattern of diseases – from infectious to chronic non-communicable diseases. Cardiovascular disease (CVD) has become the leading cause of death across the Caribbean in the last decade and accounted for 19% of deaths overall in 1995, translating into approximately 7, 300 deaths. A major longitudinal study in Trinidad and Tobago indicated that, as elsewhere in the world, coronary heart disease in men is associated with high blood pressure, diabetes, high concentrations of low-density lipoprotein (LDL) and low concentrations of high-density lipoprotein (HDL). This suggests many avenues for primary prevention. The study also found that men of Indian descent were roughly twice as likely as men of African descent to develop cardiovascular disease, even when other risk factors were taken into account. Hypertension prevalence among males aged 25-74 years in Barbados, Jamaica and Saint Lucia is 19-25% and among females is approximately 28%.

It has been well established that some risk factors for CVD are preventable. The role of diet as a public health tool to reduce the risk of developing cardiovascular disease is supported by various epidemiological, metabolic and animal research. However, although the relationship between diet and cardiovascular disease has been well established, the specific food components that make up a diet are very region specific. Thus it is not ideal to take on a North American Education publication and reproduce it for the Caribbean setting. To be effective an educational tool must be culturally acceptable and reflect the traditions and customs of the population for which it is being developed. Qualitative information for the development of effective educational material is lacking for the Caribbean. Qualitative research on the cultures, traditions and customs specific to the Caribbean Region would enable the development of a specific tool which can be used within the Region. This tool would be effective and efficient in conveying the message, so as to assist in the behavioural change required for the prevention and control of cardiovascular disease in the Caribbean Region.

Against this background, the Caribbean Food and Nutrition Institute (CFNI) supported by the Caribbean Cardiac Society (CCS) conducted qualitative research in four countries using focus group discussions to gather information on diet and physical activity and their perceived link to

Cardiovascular Disease. The results of this qualitative research will be useful in informing the Caribbean Food and Nutrition Institute on the contents and pedagogical approaches that need to be adopted in the editing of a manual on Nutrition and Physical Activity for the Prevention and Management of Cardiovascular Disease in the Caribbean.

Objectives:

1. Investigate the specific needs for physical activity and dietary education in the prevention and management of cardiovascular disease in the Caribbean.
2. Identify specific contents for a physical activity and dietary manual for the prevention and treatment of cardiovascular disease in the Caribbean.

METHODOLOGY

Twenty Focus group discussions were conducted among adults above the age of 20 years in the Bahamas (5) Grenada (6) Jamaica (3) and Trinidad (6). The discussions took place during the period June to August, 2003. A total of 166 persons in various categories participated in the discussions and group sizes ranged from 6-12. Table 1 presents the focus group categories and the number of participants in groups, by country.

Table 1: Focus Group Discussion Study in Four Caribbean Countries. Group Categories and Number of Participants in Groups, by Country.

<i>Group Categories</i>	<i>Number in Groups by Country</i>				
	Bahamas	Grenada	Jamaica	Trinidad	Total
1 – Health Care Practitioners Nutrition Personnel, Health Educators/Promoters, Nurses, General Practitioners, Physiotherapist	10	11	6	8	35
2 – Patient Support Group Members of Heart Associations/Foundations	10	9	-	7	26
3 – Patient Group: Persons (males and females) diagnosed with CVD who are 45-65 years of age. i) Recently diagnosed (1-2 years) ii) Diagnosed > 2 years	8	6 8	- -	6 6	20 14
4 – General Population: Persons 20 years and over i) Completed tertiary education ii) Below tertiary level	9 12	10 11	6 9	7 7	32 39
TOTAL	49	55	21	41	166

Recruitment

Participants were recruited in each country based on the local situation and availability of individuals to match the group category specification. Due to the inability to recruit participants, in Jamaica for the categories of ‘patient support’ and ‘patient’ groups, focus group discussions were not conducted for these categories in this country. Participants in all participating countries were reimbursed traveling expenses and offered refreshments.

Study Instrument and discussion format

An Interview Guide (Appendix I) was developed and pre-tested by the research team during the training and standardization session held in March 2003 (previously documented in Progress Report, April 2003). The guide consisted of ten questions under four broad areas, as follows:-

- Understanding of the term “Cardiovascular Diseases”
- Foods and their relationship to Cardiovascular Diseases
- Obesity and Physical Activity
- Sources and preferences of Health Information

The group discussions in each country were conducted by trained local Moderators, aided by Assistant moderators who took notes and managed the audio recording of discussions. Discussion sessions lasted from 1½ to 2 hours.

Discussion sites were selected on the basis of availability in each country and included health centers, conference rooms and schools.

Analysis

Country level

Tape recordings of discussion sessions in three countries (Bahamas, Grenada, Trinidad and Tobago) were transcribed verbatim and content analysis conducted across groups according to the five areas on the Interview Guide. In Jamaica the discussions were analyzed by discussion group according to the five areas on the Interview Guide. Appendix II presents individual country reports.

Cross-country

Results and discussion presented in this report represent a cross country analysis of findings from all four countries. The report is aimed at presenting a broad picture of the specific needs for physical activity and dietary education as seen from a ‘Caribbean perspective’.

Limitations

The focus group methodology provides qualitative data and, as such, care must be taken in the conclusions drawn and generalizations made from these data. Further, the small numbers of focus group respondents as well as the selection of only four Caribbean countries, impose limits on the data obtained. Further limits are imposed on the data too, because a large proportion of the respondents were female. It is possible that within other islands of the region and among the male population there are significant differences in knowledge and views about physical activity and dietary practices as they relate to cardiovascular diseases.

RESULTS AND DISCUSSION

Understanding of the term “Cardiovascular Diseases”

What it is

Across all four countries the term “Cardiovascular Disease” was generally understood to mean “heart disease” or “something related to the heart” as evidenced by the following responses.

- “heart”
- “something to do with the heart”
- “I think it deals with the heart”
- “Diseases affecting the heart”
- “Diseases of the vessels of the heart”

Only in one country was there a response indicating total lack of understanding of the term – “first time I’m hearing the word”. However, in another country the group with ‘below tertiary level’ education seemed more familiar with the term ‘heart disease’ than with ‘cardiovascular disease’. Groups that included persons from the health care profession and those with tertiary level education, were able to verbalize and expand more on their understanding of CVD. Commonly mentioned terms across countries were heart blockage, angina, hypertension, heart transplant, plaque in the arteries, coronary disease, major or minor heart attack and heart palpitations.

Common terms used across the four countries to describe cardiovascular disease include ‘heart disease’, ‘heart problems’ and ‘weak heart’.

What health conditions are included?

With respect to conditions that fall under the group of cardiovascular diseases, mention was made in all countries of some type of chronic nutrition-related disease such as hypertension, diabetes, and stroke. Other conditions mentioned included rheumatic fever, high cholesterol blocking the arteries/narrowing of the arteries, chest pains, blood clots, heart failure, congestive heart failure, stress and enlarged heart. The Health Care Practitioners and the Tertiary level participants were the participants most likely to mention conditions such as myocardial infarction, arteriosclerosis, atherosclerosis, coronary thrombosis, ischemic heart disease, breathlessness and circulation problems.

What causes CVD/makes CVD worse

“Lack of exercise” and “stress” were the most often mentioned causes of CVD. Several other responses such as: eating habits, poor diet, what you eat and drink, seem to indicate that in a general way DIET was considered as one of the causes. Specific dietary factors mentioned included consumption of high-fat foods, high cholesterol foods and ‘fast foods’. Other responses such as: “when pressured by someone” and when one had “problems” both lend support to “STRESS” as a cause of CVD. Age and gender were mentioned in only one country as a predisposing factor to the development of CVD.

Participants in all countries indicated that the chronic nutrition-related diseases such as diabetes mellitus and hypertension were major contributors to making the condition worse. They also alluded to the fact that bad eating habits such as eating foods high in fats, drinking alcohol and cigarette smoking in combination with lack of exercise all contributed to making cardiovascular disease worse. It is interesting to note that the general population group (below tertiary level) in two countries indicated that *too much exercise, or “extraneous exercise” could cause or make the condition worse.*

How to prevent CVD

Strategies for prevention of CVD as mentioned by participants in all countries may be classified into the following two groups:

What one should do

Exercise more
Eat well/healthily
Eat lots of fruits and vegetables
Control diabetes and hypertension
Take medication

What one should avoid

Stress
Salt
Alcohol
Smoking
Sugar
Fatty foods (animals)

Health Care Practitioners and the Tertiary level Groups in two countries mentioned public education on ‘healthy eating’ as a key means of preventing the condition since a common belief among the population is that ‘healthy eating’ meant “eating a lot of raw tasteless vegetables”.

How to treat CVD

Common views on how CVD should be treated included healthy diets and exercise. The general consensus was that treatment strategies should be similar to prevention strategies. The use of medication was also mentioned as a treatment strategy. The Health Care Practitioners in one country felt strongly that meditation and alternative medicine were popular treatment modes being currently practiced. The patient support group in one country advised that *one teaspoon of brandy in milk increases the blood circulation and makes for a good night's rest* especially for older persons and should form part of the treatment.

Discussion

From the responses across the four countries it would appear that there is a good understanding of the term 'cardiovascular diseases'. Understandably though, the term was more deeply understood by health care professionals and participants who had tertiary level education. It may be useful to use common terms such as heart disease when targeting the general public.

The understanding of what conditions make up the disease category was less clear. In general, participants across countries tended to include health conditions (hypertension, stroke) risk factors (high cholesterol, diabetes) and symptoms (chest pains) as health conditions included in CVD. This 'lack of knowledge' should be addressed in any education program designed to address CVD.

Generally, participants had a good handle on the causes of CVD as well as on strategies for prevention and management. Notwithstanding, there was some amount of ambiguity about the role of exercise and diet in that participants were unable to clearly state what was considered a 'healthy diet' or how exercise actually prevented CVD. One gets the impression that participants have 'surface' knowledge of all the pertinent issues but the knowledge is not deep enough to empower them to take action.

Overall, participants were able to identify foods and food products which if consumed in excess could contribute to the development of CVD. However two issues need highlighting. Firstly, it appears that starchy foods are still seen as being problematic either in causing cardiovascular disease or in 'making one fat'. This, notwithstanding the education messages encouraging the population to consume more complex carbohydrate foods such as ground provisions. Secondly,

participants seemed not to view 'processed foods' as problematic in relation to cardiovascular disease. This from their 'selective non-mention' of these foods as possible causes or ones to avoid to prevent cardiovascular disease.

All categories of participants appeared to know that there is a difference between fats and cholesterol but they were unclear as to what the difference is. Participants, generally, also knew that there was saturated and unsaturated fats but could not explain the differences. They, however, gave the view that saturated fats were more harmful than unsaturated ones.

It was the general feeling that all foods high in fat, whether from plant or animal origin, are also high in cholesterol – avocado and coconut being examples of foods high in cholesterol. This confusion could be as a result of incomplete or unclear messages being passed on to the public.

