Heart Disease in Southern Nigeria

The summary below is from the full report titled, "Dominance of Hypertensive Heart Disease in a Tertiary Hospital in Southern Nigeria: An Echocardiographic Study."

What is the problem and what is known about it?
Cardiovascular diseases (CVD) involve the heart or blood vessels. More than 17 million people died from CVD in 2008 and each year, heart disease kills more Americans than cancer.

Cardiovascular disease remains the biggest cause of deaths in the world. However, during the last 20 years, CVDs have declined in many rich countries but have increased at an alarmingly fast rate in poorer and developing countries. In fact, three times as many deaths from CVD now occur in developing countries as compared with developed countries.

The economic and social costs of CVDs is great, particularly because many developing nations still have poor health care facilities and high rates of poverty-related diseases such as malnutrition and infectious diseases.

Echocardiography is a procedure that can help doctors accurately explore heart disease. It gives the doctor information about the heart’s structure and function; the information can help diagnose or manage heart disease.

Why did the researchers do this study?
The aim of this study was to report experiences with the echocardiography during a one-year period.

Where was the study done?
This study was carried out at the cardiology unit of the department of internal medicine of the University of Port Harcourt Teaching Hospital in southern Nigeria between May 2009 and April 2010.

Echocardiography was performed with the ALOKA-400R machine using two dimensional, M-mode, color flow and tissue Doppler protocols.

Who was studied?
Two hundred and thirty-four patients were examined during the study period. We examined 119 males and 115 females. Their ages ranged from 10 to 96 years with an average age of about 50 years.

What did the researchers find?
One hundred and twenty-four patients (53%) had hypertensive heart disease, 20(9%) had rheumatic heart disease while 13(6%) patients had dilated cardiomyopathy.

Less than five percent of the patients had other types of heart diseases, such as hypertrophic cardiomyopathy, pericardial effusion, intracardiac tumors.

Hypertensive heart disease was the most often found type of heart disease in our study. In Nigeria, it is one of the most important noncommunicable diseases causing increased death and disability among our patients.

What can be done?
A lot more work still needs to be done to increase awareness about hypertension and its treatment. We have many strategies that, if implemented, could reduce CVD disease by more than half. For example, encouraging patients to reduce salt, stop smoking, eat a healthy diet and exercising regularly should be some of the first strategies to be used.

With health awareness campaigns and routine screening for people at risk, we could prevent the further development of CVD risk factors. Cost-effective interventions should target those who are at highest risk for death, such as those with advanced disease or overall high risk for CVD.

Using Exercise to Reduce Type 2 Diabetes in Polynesia

The summary below is from the full report titled, "Targeting the Type 2 Diabetes Epidemic in Polynesia: Historical Perspective and Rationale for Exercise Intervention Trials."

What is the problem and what is known about it?
The Polynesian (Maori and Pacific Islands) people of New Zealand have high rates of type 2 diabetes. The number of new cases diagnosed each year in this ethnic population is nearly three times higher than in New Zealanders of Caucasian-European descent. Because of type 2 diabetes, Polynesian people are at much higher risk of heart disease and stroke, with Polynesians living fewer years.

One reason for these higher rates of diabetes is the high level of obesity in the Polynesian community. For Polynesians, obesity has been influenced by Westernization, including a low-quality diet and little exercise, as well as by some biological, genetic and cultural factors.

Research has shown that aerobic exercise, weight lifting exercise, or a combination of the two can help reduce diabetes risk factors. The American College of Sports Medicine recommends exercise for the management, treatment and potential remission of type 2 diabetes. However, these recommendations are based on studies of mainly Caucasians. This is notable given that diabetes is much
more prevalent in certain ethnic groups.

Why did the researchers do this study?

Our research team conducted the study to find out how much exercise training would be helpful for Maori and Pacific Islands people diagnosed with type 2 diabetes and obesity.

What did the researchers find?

In contrast to previous research on other ethnic groups, we did not see the expected improvements in body weight, body fat percentage, or chronic blood glucose homeostasis following the 16 weeks of exercise intervention. We think the benefits of exercise may have been delayed because our participants were the most obese, having a larger amount of body fat and being in poorer physical shape than any type 2 diabetes group studied earlier.