*Participants were generally unclear as to how the body uses food. Consequently they developed 'vivid imaginings' re the metabolic path way. For example it was felt that black pepper was detrimental to the arteries and could therefore cause CVD: "Black pepper works the same way as when it is put in brake fluid to bind a leak. A similar thing happens in the body and it clogs the arteries". Cold water and cold drinks were also seen to contribute to CVD in a similar devious fashion: "cold drinks with ice affect the diaphragm and squeeze an already damaged heart". Further, "cold drinks interfere with the metabolic rate by **reducing it**".*

Overall, there was a clear understanding of the types of food preparation practices that added extra fats to foods, which could in turn contribute to CVD. It is important to build on this knowledge by teaching people how to use alternative food preparation methods to prepare tasty meals without the addition of too much fat.

Discussants across all four countries had a good understanding of foods and food products which were protective of CVD. The general idea was that fruits, raw vegetables, whole grain products, high fibre foods were protective. Again, there was confusion of the mechanism by which these foods worked to protect the body. Foods high in fibre such as provisions (dasheen,

cassava), grains, fruits and vegetables were said to “move the bad cholesterol out of the body” or as one participant puts it “fibre keeps the cholesterol down”.

Foods and their relationship to Cardiovascular Disease

Foods and food products which contribute to CVD

Foods high in cholesterol, alcohol, caffeine, starchy foods, fatty foods (saturated fats), fried foods, sweet foods were all mentioned as food types contributing to cardiovascular disease. The list below presents the most common food types mentioned:

<i>Common foods mentioned</i>		
Fatty foods	Fried foods	Animal foods
Starchy foods	Caffeine	Hamburgers
Salt	Saturated fat	Cheese
Sugary/sweet foods	Butter	Egg
High cholesterol	Highly seasoned foods	

Some groups expressed the view that **starchy foods** (ground provisions – cassava dasheen/coco eddoes) led to overweight hence “increasing the work on the heart”. Most groups mentioned ‘alcohol’ as contributing to heart disease but only when taken in excess. It was felt that such excesses caused high blood pressure. It was also felt that alcohol “hardened” the arteries after continued use. Social drinking was deemed ‘alright’ and meant no more than 2 drinks with women having 1 ounce and men 2 ounces. Some participants also felt that red wines were good for the heart but that the Caribbean people were not really red wine drinkers. People preferred rum and beers.

It was interesting to note that few mentions were made across the countries of food items such as luncheon meats, hotdogs or snack foods such as potato chips and cookies.

Country reports revealed that participants put forth some interesting concepts relating to types of foods and the mechanisms by which they work to contribute to cardiovascular disease. Firstly, in most countries participants indicated that **avocado** and **coconut/coconut milk** contribute to

cardiovascular disease “**because of fat and cholesterol**” or because (they are) “**high in cholesterol**”

Secondly, in one country discussants raised the issue that seasonings such as Vetsin/MSG and black pepper help to clog the arteries. One participant equated the activity in the artery with that of a brake line in a car. He explained that “*Black pepper works the same way as when it is put in brake fluid to bind a leak. A similar thing happens in the body and it clogs the arteries*”

Thirdly, “cold drinks” were seen by some participants as contributing to cardiovascular disease. The mechanism was explained as: “*cold drinks with ice affected the diaphragm and squeezed an already damaged heart*”. Further, “cold drinks interfered with the metabolic rate by **reducing it**”.

Food preparation and cooking methods which contribute to CVD

With regards to food preparation practices that increase the fat content of foods, the following were mentioned as responsible practices:

- frying
- stewing and currying
- adding butter to food
- using coconut milk
- failure to remove chicken skin
- adding grease
- Cultural dishes such as ‘oil down’, macaroni and cheese (National Dish)
- not removing fat from meat.

Stewing and currying were seen as adding a lot of fat because of the practice of first frying the meats in a lot of fat and then adding water and sauces to “cook it down”

Across the four countries it was the general view that in order to decrease fat in food, people should:

- take skin off meat
- remove all visible fat
- avoid adding oil

It was reported by a participant that “there was no danger in using fat once it was *worked out*”.

Foods and food products that are protective of CVD

In response to the questions raised regarding what we eat or drink that can protect/prevent heart disease, the general idea was that fruits, raw vegetables, whole grain products, high fibre foods were protective. Foods high in fibre such as provisions (dasheen, cassava) grains, fruits and vegetables were said to “*move the bad cholesterol out of the body*” or as one participant puts it “*fibre keeps the cholesterol down*”. Overall, fibre was thought to be useful because:

- it helps the body to pass out waste
- if enough is not used, some of the organs will be strained
- fibre could “soak up fat”.
- fibre adheres to fat and removes it from the body
- fibre gives a feeling of fullness

In one country there seemed to be a misunderstanding among participants as to the role of water in the prevention of heart disease. It was thought that “water would wash away fat”.

Discussion around this question not only centered on foods but also on other preventive measures such as exercising and learning to manage stress as well as “bring the weight down” and “no drugs and alcohol”.

The role of fat and cholesterol

Except for a few responses which stated “All fat is fat”, it was the general thinking that all fats were not the same although the difference was not always clear– “There are some fats more fatty than others”. Based on responses from participants across countries, fat was classified in the following ways:

- saturated and unsaturated fat
- animal and plant fat
- good fat and bad fat

Although not too clear as to the difference between saturated and unsaturated fats most gave the view that saturated fats were more harmful than unsaturated ones. As it relates to animal versus plant fats most participants also seemed unclear of the distinctions and were unable to explain any differences. A minority, however, gave the view that fats from animals were “more

fattening” than fats from plants. It was pointed out by some participants that “animal fat had cholesterol and clogged the arteries”. On the other hand avocado – a plant food had “good fat and did not clog up inside the body”. Participants from the “patient groups” indicated that all vegetable oil such as virgin olive oil, extra virgin oil and corn oil had “good fat”.

Fat was considered “bad” when:

- it was deposited into the blood stream and caused blood clots
- excess was stored in the body
- it was not digested properly. This caused plaque build up on the heart.
- “Bad fat” was seen as saturated while “good fat” was unsaturated

Participants felt that when fats were eaten, they tended to raise the cholesterol levels in the body. According to a respondent in one country : *“fatty foods make the liver produce more cholesterol”*.

On the issue of cholesterol, it was the general thinking that fat and cholesterol were not the same although participants could not explain the differences. In some instances fats and cholesterol were thought of as belonging to the “same family”, as “being related” or as “cousins”. Other responses indicated that fats and cholesterol were either the same or that fat “**caused**” cholesterol or “**build**” cholesterol. An explanation given by one respondent (lay person) for the difference between cholesterol and fat is that “the blood is used to measure cholesterol while the skin is used to measure fat”.

With the exception of one tertiary level group, there appeared to be a general confusion as to foods which contain cholesterol. Although some participants gave eggs, butter and shell fish as foods high in cholesterol, most participants tended to offer avocado and coconut as foods high in cholesterol as they were often advised by their physicians to avoid these foods.

In general, health professionals and participants with tertiary level education had surface knowledge of cholesterol while the general population (below Tertiary level) admitted that they did not know much about cholesterol. It is also noteworthy that persons diagnosed with cardiovascular disease also only had vague notions about cholesterol. As outlined in one country

report “They (participants from a patient group) also indicated that when they asked the doctor what is cholesterol they were only told to stay away from some foods”.

Discussion

Overall, participants were able to identify foods and food products which if consumed in excess could contribute to the development of CVD. However two issues need highlighting. Firstly, it appears that starchy foods are still seen as being problematic either in causing cardiovascular disease or in ‘making one fat’. This, notwithstanding the education messages encouraging the population to consume more complex carbohydrate foods such as ground provisions. Secondly, participants seemed not to view ‘processed foods as problematic in relation to cardiovascular disease. This from their ‘selective non-mention’ of these foods as possible causes or ones to avoid to prevent cardiovascular disease.

All categories of participants appeared to know that there is a difference between fats and cholesterol but they were unclear as to what the difference is. Participants, generally, also knew that there was saturated and unsaturated fats but could not explain the differences. They, however, gave the view that saturated fats were more harmful than saturated ones.

It was the general feeling that all foods high in fat, whether from plant or animal origin, are also high in cholesterol – avocado and coconut being examples of foods high in cholesterol. This confusion could be as a result of incomplete or unclear messages being passed on to the public.

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Overall, there was a clear understanding of the types of food preparation practices that added extra fats to foods, which could in turn contribute to CVD. It is important to build on this knowledge by teaching people how to use alternative food preparation methods to prepare tasty meals without the addition of too much fat.

Discussants across all four countries had a good understanding of foods and food products which were protective of CVD. The general idea was that fruits, raw vegetables, whole grain products, high fibre foods were protective. Again, there was confusion of the mechanism by which these foods worked to protect the body. Foods high in fibre such as provisions (dasheen, cassava), grains, fruits and vegetables were said to “move the bad cholesterol out of the body” or as one participant puts it “fibre keeps the cholesterol down”.

Obesity and Physical Activity

What makes people fat

The reasons given for persons becoming obese or fat were more or less the same across countries. Generally the reasons were: excess energy intake, lack of exercise, greed, and family history. The following are examples of phrases used by participants to describe this phenomenon:

- Kinds of foods
- Amount of food
- Eat too much
- snacking between meals
- in the genes
- old age spread
- suppose to be fat, come from big people
- lack of exercise

Most participants within each group felt that it mattered where fat was stored and that the greatest risk occurred when fat was stored around the chest, stomach and abdomen. Generally, discussants expressed the view that obesity is always related to CVD. However, in one country it was reported by a group that “a person does not have to be fat to get a heart attack since skinny persons are also affected”.

Responses from participants about how to prevent obesity maybe categorized into the following two groups:

Diet-related

Don't overeat
Don't eat after 7:00 p.m.
Eat foods that would not
 make you get fat
Follow your diet
Do not eat too much of anything

Exercise/physical activity-related

Don't overwork
Exercise
Walk

Swim
Stay active
Use steps; don't use elevator
Walk around your yard

Physical activity and exercise

There was mixed reaction across countries when participants were asked to discuss the differences, if any, between **Exercise** and **Physical Activity (PA)**. Most groups felt that there was a difference between the two as expressed by the following participant statements:

- "Exercise focus on particular part of the body while PA is associated to manual labor".
- "PA is natural and exercise is more structured".
- "Exercise increases heart rate and PA does not".
- "PA does not count towards a healthy heart".
- "When you do PA you do not burn calories, when you exercise, you burn calories".
- "PA is normal work around the house"
- "PA is when you are not aware that you are exercising"
- "Exercise is when you put your mind to it"
- "Exercise is purposeful physical activity"

A minority of participants, however, stated that PA and exercise are alike. "We burn calories when ever we move people can exercise in PA". "PA is when you use the steps rather than the elevator or gardening or housework". "Everything we do is PA whether planned or unplanned".