Yet, history suggests that Polynesian people have extreme levels of physical activity for daily living, gathering food, dance and rituals and island travel. They have also been historically known for their high levels of physical endurance and fitness. Due to these selective environmental factors and related evolution, it could be hypothesized that Polynesian people generally require and are able to tolerate greater doses of exercise compared to other groups, including Caucasians.

What next steps can be taken?

Future research involving Polynesian people should focus on the benefits of exercise for treating type 2 diabetes and its risk factors, such as obesity. We recommend paying attention to address cultural needs to encourage regular exercise training.

Research shows that group-based exercise programs that involve family, friends and community members may be particularly successful among Polynesian people. Using traditional sports and dance may also help high-risk Polynesian people keep a good exercise program.

ARAB MOTHERS IN THE UNITED STATES: BETTER OR WORSE DIET AND EXERCISE THAN IN HOMELAND?

The summary below is from the full report titled, “Assessment of the Effect of Acculturation on Dietary and Physical Activity Behaviors of Arab Mothers in Lubbock, Texas.”

What is the problem and what is known about it?

We wanted to know more about dietary and physical activity behaviors of Arab mothers living in Lubbock, Texas after being in the United States for a few years.

Why did the researchers do this study?

We wondered if there was a relationship between the number of years the Arab mothers lived in the United States and their diets and exercise programs.

Who was studied?

22 Arab mothers living in Lubbock, Texas.

How was the study done?

We conducted focus group discussions and individual interviews to collect information about practices and challenges of the study participants.

What did the researchers find?

Results of our study gave us new information on diet and physical activity of Arab mothers and how these behaviors are affected by living in the United States. We found differences in both opinions and dietary habits among the Arab women. Most of the differences were related to differences because of country of origin, educational background and time spent in the United States. On some points, the mothers agreed, such as challenges and factors affecting their food choices and physical activity behaviors.

Several of the mothers reported negative behaviors that started after living in the United States. These included skipping meals, eating more high-fat fast foods and meat, and doing less physical activity such as walking to stores. Some said that the negative behaviors were due to their children’s preferences, lack of access to traditional foods, preference for convenience, the low cost of some foods, and lack of time.

Positive changes for some Arab mothers included healthier cooking techniques, reading nutritional labels, and making new healthy food choices due to increased awareness of healthy foods, availability and affordability of many healthy choices in the United States, and Arab mothers’ attempts to enrich their families’ meals with vegetables in order to keep the Arabic dietary pattern.

What does the study tell us?

The ability to add new foods and exercise was thought to also offer a feeling of empowerment for these women. Arab mothers need to know, for example, how to eat nutritious in fast food restaurants, how to moderate their children’s requests to eat there, and how to read food labels. Suggestions also include the need to support the positive aspects of Arabs’ traditional diet, such as eating smaller amounts of meat and a greater variety of fruits and vegetables. Arab mothers should be encouraged to continue some of the new desirable food habits they have found in the United States. In addition, groups where Arab mothers gather, such as Islamic centers can be helpful in promoting culturally acceptable opportunities for physical activity for Arab mothers and their families.
HOW DOES EDUCATION RELATE TO WEIGHT IN AFRICAN AMERICAN WOMEN?

The summary below is from the full report titled, “Life Course Educational Status in Relation to Weight Gain in African American Women.”

What is the problem?

The problem of obesity is severe among African American women, so it is important to identify factors that may increase or decrease the risk of obesity among these women.

Why did the researchers do this study?

In the United States and other developed countries, women with lower levels of education and income are more likely to be obese than women with higher levels of education and income (also known as socioeconomic status). Some studies have found that women who grew up in families of low socioeconomic status are more likely to become obese adults than women whose families had higher socioeconomic status. It is not clear which has a more important relation to weight in adulthood—socioeconomic status in childhood or socioeconomic status in adulthood.

Who and what was studied?

We studied the relation between socioeconomic status and obesity in a group of African American women who are enrolled in the Black Women’s Health Study, which has collected information about these women’s health, weight and other factors. We also asked the participants about their education level, their spouse or partner’s education and their parents’ education.

What did the researchers find?

When we considered parents’ education alone, we found that women who had a parent who had graduated from college were less likely to be obese as adults than women whose parents had less education. When we considered current education alone, we found that women who themselves or whose partner had completed college were less likely to be obese than women whose current education (their own or their spouses) was lower. When we considered parental and current education together, women at the lowest level of both parental and current education had the highest risk of obesity. The lowest risk of obesity was among women whose current educational level was college graduate, regardless of their parental education.

What does the study tell us?

We believe this study is the largest to date to explore African American women’s education related to obesity. The results suggest that a woman’s risk of obesity as an adult is influenced more by the educational level of herself or her spouse than by the educational level of her parents. In addition, our results suggest that achieving a college degree may decrease the risk of obesity. A higher level of education may increase an understanding of how to control weight, and the higher income linked to having a college degree may increase ability to purchase healthy foods and maintain physical fitness.

UNDERSTANDING WHAT WORKS BEST FOR TREATING MULTIPLE SCLEROSIS IN AFRICAN AMERICANS

The summary below is from the full report titled, “Response to Disease Modifying Therapies in African Americans.”

What is the problem and what do we know about it?

African American patients have lower risk of acquiring multiple sclerosis. Yet, when it does strike, the disease is worse for African Americans. We know that African Americans with multiple sclerosis become disabled earlier, need assistance with walking and present to nursing home at younger age than others.

Why did the researchers do this study?

Little is known about why African Americans suffer more severely from multiple sclerosis. In our clinic, we noticed that African American patients did not respond as well to treatment for multiple sclerosis as did White patients. We decided to study this fact further.

How was the study done?

We gathered data from charts and evaluated how multiple sclerosis progress in African American patients who were treated with medications, such as interferons, glatiramer acetate and natalizumab. We then compared that data with data from White patients with multiple sclerosis.

What did the researchers find?

Our results showed poor progression of the multiple sclerosis in African American patients, which could mean that these patients did not respond to the medications as well as their White patients. We also found the same results when comparing response between females of the two ethnicities.

What does this study tell us?

Multiple sclerosis usually starts at young age and leads to early disability in most patients and is especially true for African American patients. Knowledge about the response of a particular ethnic group to widely used medications would help physicians select more personalized treatment strategies and improve the outcome and quality of life for these patients.

GENES LINKED TO OBESITY AND BLOOD PRESSURE

The summary below is from the full report titled, “Association of Variants of UCP 1 with Blood Pressure and Obesity Markers.”

What is the problem and what is known about it?

Researchers think that the uncoupling protein (UCP-1) is a gene connected to obesity and blood pressure. It may be linked to cardiovascular disease.

Why did the researchers do this study?

This study looked at the role of UCP 1 in determining obesity
and high blood pressure among an adult Indian population.

**What did the researchers find?**

This study links UCP-1 with obesity and blood pressure among females only.

**What does this study tell us?**

Early awareness and proper counseling about the UCP-1 can help a person prevent the beginning of some diseases by changing lifestyle behaviors at an early age.

Research and health promotion efforts are needed to increase awareness about environmental and genetic aspects of diseases to provide a better understanding of the relationship between genes, lifestyle, blood pressure and obesity markers.

**HIGH BLOOD PRESSURE AND DIABETES IN NICARAGUA**

The summary below is from the full report titled, “Prevalence of Hypertension and Associated Risk Factors in Six Nicaraguan Communities.”

**What is the problem and what is known about it?**

The northwest region of Nicaragua has been known for a high rate of kidney disease, which is often linked to high blood pressure. We wanted to find out the rate of both high blood pressure and diabetes in this part of the country.

**Who was studied?**

During a two year period, we studied people living in six different communities in the northwest and central regions of Nicaragua.

**How was the study done?**

This was a community-based study that recruited participants through home visits and used a mobile clinic to collect data and blood samples of study participants. First, all men and women between the ages of 20 and 60 years old and who met our guidelines were visited in their homes. Of those who met guidelines in all six communities, 80% participated in the study.

To conduct the study, we interviewed all participants who answered questions about high blood pressure and diabetes. Next, the participants went to a mobile clinic where we measured their height, weight, and blood pressure. Participants also provided blood and urine samples for measurement of creatinine and glucosuria.