Participants across all countries were able to identify several benefits of exercise. From the discussion results one may conclude that participants, in this study, not only knew the benefits of exercise but were clear as to the benefits of exercise to the heart. Some of these included:

- Burns fat and cholesterol

- Increases the pulse rate of the cardiovascular system
- Helps with breathing
- Promotes more secretions and Cleans the pores
- Strengthen muscles
- Feel more healthy
- Sometimes feel good even though inside not good
- Total health improvements
- Blood circulations improved/Increased oxygen to stimulate muscles/more oxygen to the system
- Relieves stress/more relaxed/ Sleep better
- Gives good feeling/more energetic - Can accomplish much more during the day
- Lowers blood pressure, blood cholesterol and blood sugar
- Increases coping skills
- Can prevent heart disease
- Helps bowel movement
- Makes one look good

Although groups in all countries thought that exercise was important and should be done by everyone – “from the cradle to the grave”, many persons did not exercise for some well-established reasons such as:

- Sickness/ Medical and physical conditions
- laziness (most often cited by groups)
- Lack of time
- Price of sneakers for walking/ Cost of gym and personal trainer
- Terrible conditions of the road and a lack of proper outdoor places to exercise.
- Unsafe environment
- Working hours
- Interference from dogs and “men”
- Need another person for encouragement
- hairstyle
- Stress/Lack of motivation/depression/low self esteem

- Lack of advice and guidance
- Not motivated
- Lack of discipline/lack of priorities

Some groups expressed the view that the Doctor's advice was important before one started exercising. Although most agreed that persons with heart disease should exercise the minority view was that they should not..."you want them to dead or what?"

Discussion

In all countries most participants were clear that a combination of the lack of exercise and the excess consumption of certain foods and drinks led to obesity. In a minority of cases genetics and hormonal influences were mentioned. The issue of fat distribution was discussed in only a minority of cases but in such instances the greatest risk was thought to be when fat is stored around the chest, stomach and abdomen. There was no paucity of suggestions from participants as to what to do to prevent obesity, suggesting that generally the public has information as to how to prevent obesity. The problem seems more to be with putting this knowledge into practice.

The general confusion as to the differences, if any, between 'physical activity' and 'exercise' is an issue which needs urgent attention. Education messages which urge the population to engage in increased physical activity must be clear as to what constitutes physical activity and how physical activity can be increased. Messages must also ensure that 'planned exercise' is explained in the context of overall physical activity and not as a separate entity.

Although the benefits of exercise, generally, and the role of exercise in preventing cvd, specifically, were well understood there appeared to be several 'perceived obstacles' preventing individuals from participating in these activities. Most of these obstacles revolved around unsafe environments, lack of self efficacy among individuals and lack of support. Efforts aimed at increasing physical activity among the population should pay careful attention to these perceived obstacles.

Sources of Health Information

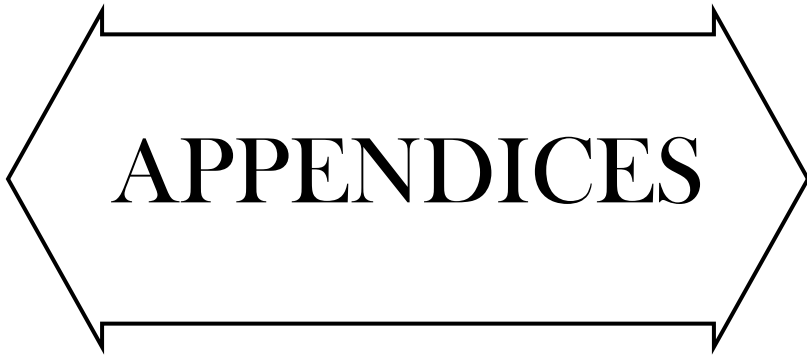
Results from discussions revealed that participants received health information from a variety of sources chief among them being health professionals and the print and electronic media. Other sources of information include leaflets, magazines, books, pharmacies and family and friends.

When asked “How would you like to see information about keeping the heart healthy presented”, most participants, especially the General Population (below tertiary) especially wanted something visual –television and video presentations, interactive radio programs, drama, song or calypso and active practical workshops. Other suggestions included user-friendly education materials that are easy to read, illustrative, colourful and contain information on food preparation, calories, portion sizes and types of physical activity. “The information should be relevant to the people in the Caribbean in terms of weight chart and weight range”. In one country the older participants suggested having a document with glossy pictures, big print, which include pictures of local fruits.

RECOMMENDATIONS

Based on the results of the focus group discussions presented in this report, the following are put forward as recommendations for consideration when developing education materials on physical activity and diet for the prevention and management of cardiovascular diseases in the Caribbean.

1. Medical terms such as “cardiovascular disease” should be clearly explained when targeting the general public.
2. For a clearer understanding of what constitutes CVD it will be necessary to provide information on the “health conditions”, the “risk factors”, and the “symptoms”.
3. Provide clear information on the role of **starchy foods** in a healthy diet. Efforts should be made to remove the ‘negative perceptions’ surrounding these foods.
4. Offer clear explanations as to what is fat and what is cholesterol and the relationship between the two. Provide clear examples of food sources of these compounds. Avoid giving ‘partial’ information or making the mistake that “they will not understand”.
5. Provide some simple pictorial representation of how the body uses food – perhaps showing the changes in the actual food to the metabolite which is used by the body.
6. Build on the knowledge base of the population. Provide guidance on how to use less common methods of food preparation to prepare nutritious and tasty meals which are low in fat.
7. Develop efficacy skills to enable individuals to move from the knowledge level to behaviour.
8. Provide clear messages as to what constitutes ‘physical activity’, what constitutes ‘exercise’ and the relationship between the two. Offer practical advice on how to increase physical activity at the individual level.
9. Empower the population to advocate for policies and programmes that would support increased physical activity at the community level.
10. Provide education materials that have the following characteristics: user-friendly; easy to read; illustrative; and, colourful.
11. Develop and offer educational programmes that are ‘away from the mundane’. Suggestions include video presentations; interactive radio and television programmes incorporating drama and music.



APPENDICES

APPENDIX I

TOPIC GUIDE

1. What comes to mind when you hear the term/words “Cardiovascular Disease”?
 - heart disease
 - what types of conditions fall under the group heart disease
 - causes/other conditions that make it worse
 - how prevent
 - how treat
 - what else do you call “heart disease”

2. What kinds of foods cause/ contribute to heart disease?
 - fats
 - cholesterol
 - alcohol
 - starchy foods
 - sweet foods

- 2a. Fats
 - What do you mean by fats?
 - Are all fats the same?
 - When the above fats are eaten how do they affect the health of your heart?

- 2b. Cholesterol
 - What foods? (probe)
 - Same as fat? (probe)

3. Which ways do we cook/prepare food that contribute to our fat intake/heart disease?

4. What do we eat or drink that can prevent (protect against) heart disease?
 - fruits and vegetables (probe for example)
 - fibre/roughage

5. Talk about
 - What makes people fat?
 - How do you think being fat is related to heart disease?
 - Does it matter where the fat is on the body?
 - How do people get fat?
 - What specific things can we do to prevent ourselves from getting fat? (probe for nutrition and physical activity)

6. What comes to mind when you hear the term “Physical Activity”?
 - Establish difference between physical activity and exercise

7. What do you think are the benefits of exercise? (probe for benefits to heart disease)

8. Who should exercise

9. Summary of food and Physical Activity benefits to CVD
Where do/did you get your information on these issues?

10. How would you like to see information about keeping the heart healthy presented?

11. Any other points for discussion.

APPENDIX II

COUNTRY REPORT

Bahamas Project
Caribbean Cardiac Society
Cardiovascular Health Research
Bahamas Focus Group Study

October 12, 2003

Prepared by: Camelta Barnes
Nutrition Unit
Ministry of Health/Department of Public Health
10/13/03

Background

Cardiovascular diseases (CVD) have been among the leading cause of death in the Caribbean for decades. Here in the Bahamas, CVDs are among the top five leading causes of death. Studies show that major risk factors contributing to these diseases are often nutritionally and life style related. Therefore many of these deaths could be prevented through primary avenues such as nutrition and life style intervention. Studies also show that diet plays a key role as a public health tool in reducing the risk of CVD. It is well noted that CVDs are common among the Caribbean region and even North America. This similarity stretches across eating styles and specific food components yet at the same time, there are varied differences in eating styles and types of foods eaten. But nevertheless, many of the nutrition educational tools used in the Caribbean region are specific to North America. These educational tools do not always address specific needs and concerns of people living in Caribbean region. Thus it will be ideal to produce nutrition education tools for CVD that are culturally relevant and that reflect the traditions and customs of the population it is being used in. The Caribbean Food & Nutrition Institute (CFNI) in collaboration with the Caribbean Cardiac Institute aim to address and meet this need.

CFNI invited the Bahamas along with three other countries in the region; Jamaica Trinidad and Grenada to take part a focus group research study. The combined results will aid in the development of a dietary and physical activity manual for the prevention and treatment of CVD in the English speaking Caribbean. This tool will play an instrumental role in decreasing the mortality and morbidity rate from CVD in this part of the region. The Specific objectives for this study were to:

1. Investigate the specific needs for physical activity and dietary education in the prevention and management of CVD in the Caribbean
2. Identify specific contents for a physical activity and dietary manual for the prevention and management of CVD in the Caribbean

This CVD focus group research was conducted in New Providence, Bahamas during the months of July and August 2003. There were six focus groups with 8 to 12 persons per group. Persons targeted for group discussions were 20 years and over, including health care providers, patient support groups, persons diagnosed with CVD and the general public.

The Nutrition Unit lead the focus group research with discussions moderated by Camelta Barnes and assisted by Melissa Underwood and Pamela Bowe. Persons were recruited from the Princess Margaret Hospital outpatient, the Bahamas Heart Association, The Royal Bahamas Defense Force, nurses and a church youth group. Participants' age ranged from 19 to 74 years old. Group Discussions were conducted based on a pre-tested interview topic guide, which comprised of a number of related questions. A letter of invitation was sent to each group to take part in the Focus Group

Discussion, followed by verbal confirmation via the telephone. Participants received light refreshments, which included finger sandwiches and cookies.

GROUP	No. Of persons	M	F	AGE RANGE	GROUP DISCRIPTION
Princess Margaret Hospital (PMH)	8		√	42-74	Patient Group
Bahamas Heart Association (BHA)	10	√	√	34-44	Support Group
The Royal Bahamas Defense Force (RBDF)	9	√	√	23-38	Defense Officers
Mission Baptist Church (MBC)	12	√	√	19-36	Youth Group & Leaders
Health Professionals (HP)	10		√	25-57	Registered Nurse (RN) & Trained Clinical Nurse (TCN)

All sessions were taped (with the exception of one) and assistant moderators took notes. A noted limitation to this research was that most of the participants were women. Even though men participated in three of the groups they were out numbered 1 to 3 in most cases.

Findings

Question 1

What comes to mind when you hear the term “Cardiovascular disease”?

The general consensus between all groups was “heart disease”. However, it appeared that the groups, which included persons with some level of tertiary level education, were able to verbalize and expand more on this question. The groups mentioned heart blockage, angina, hypertension, heart transplant, pace maker, major or minor heart attack and heart palpitations. When probed with the question, what other conditions that makes CVD worse, persons mentioned diabetes, obesity, stroke, enlarged hearts, blood clots, irregular heart and hole in the heart.

Question 2

What kinds of food causes/contribute to heart disease?