**What did the researchers find?**

Of the study participants, high blood pressure was found in about 1 in 5 and diabetes in about 1 in 30. Both conditions were more common in women. Other risk factors for developing high blood pressure were also seen, including increasing age and being overweight or obese. In general, women with high blood pressure had better control of their disease. Half of the study participants had at least one cardiovascular risk factor like high blood pressure, diabetes, smoking, or obesity. In women, finishing primary school education was linked with lower rates of high blood pressure.

**What does this study tell us?**

The rates of high blood pressure among study participants in Nicaragua were similar to those in the United States and wealthier countries in Latin America. Education appears to be key to promoting health, particularly among women.

**STRESS, EXERCISE AND OBESITY AMONG AFRICAN AMERICAN WOMEN**

The summary below is from the full report titled, “Chronic Stress and Decreased Physical Exercise: Impact on Weight for African American Women.”

**What is the problem and what is known about it?**

In the United States, 53% of African American women are overweight or obese. In Maryland, although only 41% of African American women are overweight or obese, all African American women around the nation are at risk of poor health and disease.

Stress, psychological symptoms and health behaviors may be some of the causes for higher rates of obesity among African American women. Those who think they are being discriminated against or who experience stress because of their race or ethnicity may be at risk of poorer health. Constant stress has been found to lead to changes in eating habits, meal choices, and food patterns that result in more snack foods, fewer fruits and vegetables, and more calories. Those with constant stress also tend to eat more foods high in fats and sweets.

Exercising can be one way to reduce stress, but African American women often have trouble following an exercise program due to work or personal stress, lack of support from family and friends, and cultural beliefs that accept higher weight levels. Health care and other workers on a changing shift schedule find it even more difficult to keep up an exercise program.

**Why did the researchers do this study?**

Most US studies have not examined how exercise behaviors of African American women are affected by ongoing stress and how this eventually affects obesity.

**Who was studied?**

90 African American female hospital workers at the University of Maryland Medical Center participated in the study.

**How was the study done?**

We conducted a study on the relationship between perceived ongoing (chronic) stress (both psychological and ethnic discrimination), physical exercise and body mass index (BMI). During the first office visit, researchers collected participant information on weight, height, size of waist, and they calculated each participant’s BMI. Within one week of entering the study, each participant answered a computer-based survey.

**What did the researchers find?**

We found that workers who had a higher BMI more often
said they did not exercise than they reported chronic stress. Women who said family/friends were their most important stressor had higher BMI levels, which, in turn, was linked to less physical exercise. We concluded that if family and friends are not sources of support, they more often would harm a woman’s chance to maintain a healthy exercise program to manage their weight.

The participants said the top two stressors were finances and work. They are related to each other in that the types of health care jobs in our study receive lower pay and are mainly filled by ethnic minorities. The jobs are demanding, which has also been linked with increased stress. These issues are not usually considered by employers in efforts to address employee obesity.

What does this study tell us?
In addition to finding out about the top two stressors and the link between lack of family support and exercise, we found that women often did not see a connection between how they thought about good health and an understanding of how a good diet and healthy BMI could affect health. This perception can negatively impact public health efforts to decrease obesity for this population.

Breast Cancer Screening Can Save Lives

The summary below is from the full report titled, “Barriers to Breast Cancer Screening and Treatment among Women in Emirate of Abu Dhabi.”

What is the problem and what is known about it?
Breast cancer is the most common cancer among women around the world. If discovered late, breast cancer is often fatal. Screening for breast cancer can improve rates of death and sickness from breast cancer. Regular breast self-examination, physician checks, and mammograms are some of the ways to increase early detection of breast cancer.

Why did the researchers do this study?
Some of the factors that affect screening participation are: age, culture, beliefs, education and medical insurance. We wanted to find out what the women in the Emirate of Abu Dhabi thought about breast cancer screening.

Who was studied?
299 women of different ages and ethnic groups in Abu Dhabi. We placed the women in two groups: well women (299 well women who did not conduct breast screening regularly) and regular screeners (30 who did conduct screening regularly). None of the women had breast cancer.

How was the study done?
We studied the knowledge, attitudes and behaviors of women related to breast cancer screening in Abu Dhabi through 46 focus group discussions and 30 personal interviews.