Participants from all groups mentioned the terms greasy fried foods, starchy foods and highly seasoned foods, which they classed to be peas and rice, macaroni and cheese, fried plantain, red meat, high fat, high cholesterol, saturated fat, butter, oil, cake and lard were also mentioned as foods that contributed. It should be noted here that none of the participants from any of the groups mentioned lunchmeats such as hot dog or bologna or snack foods like potato chips and cookies even though probed although one group mentioned cake. Some participants mentioned non nutritionally related risk factors such as stress, extraneous exercise, depression, not enough rest, worry, and non compliance with doctor’s orders as causes for heart disease.

Question 2a

What do you mean by fats?

Some of the participants felt that the term fat meant fried foods, high cholesterol, jerk pork, the skin on the chicken. Some mentioned foods with fat such as olive oil butter, bacon, pork chops and meats. Most participants agreed that all fats were not the same. However, some were not able to state why. One participant felt that all fats were the same, “ some good and some you can deal with”. Some participants in the PMH group stated that fruits and vegetables have fat. “Avocado, coconut, peanut, bananas all high in fat” Participants in this group also admitted that they did not know whether or not all fats were the same after being probed with the question, Are all fats the same?

A participant mentioned, “There are some fat more fatty than others, like milk in tea”. One participant stated “HDL and LDL some letters”. Another said “all solid is bad and liquid is good”. There is not a clear understanding of what foods have high fat content as one client said that fruit and vegetables have fat like avocado, coconut peanut and banana. It appeared that the groups with some level of tertiary education level were more specific. When asked, why were fats different the following were stated, “There are different kinds of fat like monounsaturated, saturated and polyunsaturated fat.

However they were not able to explain what each of these were. . A client stated, “Too much protein is not good, it lead to heart problems”

Question 2b

What do you mean by cholesterol?

Participants associated cholesterol with eggs, butter, and hotdog, shellfish (e.g. conch, lobster) whole milk and ice cream, “2% is better to drink”. Someone even mentioned white bread. A participant stated that there were “two kinds of cholesterol, high and low cholesterol”. Examples given for high cholesterol were red meat, fish, conch, peas and rice, salt pork, baked macaroni and cheese and squid. Most felt that Cholesterol and fat were not the same but could not state why. A participant stated, “cholesterol is fat but it is a type that is hard and greasy that hardens your arteries”. Some stated, “cholesterol does more damage than fat” While some were not sure whether or not there were any differences.

Question 3

Which ways do we cook/prepare foods that contribute to our fat intake/heart disease?

It was noted that all six groups mentioned the word frying first. Some also mentioned, “steaming” which was described as frying the chicken then smothering it in sauce. It was mentioned that peas and rice have cholesterol because of the coconut milk, salt pork and oil that is added for cooking. The PMH group mentioned that combinations of food could contribute to heart disease. “If you have macaroni and cheese, don’t need rice.” The Youth group mentioned grilling, “ They said that grilling is bad for you”. They also mentioned jerk, eating too much junk food and fast foods. When asked what do they mean by junk food, they replied, “potato chips, cheese doodles twist (a long doughnut like pastry) and stuff like that”.

Question 4

What do we eat or drink that can prevent (protect) heart disease?

Some of the participants focused on methods of preparation for this question. They mentioned boiling, baking,, cooking with less fat and trimming the fats from meats as being ways of preventing heart diseases. They also mentioned, “Purchase lean meats” and “Cut down on portion sizes”. It was noted that the groups made up of the younger age groups, 19 to 30, focused more on what we eat. They mentioned leafy vegetables, fruits, whole grains, nuts, cereal, wheat, brown rice “fiber keeps the cholesterol down” and natural ingredients. They went on to include non-nutritional prevention measures such as having an annual physical, “bring the weight down”, drink lots of water and “no drugs and alcohol. Stress management was also a prevention measure given.

Question 5

Talk about what makes people fat.

The feed back from this statement were “Kinds of foods”, Amount of foods”, Drinks like soda and coffee not good for the heart”, “suppose to be fat, come from big people”, Snacking between meals is wrong”, Best to drink water than unsweetened juices”, “eat too much”, “in the genes”, Lack of discipline”, big portion sizes”, “lack pf exercise”, Eating late in the night”, “Low metabolic”, “Old age spread”. “When you are overweight, your heart beat too fast”, When you are fat you can’t walk so your blood can’t flow”. fat equals heart disease”. “You over work the heat when you are big, too much load”.

Question 6

What comes to mind when you hear the term “physical activity”(PA)?

Feeds back from this statement were as follows, “walking, jogging, tennis, moving, dancing, and the gym. With further probing, participants made these comments; PA and exercise are not the same. “Exercise focus on particular part of the body while PA is associated to manual labor”. “PA is natural and exercise is more structured”. “Exercise increases heart rate and PA does not”. “PA does not count towards a healthy heart”. “When you do PA you do not burn calories, when you exercise, you burn calories”. Some stated that PA and exercise are alike. “We burn calories when ever we move people can exercise in PA”. “PA is when you use the steps rather than the elevator or gardening or housework”. “Everything we do is PA whether planned or unplanned” Most of the participants in all five groups felt that women exercised more than men. Some went on to further state that women walk more and men spent more time in the gym. The youth group stated, “Men do not exercise because they do not worry about weight as women do”. “Men are involved in more casual exercise while women are involved in more structured exercise with the purpose of weight loss, men just for fun”. When asked to explain casual exercise, they stated, men “shoot hoops” (basketball), played softball, soccer and football. The PMH group, which happened to be the oldest age range, same unsure of what PA is.

Question 7

Talk about what you think is the benefit of exercise of exercise?

Participants made comments such as “exercise helps you get slim” “exercise helps you look and feel better”, “tune up muscles”, “increase heart rate”, “helps burn calories”. A great part of this question was also answered in question 6. Many of the participants across the groups felt that benefits for the heart can only be obtained from structured exercise not PA.

Question 8

Who should exercise?

This question brought a resounding, “everybody” from most of the participants from all groups. Participants expressed concern for over exertion in that it may cause heart problems. “Overweight causes the heart to beat to fast when you exercise.

Question 9

Where do/did you get your information on these issues?

A variety of avenues were given including First Aid, periodicals, science books, food labels, pharmacy, leaflets from the hospital, the internet, health professionals such as The doctor. Participants also mentioned that they did not trust information that is promoting the sale of a product. “I do not trust it if some tell me something is good for my heart just so I can buy the product”.

Question 10

How would you like to see information about keeping the heart healthy presented?

Participants stated that they would like to see this information classified according to gender and age in print form. “The information should be relevant to people living in the Caribbean in terms of weight charts and weight range”. The older participants suggested having a manual with glossy pictures, big print, and include pictures of local fruits. Some stated they would like information that tells them exactly what to eat and what not to eat.

Summary

Overall the Focus Group project was successful. The major limitation as mentioned earlier was that most of the participants were women. The groups varied in age and educational level, which provided a wide range of input. The PMH group which consisted of all women and also having the highest age range was described by the assistant moderator as being very quite. They commented most on the questions related to heart and diabetes. They spoke a lot of not being able to afford healthy foods that will help keep the heart healthy. The BHA group was described as being very knowledgeable. However the focus group was conducted towards the end of the day, 6pm and participants appeared to be concerned about the length of time they would have to be retained. They also appeared tired and periodically looked at their watches. Participants walked in late, which created slight disruptions. The RBDF group was described as being very attentive and showed much interest in the discussions. The moderator also noted that the males seem to dominate the conversation while the females appeared quite. The MBC group, which consisted of the youngest age range, was very focused and very forth coming with their answers. They were full of information. The information, however, for the most part was either not factual or

confused. The HP group that consisted of registered nurses (RN) and trained technical nurses (TCN) and student nurses, showed some interest in the discussions. The student nurses were very quiet. It was noted that two out of the five groups, the MBC and the RBDF group linked heart to disease on a constant basis to "stress". Participants of these groups repeatedly mentioned the word stress and stress management in relation to heart disease even when probed for its connection with food and physical activity. Overall all participants seem to have some level of knowledge of healthy eating, physical activity and a healthy heart. However, much of the information was not always completely correct and somewhat confused. Also noted was that the men seem to think that women were more in need of physical activity because they had more of a reason to care about their weight. "Women need more exercise to stay in shape, men don't check". Based on the focus group results, it would appear that the general public needs specific information stated clearly in layman's term on what is fat, what is cholesterol, and the difference between the two, what is PA and what is exercise, the difference between the two, examples of high fat foods and high cholesterol foods and the relationship to fat overweight and heart disease.

GRENADA REPORT

EXECUTIVE SUMMARY

Focus Group Discussions were used in a study conducted in Grenada to gather information about cardiovascular diseases. The information would be used to develop educational packages to combat cardiovascular diseases. The goal of this study is to develop a physical activity and dietary manual for the prevention and treatment of cardiovascular diseases in the Caribbean. Six focus groups were conducted with a total of 55 participants. Groups consisted of 6 – 11 persons.

The results indicate:

- There was a good understanding of the term “Cardiovascular Diseases”
- Generally, participants knew what foods would cause or prevent heart disease.
- Although they knew that fats and cholesterol were bad for the heart, not all persons within all the groups knew the difference between fat and cholesterol
- The greatest disparity in understanding came with differentiating between exercise and physical activity.
- All groups were able to list some benefits of exercise
- All groups were able to identify their source of information
- All groups were able to very clearly state how they wanted information presented to them.

These results suggest the need for more information on cholesterol, fat, exercise and physical activity.

BACKGROUND

Over the last 20-25 years there has been an epidemiological transition in the pattern of diseases – from infectious to chronic non-communicable diseases. In Grenada, over the last several years health statistics indicated that the leading cause of death was Cardiovascular Diseases (CVD). This is the case not only Grenada but also in several other Caribbean islands.

It is well established that some risk factors for CVD are preventable. It is also well documented that diet and exercise are integral components of any prevention programme.

It is against this backdrop that Grenada conducted qualitative research using focus group discussions to gather as much data as possible to inform the development of educational packages for the control and prevention of CVD.

METHODOLOGY

Six focus group discussions were conducted with previously - agreed categories – Health professionals, patient support group, patient groups (urban and rural), tertiary level and below tertiary level (lay persons).

Identification of participants was done with the assistance of relevant persons. The discussions were held at conveniently located venues. Bus fares were reimbursed to participants and a light snack was served. One group received lunch due to the time (10:30 am – 12:00 noon) of the discussion.

The following is the order in which the groups were conducted:

GROUP	LEVEL
Group #1	Tertiary level
#2	Below tertiary
#3	Patient Group (rural)
#4	Patient Group (urban)
#5	Support Group
#6	Professional Group

The group discussions were conducted by the writer, while the assistant moderator took notes and recorded the proceedings.

A pre-tested interview guide – developed during an earlier training session – was used to guide the discussions. The guide consisted of ten questions under five broad areas:-

- ❖ Understanding of the term “Cardiovascular Diseases”
Causes, prevention and treatment of CVD
- ❖ The impact of certain foods (nutrients) on CVD
- ❖ The impact of exercise/physical activity, or lack of, on CVD
- ❖ Sources of health information
- ❖ Recommended method for receiving information on CVD

DISCLAIMER

From a population of approximately 100,000 persons it would be unwise to use data collected from 55 persons to make generalizations. However the information collected could be the beginning of baseline data for the development of not only educational materials but also information on knowledge, attitude and practice among relevant groups.

RESULTS

A total of 55 persons participated in the group discussions. Average number in each group was nine with a range of 6-11 persons.

UNDERSTANDING OF THE TERM “CARDIOVASCULAR DISEASES” (CVD)

Within all groups the general thinking was that CVD were related to the heart as evidenced by the following responses.

- heart
- something to do with the heart
- I think it deals with the heart
- Diseases affecting the heart

However, in one group one person said “first time I’m hearing the word”. Although correct answers came from all groups; not all members within the groups answered. This might indicate that they did that know the term.

CONDITIONS WHICH FALL UNDER HEART DISEASE

The following responses were given as conditions which fell under heart disease. Each health condition classified under heart disease was arbitrarily assigned a number to assist in determining frequency of occurrences of conditions named in the groups.

1. Hypertension	8. Heart Attack	14. High Cholesterol
2. Diabetes	9. Anxiety	15. Lupus & any other connective tissue
3. Stroke	10. Blocked Arteries	16. Congestive heart failure
4. Respiratory problems	11. Blood Circulation	17. Atherosclerosis
5. Obesity/Overweight	12. Enlarged Heart	18. Angina pectoris
6. Blood Clots	13. Eating food with too much fat & butter	19. Gangrene of the foot
7. Stress		

Frequency of Occurrences of Conditions across the Groups:

#1	#2	#3	#4	#5	#6
1	2	1	1	1	1
2	7	2	2	2	3
3	8	7	7	11	5
4	9	11		13	16
5	10	12		14	17
6	11			15	18
					19

The above frequency table indicates that hypertension and/or diabetes were named across all groups. Stress, poor circulation and obesity were listed by 3, 3 and 2 groups respectively.

Congestive heart failure, atherosclerosis, angina pectoris and gangrene of the foot were mentioned only by the health professionals.

Since 'stress' was mentioned in more than one group as a condition that fell under heart disease the researcher did some further probing. The lead question was "what is stress?" Several answers surfaced with the general idea being that stress was an inability to manage your life in a way that showed you were coping.

CAUSES, PREVENTION AND TREATMENT

"Lack of exercise" and "stress" were the most often mentioned causes of CVD. Several other responses such as: eating habits, poor diet, what you eat and drink seem to indicate that in a general way DIET was considered as one of the causes. Other responses such as: "when pressured by someone" and when one had "problems" both lend support to "STRESS" as a cause of CVD.

Strategies for prevention as stated by participants were classified into the following 2 groups –

THINGS YOU SHOULD DO

Exercise
Eat well
Eat lots of fruits and vegetables

THINGS YOU SHOULD AVOID

Stress
Salt
Alcohol
Smoking
Sugar
Fatty foods (animals)

The control of diabetes and hypertension were named as a prevention strategy as well as the taking of medication where necessary.

In response to whether prevention and treatment approaches should be the same; some said "yes" others said "no". However several persons within each group indicated that guidelines on "diet", "exercise" and avoidance of "high cholesterol foods" should be the same for both prevention and treatment.

FOODS WHICH CAUSE/CONTRIBUTE TO HEART DISEASE

No. of Times Foods were Repeated across Groups

3 Times

Fatty foods
Starchy foods
Salt

2 Times

Fried foods
Caffeine
Saturated fat
High cholesterol

Once

Animal foods
Too much red meats
Sugary foods
Coconut (but it has cholesterol)

Acid foods
Too much oil
High fat
Alcohol

The foods that had the highest number of repeats were considered to be the ones most commonly thought of as contributing to heart disease. They were: fatty foods, starchy foods and salt. In Patient Group (rural) some did not think food could cause heart disease. However if it did, it depended on the type of food.

FAT AND CHOLESTEROL

Except for one response which said “All fat is fat”, it was the general thinking that all fats were not the same. Based on responses from participants, fat was classified in the following ways:

- saturated and unsaturated fat
- animal and plant fat
- good fat and bad fat

It was further pointed out by participants that “animal fat had cholesterol and clogged the arteries”. On the other hand avocado – a plant food had “good fat and did not clog up inside the body”. Group #5 (Cardiac Programme) indicated that all vegetable oil such as virgin olive oil, extra virgin oil and corn oil had good fat.

Fat was considered bad when:

- it was deposited into the blood stream and caused blood clots
- excess was stored in the body
- it was not digested properly. This caused plaque build up on the heart. Interestingly, Group # 1 (tertiary level) recommended margarine instead of animal fat. This suggested that they considered margarine to be a source of vegetable fat. However the same group indicated that coconut can lead to heart disease because it has cholesterol.

It was the general thinking that fat and cholesterol were not the same. However they were thought of as belonging to the same family, as being related or as cousins. One respondent considered cholesterol as a type of fat. An explanation given by one respondent (Group #2 Lay persons) for the difference between cholesterol and fat is that “the blood is used to measure cholesterol while the skin is used to measure fat”. Group # 3 (Patient Group –rural) did not know what foods contained cholesterol nor did they know whether there was a difference between cholesterol and fat. Responses from Group # 4 (patient group – urban) seem to indicate some confusion regarding coconut and heart disease. They contended that their parents used lots of coconut in their food and they lived for a long, long time into their eighties with no health problems. What therefore is this idea about coconut and bad health? Quite confusing to them.

HIGH FAT FOODS

Avocado
Peanut
Egg
Dessert
Pastry
Margarine
Cheese
Pizza
Fatty foods
Chicken
Butter
Local vegetable – Lettuce

FOODS CONTAINING CHOLESTEROL

All animal products
Cheese
Milk
Egg yolk
Sausage
Meat
Some oils
Bacon
Sword fish

In listing pizza as a high fat food, the tertiary level group maintained that if pizza was prepared at home, it would contain less fat. However it was also mentioned that T.V influenced people to eat outside the home.

With regards to food preparation practices that increase the fat content of foods, the following were mentioned in order of frequency:

- frying
- stewing
- adding butter to food
- using coconut milk
- failure to remove chicken skin
- adding grease
- oil down (National Dish)
- not removing fat from meat.

Across groups it was the general thinking that in order to decrease fat in food, people should:

- take skin off meat
- remove all visible fat
- avoid adding oil

It was said that there was no danger in using fat once it was “worked out”.

FOODS WHICH PROTECT THE HEART

In response to the questions raised regarding what we eat or drink that can protect/prevent heart disease, the general idea was that fruits, raw vegetables, whole grain products, high fibre foods and water should be used. There seemed to be a misunderstanding of the role of water in the prevention of heart disease. It was thought that “water would wash away fat”.

In Group #4 (Patient Group – urban) one individual indicated that food or drink couldn't help since in some instances the condition was inherited. It was the thinking that vegetables could help because of the presence of beta-carotene (Lay persons) fibre, roughage, cellulose, antioxidant (Health Professionals) and vitamins. Fibre was thought to be useful because:

- it help the body to pass out waste
- if enough is not used, some of the organs will be strained
- fibre could “soak up fat”.

OBESITY

The reasons given for individuals becoming obese or fat were more or less the same across groups. Generally the reasons were: excess energy intake, lack of exercise, greed, and family history.

Most participants within each group felt that it mattered where fat was stored. The greatest risk occurred when fat was stored around the chest, stomach and abdomen. With regards to gender, obesity was bad for both male and female. However it seemed as though society pressured overweight women more than overweight men.

Responses from participants about how to prevent obesity were categorized into the following two groups:

DIET-RELATED

Don't overeat
Eat foods that would not
make you get fat
Follow your diet

EXERCISE - /PHYSICAL ACTIVITY- RELATED

Don't overwork
Exercise
Walk
Swim
Stay active
Use steps; don't use elevator
Run ob spot
Walk around your yard

EXERCISE AND PHYSICAL ACTIVITY

Generally respondents said that there was a difference between exercise and physical activity as listed below. However the difference was not clear.

EXERCISE

- more energy is used up
- you put your mind to it
- doing it in a certain way
- regulated
- any physical activity
- purposeful physical activity

PHYSICAL ACTIVITY

- normal work around the house
- when you're not aware that you are exercising
- gardening and household chores
- not regulated
- running,
- walking
- gardening
- skipping
- bicycling

BENEFITS OF EXERCISE

Several benefits of exercise were listed. It can be concluded that participants knew not only the main benefits of exercise but also the benefits to the heart.

In response to benefits to the heart, the following were listed:

- fat is burned up
- keep down weight
- increase cardiac output
- strengthens heart muscles
- lowers blood pressure
- lowers blood sugar
- lowers blood cholesterol
- releases stress
- increase blood flow

It was the general thinking that everyone should exercise – from the cradle to the grave. With regard to frequency and length of time for exercise; three times a week for 30 minutes or more were listed most often. Other times listed were 1 hour, 1 ½ hours and 30 minutes in 10 minute slots. When questioned as to whether people with heart disease should exercise, there was consensus that they should. However they should check their doctor first.

The groups indicated that although exercise was so important, many persons did not exercise for some well-established reasons such as:

- laziness (most often cited by groups)
- time
- health problems
- hairstyle
- not motivated
- cant get your age group to accompany you
-

Participants understood very clearly the negative impact i) easy availability of transport and ii) entertainment centres at home have on exercise.

SOURCE OF INFORMATION

Generally participants got their health information from health professionals, the media including the internet and friends. However they would like to receive information through the T.V – after the evening news (most often cited avenue), drama, radio, leaflets, song or calypso, discussions, video presentations and active workshops (receive reference guide for follow-up).

FINDINGS

The results indicate the following:

- There was understanding of the term “Cardiovascular Diseases” except in a few cases
- Generally, participants knew what foods would cause or prevent heart disease.
- Although they knew that fats and cholesterol were bad for the heart, not all persons within all the groups knew the difference between fat and cholesterol
- The greatest disparity in understanding came with differentiating between exercise and physical activity.
- All groups were able to list some benefits of exercise
- All groups were able to identify their source of information
- All groups were able to very clearly state how they wanted information presented to them.

RECOMMENDATIONS

Further research is needed to be able to make greater generalizations. However, based on what is available I would recommend:

- a) a healthy heart campaign for one month to include information on:
 - exercise and physical activity
 - high fat foods
 - high cholesterol foods
 - the difference between fat and cholesterol
 - increased consumption of fruits and vegetables (get the private sector involved)
 - produce fact sheets for distribution

This could be the beginning of a decrease in the incidence of Cardiovascular Diseases.

ACKNOWLEDGEMENTS

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Secretary (GFNC) Mrs. Wendy Adlam

JAMAICA COUNTRY REPORT ON FOCUS GROUP DISCUSSIONS AND IN-DEPTH INTERVIEWS

Group 1: Recruitment Category: Laypersons at tertiary education level. Students on UWI Mona campus.
Location: CFNI Office, Mona Campus
Date & Time: Wednesday 25th June, 2003
Number of participants: 6
Facilitator: Diane Renaud

Group 2: Recruitment Category: HCW (Health care professionals) who work with persons who have heart conditions. Present were two physiotherapists, one dietitian and three nurses.