What did the researchers find?
Across all groups in our study, the women most often thought that family history was the number one risk factor for breast cancer. Yet, other research shows that only about 5%–10% of women with breast cancer have a family history of the disease.

The women also thought these risk factors put them at increased risk of breast cancer: unhealthy foods (fatty, junk foods, or canned), improper breastfeeding technique, suddenly stopping breastfeeding, pollution, tight bras, and bumping into doors. Some women said breast cancer occurred because it was God’s will.

None of the women in our study knew that the two main risk factors for breast cancer are being a woman and growing older.

Many women in our survey correctly identified the signs and symptoms of breast cancer, such as a lump or nipple discharge. However some women incorrectly thought that pain was a common symptom of breast cancer. While pain may be a symptom in later stages of breast cancer, it is rarely an early symptom.

The two most common barriers to screening were fear of finding they have breast cancer and shyness to show their breasts. Most of the women claimed to be unwilling to be examined by a male doctor if they had a breast problem, preferring to wait for weeks to find a female doctor. Some women said they would try an herbal medicine (cauter) or see a traditional healer before going to a medical doctor.

What does this study tell us?
Breast cancer treatment and management can be less successful the later the cancer is discovered. Men, especially husbands, were not considered as barriers to screening; actually, many felt that men were very supportive.

The key difference between the attitudes of those in the regular screener group compared with the well women group was the knowledge that regular checking might save their lives. We conclude that this should be the focus of health promotion campaigns.

Culturally Sensitive Education Can Help Prevent and Control Diabetes

The summary below is from the full report titled, “The EN BAL-ANCE Spanish Diabetes Education Program Improves Lipids, Serum Glucose and Body Composition in Hispanic Diabetics.”

What is the problem and what is known about it?
More than 20 million Americans have diabetes. It is a disturbing medical condition that increases the risks for serious problems such as kidney failure, blindness, heart attack and stroke.

Compared to Whites, Hispanic and African Americans are at higher risk of diabetes. Hispanic Americans have high rates of several risk factors for diabetes: obesity, a family history of diabetes, low social or economic status, poor access to health care, poor diets and lack of exercise.
Why did the researchers do this study?

Programs to prevent, reduce and possibly reverse the effects of diabetes, especially in Hispanic Americans are needed. Our program, named Enbalance, is a culturally sensitive Spanish diabetes education program that focused on the importance of making healthy informed choices with respect to diet, and exercise.

Who was studied?

We recruited 35 Hispanic diabetics from two California counties: Riverside and San Bernardino. They participated in the program for three months.

How was the study done?

We recruited 9 men and 24 Hispanic diabetics to participate in the study. At the beginning of the study, we measured several body markers for each participant: height, weight, body mass index, cholesterol and glucose (sugar) levels. The participants then attended diabetes education classes twice a week for three months. Following the classes, the participants’ body markers were measured again.

During the classes, the participants were asked to decrease the use of white flour, white sugar, white bread and white rice (because these foods increase blood glucose level), avoid processed foods and decrease intake of foods with high cholesterol (and saturated fat foods) such as pork and lard, increase intake of fruits and vegetables (nine servings/day each serving is ½ cup), nopales and tunas, nuts (e.g. almonds, pecans), whole grains (beans, lentils). For exercise, participants were encouraged to walk or dance at least 30 minutes a day.

What did the researchers find?

At the end of the study, results showed that even within a short time period, body weight, blood sugar level, trunk fat (abdominal fat) and bad cholesterol (LDL) decreased, while good cholesterol (HDL) improved. We believe the program was successful because it focused on the importance of behavior change with respect to diet and exercises and took into consideration social and cultural practices of the Hispanic population.

What does this study tell us?

We have known that most long-term diseases such as diabetes, obesity, and high blood pressure can be prevented by lifestyle practices. We expanded this knowledge by developing a program that offered culturally sensitive education on portion sizes, label reading, importance of exercise, avoiding tobacco and alcohol. We found significant health benefits, even in resource poor communities where access to health care is limited.

Overall, lifestyle education programs will prevent premature death and reduce cost spent on health care. The findings from this study demonstrate the effectiveness and importance of these programs in improving blood sugar control in diabetics and reducing the risk of complications.