Location: Cardiology Unit, UHWI, Mona
Date & Time: Wednesday 9th July, 2003
Number of participants: 6
Facilitator: Diane Renaud

Group 3: Recruitment Category: Laypersons. Nine security guards – five female and four male – who work on the UWI Mona campus.

Location: CFNI Conference Room
Date & Time: Thursday 17th July, 2003
Number of participants: 9
Facilitator: Diane Renaud

In-depth Interview 1: Rationale for recruitment Category: Attempts to assemble the six members of the Friends of the Heart Foundation failed miserably. Only one person was willing to attend such a session. After consultation with the Public Health Nutritionist, the decision was made to have an in-depth interview with Carey.

Location: CFNI offices, UHWI, Mona
Date & Time: Monday 14th July, 2003
Interviewee: Member of Friends of the Heart Foundation, Jamaica.
Interviewer: Diane Renaud

In-depth Interview 2: Many attempts over a long period of time had been made to recruit patients from the two categories – those diagnosed with a heart condition for two and over years and those of one or less year. The main problems encountered were the expressed difficulties in recruiting those patients at the Diagnostic Clinic to which I had been originally referred by Dr. Edward Chung, the absence during August of many key staff members and finally to Dr. Chung's perceived lack of jurisdiction over the Cardiac Clinics where patients fitting those criteria could actually be recruited.

Contact was made with Professor Claude Denbow, Head of the Medicine Department of UWHI to seek his assistance. He passed this task onto another physician who subsequently moved to another unit without following up. He himself got involved and attempted to recruit patients but was successful in recruiting only two. I interviewed these two men, both of whom had been diagnosed for less than one year. They were 47 and 64 years old respectively.

Results

1. Cardiovascular Disease – meaning, causes, prevention.

Group 1: To most persons the term had connotations of heart attack which was further elaborated to mean blockage of the arteries leading to the heart. Other forms of heart conditions that were familiar were an enlarged heart, or hole in the heart. Only one person had familial experience of a heart condition and it was an enlarged heart. Most persons immediately thought of overweight, under-exercised persons as those at risk of heart attack although this was expanded to persons who had high levels of cholesterol who may not necessarily be overweight. What was important was the lifestyle that was led –including diet, stress levels, and other substances such as alcohol and smoking. Coronary bypass was the only treatment they had heard of. They felt they were at risk because of the poor food most of them ate - “KFC diet”. While they agreed that the fatty, greasy food served there was not the best it suited their student lifestyle the best – open at conveniently late hours when they needed food, and very filling for the price paid. However, many of them agreed that as young people they felt themselves protected – for a while at least - by their youth and healthy metabolism. They recognized though that even after they had left the University a busy lifestyle could influence their eating behaviour as much as the stresses of student life was doing currently.

Group 2: Cardiovascular disease was associated with high cholesterol levels, atherosclerosis, chest pains, heart attacks and blocked coronary arteries. Mention was also made of congenital heart disease which were to be distinguished from acquired heart disease. Hypertension, diabetes, strokes were also associated with and to some extent were predisposing factors for heart disease. Other predisposing factors were smoking, alcohol use, high stress, age, gender (though it was mentioned that the gap between men and women was closing) and a certain personality type. Persons of Asian ethnicity were also purported to have narrower blood vessels which explained their higher incidence of heart disease. The main causes were “lifestyle” factors, further elaborated as diet, level of physical activity, sedentary lifestyle, fast foods, busy and stressful lives with less time and opportunity for relaxed, recreational events. Dietary factors included consumption of high fat foods, high cholesterol foods and fast foods.

Group 3: While the phrase ‘cardiovascular disease’ was not familiar to this group, ‘heart disease’ was. Even so, there was a vagueness in their responses that showed unfamiliarity with the notion. Mention was made of rheumatic heart disease and a ‘hole in the heart’ but they could give no details. The heart was described as a pump that pumped blood; if it was not working properly a blood clot could result. Hypertension could also result from this. They realized that heart attacks were dangerous and could cost you your life, that fat clogged the arteries and prevented the blood from flowing to the heart properly in heart disease and that cholesterol had something to do with it, but none of them knew of anyone dying from heart attack, and one person was not even sure that you could survive a heart attack. One member of the group, though, related that she had been told by her doctor that she just ‘missed having a heart attack’, and was told she had to lose weight, exercise and take medication.

In-depth Interview 1: Heart attack was what Carey associated most with Cardiovascular disease. She also thought about rheumatic heart disease and hypertension. She recalled an aunt who was diagnosed with a heart problem and had to be on medication and change her lifestyle, in terms of diet, exercise and smoking. She felt that eating the wrong foods, i.e., fatty foods, smoking, abuse of alcohol and lack of physical exercise, make it more likely that someone would get heart disease. Genetic factors were also important and it was vital to find out if there was a history of heart disease in the family so that you could get checked out. Many persons may be walking around with heart problems without being aware of it. She felt that very busy lifestyles that involved eating on the run, being too busy to cook a meal or not enough money to buy healthy meals were important factors in determining diets that predisposed to heart disease.

In-depth Interview 2: To neither of the men was Cardiovascular disease a familiar term – heart disease was more commonly understood. One man had had a heart attack and the other was not very clear about his diagnosis – it was probably an enlarged heart. No other heart conditions were familiar to them. Heart disease was caused by arteries blocked with cholesterol. Other causes were stress and not ‘living right’ – referring to smoking and drinking excessive alcohol. Persons with heart disease were perceived to be ‘fragile’, did not live long and were under stress. Therefore to prevent heart disease, one had to be calm, eat right, exercise a lot.

2. Role of diet in causing heart disease.

Group 1: Fatty foods were the main culprit but the major offenders were oil and foods fried in oil. They recognized the difference between animal fats and plant fats but felt that cholesterol was present in both, albeit in larger quantities in the former. They recognized too that foods from animals were more fattening than those from plants. Fats from the latter were also saturated fats but they admitted to not normally making the distinction between saturated and unsaturated fats. However they perceived that saturated fats were in some unarticulated way more harmful than unsaturated fats.

Group 2: High cholesterol foods caused blockage of arteries. Cholesterol was found only in foods of animal origin, such as meat, especially organ meats, egg yolks, milk, butter and cheese. Plant foods had no cholesterol. Beyond knowing that there was ‘good’ cholesterol and ‘bad’ cholesterol, HDL and LDL, not much was known about quantities in foods. It was also known that there were saturated fats and unsaturated fats, and that the former were ‘bad’ and the latter ‘better’. However, except for the dietitian, none could really name foods that had high quantities

of one or the other. Olive oil was seen as having more 'good' fat than margarine, which was seen as 'bad' because of the process of hydrogenation which converted the fat to saturated fat.

Apart from leading to plaque formation in the arteries, fatty foods were also harmful in that they led to obesity and the hearts of obese persons had to work harder and thus more strain was put on them. Obese persons also tended to have lower levels of physical activity thus making their hearts less fit and more prone to disease.

Most persons had a good idea of how obesity was determined, quoting the weight/height ratio and other measures such as skin-fold thickness and body fat composition measures. Only the dietitian knew the actual cut-off points though.

Preventive measures were stated as eating more fruits and vegetables and less meats and fatty foods, exercising 4-5 times a week for 30 minutes a time, and learning to manage stress adequately. Meditation, yoga, church membership, relaxation techniques and fruits and vegetables were prescribed not only because they provided more fibre which produced a feeling of fullness, thereby cutting down on consumption generally, but also because they provided essential vitamins and minerals. Most were aware of a cultural preference for meat, especially among men, and the general ignorance of nutrient properties and caloric values of portion sizes. The result was that huge amounts of meat were eaten without the awareness that this was in excess of their needs. They felt too that in general the average person did not like fruits and vegetables and regarded meat (e.g., chicken) as being cheaper, more filling and giving greater value for money, despite efforts by dietitians and educators to show them differently.

These points were made more forcefully in the context of persons who were already ill with heart disease. Many examples were given of the difficulties encountered in persuading these persons to change their diets and lifestyles, even in the face of life-threatening conditions. Intensive and prolonged counselling was necessary and was most effective when other members of the family were actively involved. One person mentioned that food outlets ought to be targeted as well to prepare healthy food, since it was inevitable in these times that busy persons would buy food out of the home.

On the subject of protective foods for heart disease, most agreed that there were no 'good' or 'bad' foods, but that a balance needed to be struck. 'Everything in moderation' seemed to be the key and this meant selecting foods from all the food groups – proteins, carbohydrates, vitamins, minerals, were named – in a balanced way. Most felt that they were lacking fruits (and to a lesser extent, vegetables) in their diets and felt this to be undesirable. What they recognized as being healthy eating was what they ate at their parents' houses when they visited – and this included vegetables, rice and peas, and lots of fruit.

Fibre, as found in bran, was volunteered as being beneficial in 'adhering to fat and removing it from the body'. Fibre was found also in all fruits and vegetables and was thus found to be a useful food. Foods cooked in oil were also perceived as being more harmful and contributing to higher cholesterol and overweight in persons.

Group 3: Being overweight or fat can put a strain on the heart and eating fatty foods could make you fat. Also too much sugary foods, carbohydrates and red meat were harmful. Fatty foods included pork, oxtail, oil, butter and dairy products. These ‘animal’ foods contained cholesterol that clogged up the arteries. Preparation of food had an impact too – fried foods, cooking chicken and meat without removing the fat, or keeping the oily residue in grilled or baked foods, added to the fat content.

While they agreed that there was fat in some vegetables or plant food, such as cocoa and coconuts, they felt that all cholesterol was bad and that fat was the same as cholesterol. Cholesterol for them was also to be found in plant foods that were fattening. However they all agreed that fatty foods tasted good.

People got fat from eating too much and not exercising, eating just before going to sleep at night, eating late at nights, and being contented. The group wondered aloud how it was that some persons were able to eat a lot without putting on weight and concluded that it had to do with their not being ‘comfortable’ in their minds.

While they were all aware that there was a formula that determined whether one was fat or not and that the doctor’s office was the place to check this, each admitted to having criteria on which to judge whether one is fat – big tummies, fat arms, thick necks. They did not think abdominal fatness to be by itself harmful or predisposing to heart disease. Interestingly, most members denied that one member of the group ‘looked fat (or obese)’ despite her having been told she was so by the doctor. They agreed that their perception of ‘fat’ was sometimes at odds with the judgement made by the formula. They agreed too that ‘fatness’ does not always mean ‘unfitness’ as if often perceived.

While they agreed that fruits and vegetables are ‘good for you’, there was a distinct ambivalence on the relative value with respect to meat. As one person said ‘things that are good for you don’t taste good’, and this was exemplified by vegetables. A diet of fruits and vegetables meant a lack of protein. They did admit that peas, beans and nuts also provided protein, but seemed not terribly convinced. Fruits tasted better than vegetables but you had to be careful because some of them, e.g., mangoes, pawpaws, oranges and bananas, were very sweet and could lead to weight gain and diabetes. Fruits and vegetables also had vitamins and iron.

In-depth Interview 1: Fatty foods made the blood vessels smaller and made the heart work harder to pump blood through the vessels. Though she was not quite aware of the mechanism, she felt alcohol had a large role in heart disease. When she thought of fatty foods she thought mostly of the method of preparation of foods, i.e., being cooked in lots of oil. French fries and hamburgers came to mind but even ackee and saltfish were cooked in too much oil. Red meat, chicken and butter were also foods that were considered fatty.

While she recognized that the body needed some fat she was not able to clearly make the distinction between saturated fat and unsaturated fat. She felt it was wise to be moderate in the intake of all fat. She had also heard of good and bad cholesterol but again felt unable to list any foods in either category.

Being obese was also a risk factor for heart disease and while she was aware that there was a formula for determining whether someone was obese and that one could not tell just by looking, she did not have it on the tips of her fingers. She has found it on the Internet though and has consulted it in relation to her own ratings. Obesity makes the heart work harder and thus puts a strain on it.

Fruits, vegetables and nuts were protective against heart disease, though she felt some nuts were fattier than others. She felt that the fibre in these foods served to keep the system “clean”.

She was emphatic that persons who already had heart disease could benefit from a diet of less fatty fried foods and more fruits and vegetables. In fact it was absolutely vital though she cited one instance of how difficult it could be for some persons who are used to eating differently. The consequences though could be very serious in terms of health.

In-depth Interview 2: Cholesterol, which blocked arteries leading to heart disease, was generally a ‘bad’ thing, and was to be found in greater amounts in foods such as cheese, meat, flour products, cooking oil and butter. Pork was especially bad. Starchy foods such as yams, rice and flour were high in cholesterol. Fruits and vegetables were seen as ‘good’ because they had little cholesterol and much fibre, but none of the men could say just why fibre was good for you. Now that these men had heart conditions, they realized that their diets were important in helping them lose weight as well and for this they had to eat less meat and fats and starches, and eat more fruits and vegetables and peas. Losing weight was vital, since excess weight causes the “heart to work too much.”

3. The role of physical activity in heart healthy

Group 1: Physical activity provided a balance with respect to a healthy lifestyle. Food represented the energy that was put into the body while the energy used in physical activities represented the using up of that energy. So physical exercise was necessary to maintain this balance overall. It could prevent you from putting on weight because it maintains this balance. Physical exercise also made the heart work better in that the heart rate of a fit person dropped and thus the heart was able to withstand whatever demands that were made on it. The heart became stronger with continued exercise. While they felt that all persons should exercise to maintain good health, they felt that the type and intensity of exercise would vary depending on the person’s tastes, needs and fitness level. Swimming was seen as overall good exercise but each person should assess him/herself according to how much physical activity already exists in their daily routine, what they were used to doing and what they liked doing. For example, someone who is good at jogging and running would not take easily to track and field or football. Someone who did a lot of brisk walking as part of their daily routine would need to engage in less planned physical exercise than someone who did not. Someone who wanted to lose weight would have to exercise for longer at a greater intensity because in the beginning of exercise, only carbohydrates were lost; it was only if exercise was prolonged that fats were lost. Every bit of physical activity adds up. While sports and games were seen as good forms of exercise, brisk walking was also beneficial.

Group 2: Physical activity was said to strengthen bones, reduce fat, and promote heart fitness. Four to five times a week for 30-45 minutes each time was seen as necessary. However the intensity is important for the benefits to be attained – the heart rate must be elevated to a certain level for a minimum length of time before fat is burned. Greater compliance was achieved when exercise was tailored to the persons' interests, e.g, with respect to sports or hobbies. While reasons given for not performing physical activity were lack of time and insecure places to walk, these could be overcome by learning to do certain exercises in the home or modifying housework to make it more akin to physical exercise. Exercise should be started from young to inculcate good habits and because precursors of heart disease, i.e., plaques in arteries have been found in very young persons.

Group 3: Running, walking, cycling, swimming and sex were listed as being examples of physical exercise. Exercise was stated as being good for 'burning fat', keeping you healthy, toning muscles, keeping you in shape, keeping you fit for physical activities. Exercise should be done on a daily basis. However, all agreed that 'Jamaican people don't like to exercise'. They'd rather take a ride than walk a short distance. They were on the whole lazy. In their personal experience however, they found that the long hours they worked (12 hours a day) prevented them from doing exercise. Some admitted to feeling lethargic and this made exercising unappealing. Fear of pains and body aches also prevented people from exercising. Support from persons who will instruct in the correct exercises, will encourage and actually accompany you will be very useful.

In-depth Interview 1: Physical activity was essential in keeping the heart as a muscle healthy. It also prevented weight gain. While exercise could be tailored to meet people's situations, she felt that the heart rate must be elevated in order to achieve the benefits of exercise. Three or four times a week for about 30 minutes was a minimum. Sports were a very good way to exercise. Lack of time and facilities did prevent persons from doing exercise but she felt public education as to the benefits of exercise must stress how essential it was.

In-depth Interview 2: Physical exercise, both for prevention and treatment of heart attack was seen as vital. Walking and swimming were the best forms. Using weights was seen as dangerous. Three to four times a week for 30 minutes each time was enough. Exercise 'helps the heart to function properly' but both admitted that it was hard to find time to exercise.

4. Preferred sources of information.

Group 1: The Internet was the first response while medical students and/or doctors was the next, although they were emphatic that they would not go to the University Health Centre. Leaflets distributed in eating places and regularly visited places such as the Main Library were also named as useful.

Group 2: They felt there was a great need for basic, user-friendly educational material on diet and physical activity levels for the general public and patients in particular. These should cover nutrients in foods, portion sizes and exchanges, types of physical activity, length of time it should be done, and benefits.

As for their own needs they felt that a more integrated health care team approach to patient care would afford the patient the opportunity to appreciate the multi-faceted nature of their condition and benefit from all the expertise available. Some felt a Cardiac Rehabilitation Unit would serve this purpose – all the services would be available in one place, as it were, and the opportunities to educate the patient and his/her family would not be lost.

Group 3: Various sources were named for information about diet and exercise to promote good health – mother, books, TV, radio call-in programmes, “creative cooking” radio programme, home economics teacher.

Preferred sources to get further information were also varied – the library at UWI, the Heart Foundation of Jamaica, health channel on TV, the Internet, the Canteen from which they get their meal, interactive radio programmes.

In-depth Interview 1: Carey got a lot of her information from reading diverse materials – magazines, books, etc. she herself would look for this information on the Internet if she needed it, even on CFNI website. She feels that information on proper nutrition, on the appropriate portion sizes of foods, on the caloric and nutrient content of local and Caribbean foods would be very useful to give to teachers in training so they can educate their students, many of whom eat badly. (She is a lecturer at Mico teachers’ training college in special education).

In-depth Interview 2: The men got information on diet from the dietitian who gave them lists of foods to consume. Pamphlets and TV shows were other sources of information on heart disease. However they felt their doctors to be the best sources and would like to get information from this group. Doctors should produce a ‘magazine’ and/or pamphlets for heart patients. They also felt that testimonials from affected persons would be useful. Use of private sector and of noticeboards was also recommended.

REPORT ON CARDIAC FOCUS GROUP DISCUSSIONS IN TRINIDAD AND TOBAGO

**Submitted by
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Caribbean Food and Nutrition Institute**

October 31, 2003

Focus group discussions were conducted in Trinidad during the period July 23-August 26, 2003. No discussions were conducted in Tobago. Six groups were selected in four different categories. Except for the Patient Support Group which took place at the Chest and Heart Association Conference Room and the Patient II Group which was conducted at the Urology Conference Room at the San Fernando General Hospital, all the other sessions were conducted at the Caribbean Food and Nutrition Institute (CFNI) Conference Room. The discussions were rich and informative. Each session was conducted over a period of about 1½ - 2 hours.

Cardiovascular Disease

To the participants the term “Cardiovascular Disease” meant “heart disease”, or “related to the heart” or “diseases of the vessels of the heart” or simply “heart”. Some even indicated that the term meant plaque in the arteries and coronary disease. The general population (below tertiary level) also included “all problems of the heart” They further explained that different diseases from food eaten leads to blockage of the arteries and this contributes to heart attacks. The Health Care Practitioners and the Tertiary level population groups indicated that the term also brought to mind a condition associated with sedentary lifestyles/lack of physical activity/inactivity; food/diet; and middle age.

In Trinidad and Tobago persons had different terms and names for “cardiovascular disease” such as ‘heart problems’, ‘weak heart’, ‘heart case’, ‘heart problems’, ‘heart condition’, ‘suffering with heart’, ‘damaged heart’, ‘swollen heart’. The Patient Support group Indicated that the term used would be dependent on the person to whom one is speaking since some terms are more common among certain socio-economic groups. The Tertiary Level group could not recall the condition

being called by any other name and this could have been due to the fact the group had so many young persons.

With respect to conditions that fall under the group of heart disease, most groups mentioned some type of chronic nutrition-related disease such as hypertension, diabetes, stroke. Other conditions mentioned included Rheumatic fever, high cholesterol blocking the arteries/narrowing of the arteries, chest pains, stress and swelling of limbs. The Health Care Practitioners and the Tertiary level population were the only groups that mentioned Myocardial Infarction, Arteriosclerosis, Atherosclerosis, Coronary Thrombosis, Angina Pectoris, Heart Failure, and Aeschaemic Heart Disease. The Health Care Practitioners also included Breathlessness and Circulation problems. They all felt that the chronic nutrition-related diseases such as Diabetes Mellitus, Hypertension were major contributors to making the condition worse. They also alluded to the fact that bad eating habits such as eating foods high in fats, drinking alcohol and cigarette smoking in combination with lack of exercise all contributed to making heart disease worse. Most of the groups indicated that STRESS was a major contributor to heart disease with the Patient Support Group being the only one to include conditions like lung disease, kidney disease and inadequate rest. The General population group (below tertiary level) indicated that *too much exercise made the condition worse.*

Participants felt that heart disease can be prevented if persons exercised more, ate healthily: not too much fats and eating on time. The Health Care Practitioners and the Tertiary level Groups both saw the need for educating the public as a key means of preventing the condition since a common belief among the Trinidad population is that healthy eating meant eating a lot of raw tasteless vegetables. In addition, the Health Care Practitioners stated that there were not enough professionals committed to Health Promotion based on past experiences and current behaviours. The General Population Group (below tertiary) seemed to be very concerned about **stress levels**, particularly on the job, and felt that if persons stopped worrying, forgot problems and stopped being angry and engaged healthy eating and exercise habits, they would prevent themselves from developing the condition. The Patient Support Group also felt that ceasing smoking would prevent one from developing the condition since *“nicotine thickens the blood”*

When asked about how they could treat the condition, healthy diets and exercise were common threads for the treatment of all groups but only two groups mentioned medication in addition to diet/healthy eating and exercise. The Health Care Practitioners felt strongly that meditation and alternative medicine were in fact a popular treatment now. The patient support group also felt that *one teaspoon of brandy in milk increases the blood circulation and makes for a good night's rest* especially for older persons.

Foods high in **cholesterol**, **alcohol**, caffeine, **starchy foods**, **fatty foods (saturated fats)**, **fried foods**, **sweet foods** were all mentioned as food types contributing to heart disease. Some felt that sweet foods had an indirect effect (contraindicated) since sweet foods meant extra calories leading to extra weight and ultimately heart disease. Some classified the foods as “wrong foods” or more refined foods or less high fibre foods. Those foods included: cheese, butter, egg yolk, **avocado (high in cholesterol)**, red meats, pork, milk, sugar, **coconut milk (“because of fat and cholesterol”)**, hamburgers, fried chicken, home made ice cream with coconut cream in the mixture, barbecue chicken, margarine. All foods “with grease” were seen as clogging the arteries. The Patient Support Group (<2 years) believed that it was better to add oil after cooking rather than cooking with it.

Most groups mentioned ‘alcohol’ as contributing to heart disease but only when taken in excess. One group felt that such excesses caused high blood pressure. The participants of the Tertiary group went on to explain how **alcohol** contributes to heart disease - the body “*oxidizes the ethanol molecule and leaves the fat and carbohydrates to be stored*”. Some participants also felt that red wines were good for the heart but that the people of Trinidad and Tobago were not really red wine drinkers. People prefer rum and beer. The Patient Support group also believed that **starchy foods** (ground provisions – cassava dasheen/coco eddoes) led to overweight hence “increasing the work on the heart”. The General Population group (below tertiary level) also felt that way. They further explained that those foods *broke down into fats and made persons put on weight*. That particular group was also concerned that the seasonings such as Vetsin/MSG and black pepper help to clog the arteries. One participant equated the activity in the artery with that of a brake line in a car. He explained that “*Black pepper works the same way as when it is put in brake fluid to bind a leak. A similar thing happens in the body and it clogs the arteries*”. Cold

drinks were also seen by the Patient Support group as contributing to heart disease. They explained that *“cold drinks with ice affected the diaphragm and squeezed an already damaged heart”*. They explained further that cold drinks interfered with the metabolic rate by **reducing it**, however chilled drinks were alright to have. They also felt that alcohol “hardened” the arteries after continued use but believed that drinking socially was alright. Social drinking meant no more than 2 drinks with women having 1 oz and men 2 oz.

Fats and Cholesterol

Fats were described as anything with a lot of grease or anything that would make you gain weight and *raise the cholesterol levels in the blood/ cause high cholesterol*. The Tertiary level group was the only group that saw fats being necessary for normal body function but that you *should not let it get out of hand/ out of control*. They further explained that cell membranes had phospholipids: triglycerides were seen as having other functions in the body. They listed fatty foods as: SOLID OILS, bacon, margarine, cheese, chicken, full cream milk, butter, lard, avocado. One patient group queried the truth about **pumpkin and fat content** since they heard that it had plenty of fat.

All groups were adamant that all fats were not the same. They listed two types of fat: saturated(animal fat) and unsaturated(vegetable fat). Saturated fat was seen as the **BAD** fat and Unsaturated fat as the **GOOD** fat. The Tertiary level group stressed that *“Too much bad fat is bad for the heart”*. The Health Care Practitioners saw all fats being high in calories and hence could be bad for you.

Participants felt that when fats were eaten, they tended to raise the cholesterol levels in the body. According to the Patient group(<2 years diagnosed), *“fatty foods make the liver produce more cholesterol. The good cholesterol is the high one while the bad cholesterol is the low one that sticks to the arteries, forms a crust and eventually cause blockage over a period of years”*. The Health Care Practitioners and the Tertiary level groups had a better idea as to how fats could affect the heart. One indicated that saturated fat raised the total cholesterol in the body and that could affect the heart. The other group went further to explain that the different fats had different effects on the body and stated that *“saturated fat transport cholesterol and so increase*

the LDL concentration and this increases the cholesterol deposition leading to blocked arteries.”

Foods high in cholesterol were seen as the same foods that contained a lot of fat: greasy and fatty foods, pork, shrimp, liver, lobster, shell fish, cheese, butter, etc. **Coconut milk/cream and avocado were classed by one group (Patient Support) as high cholesterol foods. The same group indicated that avocado had the good cholesterol and that avocado from the Caribbean was better than avocado from the United States of America.** Most of the participants were certain that fats and cholesterol were not the same but they could not explain the differences. Others felt that fats and cholesterol were either the same or that fat “**CAUSED**” cholesterol or “**BUILD**” cholesterol. The General population group (below Tertiary level) admitted that they did not know much about cholesterol. They also indicated that when they asked the doctor what is cholesterol they were only told to stay away from some foods. The Tertiary Level group felt that even though fat and cholesterol were not the same they were related, and whereas fat had many functions, cholesterol had only ONE.

The methods of preparation of foods in Trinidad and Tobago were seen as contributing to fat intake and heart disease. All groups gave examples of food preparation which included: stewing and currying of foods in which a lot of oil is used; few persons removing the skin from chicken or the fat from pork and salted pigtail. Some even indicated that the fat and skin of the Christmas ham were saved and used in peas stews and soups. Coconut milk is included in many recipes together with Margarine/Golden Ray (this specific brand being the one of choice).

Vegetables, fruits especially tomatoes, carrots and celery were listed as foods which protect from heart disease. Foods high in fibre such as provisions (dasheen, cassava), grains, fruits and vegetables were said to “*move the bad cholesterol out of the body*”. One group indicated that even though spinach/callaloo was good for you too much should not be eaten because it has “**TOO MUCH IRON**”. The tertiary level group stated that fish was good since it had plenty of Omega 3 fatty acids, but too much fish is not good, particularly for women because the fish also has lots of toxins and iodine. That same group also believed that:

1. White flour stayed in the stomach longer

2. Persons should not eat fatty fruits such as bananas
3. Avocados would increase the cholesterol.

Physical Activity, Exercise and Implications

A combination of lack of exercise (not burning off calories) and too much food (especially fatty, cholesterol-rich and sweet foods) was seen as the basis for becoming fat. Excessive carbohydrates was seen as a major cause of obesity. Genetics and hormones were also cited. One group (Patient Group below Tertiary level) agreed that if you drink too little water you would get fat. The explanation for this is that the small amounts taken in do not pass out of the body but are absorbed. The Patient Group (>2 years) indicated that “beef does not make you fat”. Added to this the Tertiary level group indicated that “if one is lying down the body looks for a place to put the fat.”

It was the general consensus that fat is always related to heart disease. With increased body weight the heart has to work harder and with the narrowing of the arteries, the heart becomes larger. The blood also has more body mass to supply and this poses a strain on the heart – much more cells to be fed (heart cannot pump enough blood around the body). The Tertiary level group had this explanation: “*Depending on the metabolism, fat is not converted to adipose tissue but is deposited in the arteries and so cause **ARTHEROSCLEROSIS**. If it is adipose tissue, it could be lost (burnt off) during exercise*”. All the groups except one indicated that fat around the middle made persons more prone to heart disease. The point was made however by one group that a person does not have to be fat to get a heart attack since skinny persons are also affected. Most persons felt that persons got fat because they were too lazy to exercise, they led sedentary lifestyles and that they ate too much fats. Suggestions for what could be done to prevent oneself from getting fat included: not eating after 7pm; increased exercise and taking a nap sitting up after eating. One group stated that breakfast should be the heaviest meal, skip lunch and then have a heavy dinner; drink more water; do not eat too much of anything- just what the body needs to keep it going; drink vegetable punches; eat more fish and high fibre foods (soya, beans, fruits/oranges and bananas).

When asked about Physical Activity (PA) and Exercise it was surprising that the general population (below tertiary level) was the only group that was very certain from the start that these terms were different. They indicated that PA was everyday work while exercise was planned. The other groups were not sure: some believed that they were the same while others thought they were different but generally they were not sure. At the end of the discussions however, most believed that they were different with exercise being planned and PA being everyday movement.

Participants were able to identify several benefits of exercise. Some of these included:

- Burns fat and cholesterol
- Increases the pulse rate of the cardiovascular system
- Helps with breathing
- Promotes more secretions and Cleans the pores
- Strengthen muscles
- Feel more healthy
- Sometimes feel good even though inside not good
- Total health improvements
- Blood circulations improved/Increased oxygen to stimulate muscles/more oxygen to the system
- Relieves stress/more relaxed/ Sleep better
- Gives good feeling/more energetic - Can accomplish much more during the day
- Makes one more focused
- Increases coping skills
- Can prevent heart disease
- Helps bowel movement
- Makes one look good

It was agreed almost immediately that everyone should exercise. However some groups believed that some fat persons have problems to exercise. They were conscious, however, that even amputees could exercise in their wheel chairs.

During a person's lifetime exercise was thought to be important from an early stage. Most indicated from childhood (3-4 years) with just one group saying from birth. The Tertiary level group did not think that exercise should start earlier than the age of 15 years. They were certain that it is only when a person attains the age of 40 or 45 that they needed something more than just physical activity. At that age they needed to join a gym and have planned exercise.

Several reasons were given for why persons do not exercise. All groups except the Patient Support felt that **laziness** was the main hindrance to exercising. Other reasons included:

- Sickness/ Medical and physical conditions
- Price of sneakers for walking/ Cost of gym and personal trainer
- Terrible conditions of the road and a lack of proper outdoor places to exercise.
- People afraid of being kidnapped or assaulted etc/ Environment not safe
- Working hours
- Lack of privacy
- Need another person for encouragement
- Transport
- Stress/Lack of motivation/depression/low self esteem
- Lack of advice and guidance
- Some say they just cannot exercise
- Lack of discipline/lack of priorities
- Dogs

Responses on the duration of exercise ranged from 30 –60 minutes three times per week to 30 minutes to one hour daily. They all indicated that the duration depended on the individual and that it should be done in moderation.

Common exercises done included: yoga, tai chi, swimming, walking, lifting weights, Jumping jacks, crunches, all sports (e.g. football, cricket, tennis), skipping, riding, cycling. Of those listed they felt that even though all may be good for the heart, walking seemed the commonest one mentioned as being very good for the heart. One group included swimming, yoga and TaiChi. It was the general feeling that persons with heart disease could exercise but nothing too strenuous.

The doctor's advice was important. One particular group (patient group >2 years) said that persons with heart disease should not exercise ... "*you want them to dead or what*".

Sources of Information

Most persons seemed to get their information on heart disease from the newspapers. Other sources included:

- Television
- Internet
- Medical personnel
- Information sharing by others/sharing of experiences
- Professionals (Dietitian)
- Radio
- Health Office/Health Centre/Clinics
- Some beauty magazines have articles on health
- CFNI CAJANUS
- Trinidad Presbyterian magazine
- Documentaries
- Medical Journals
- CHRC/Conferences
- Work-related material
- Catholic News
- A'Level Biology

In trying to solicit ideas on how they would like to see the information presented, most persons, especially the General Population (below tertiary) especially wanted something visual (TV, Videos). Most of the other persons wanted a document that was easy to read, illustrative, colourful and with information on food preparation, calories, for example.

Many more issues could have been explored and details obtained if more time was available. Participants enjoyed the sessions and all had numerous questions at the end of the session which indicated that persons are in need of information on the topic.