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## Metabolic Syndrome in African Americans: Views on Making Lifestyle Changes

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### Abstract

This study explores African American adults' understanding of metabolic syndrome (MetS) and their motivations for making lifestyle changes. African Americans have a greater risk for components of MetS, such as hypertension.

**Methods**—Three focus groups were conducted with African American adults (n=11) with MetS.

**Findings**—Content analysis revealed themes of: Threat of Poor Health, Building Trust with Providers, Gaining Social Support; Seeking Culturally Acceptable Alternatives; and Getting on Track and Staying on Track.

**Conclusions**—Lifestyle interventions for African Americans with MetS need to focus on building trust, developing self-monitoring skills, social support, and identifying low cost/convenient opportunities for physical activity.

### Keywords

Metabolic syndrome; Focus groups; Physical activity; Behavioral change; African American

## BACKGROUND

Metabolic syndrome (MetS) is a constellation of interrelated risk factors (including hypertension, dyslipidemia, obesity, and elevated blood glucose) that predispose an individual to higher cardiovascular (CV) risks. The combinations of these risk factors create prothrombotic and proinflammatory conditions, pathobiological pathways to increased CV risk (Grundy et al., 2005). Although African Americans (AA) do not have a higher prevalence of MetS than other racial/ethnic groups, they are at a greater risk for selected components of the MetS, such as hypertension and glucose abnormalities. These two components which are more prevalent in AA also confer the highest risk for death from MetS (Martins, Tareen, Ogedegbe, Pan, & Norris, 2008).

Additionally AA experience greater difficulty in treated blood pressure control, increased hypertensive complications, disproportionately higher levels of obesity, and lower physical activity (Bosworth et al., 2008; Clark & El-Atat, 2007; Ferdinand, 2006; Mokdad et al., 2003; Nwasuruba, Khan, & Egede, 2007; Okosun & Dever, 2002). Thus MetS is a significant health problem to address (Ford, Giles, & Dietz, 2002). In addition, people who are middle aged, male, African-American, and/or have histories of hypertension or diabetes have been found to be less likely to be leading a healthy lifestyle (King, Mainous, & Geesey, 2007).

The primary strategy to mitigate the long term effects of MetS involves weight reduction and increased physical activity (Grundy, 2007; Hall et al., 2003). The secondary strategy consists of combining lifestyle changes with pharmacological treatment of MetS individual components (Grundy, 2007; Hall et al., 2003). The first line approach of intensive lifestyle change is intended to prevent or delay onset of atherosclerotic CV disease as well as type 2 diabetes mellitus, if it is not already present.

The JNC-VII (Chobanian et al., 2003) and ATP-III (National Cholesterol Education Program (NECP), 2002) guidelines suggest lifestyle modifications (weight loss, increased physical activity, improved dietary patterns) to enhance drug therapy for blood pressure and lipid control. Although there is good evidence that lifestyle changes involving adequate physical activity improves overall health, contributes to the prevention of diabetes and other chronic conditions, (Diabetes Prevention Program Research, 2002; Hall et al., 2006; Hussain, Claussen, Ramachandran, & Williams, 2007) and reduces all cause mortality and improves overall quality of life, (Brown et al., 2003; Lee & Shapiro, 2003) little is known about promoting therapeutic lifestyle change in African Americans with MetS. Accomplishing lifestyle change is challenging for patients and providers, and factors contributing to success can be identified at the patient, health provider, and societal (including family) levels. For the purpose of this project we focused on perspectives regarding patient level factors.

At the patient level, adoption and maintenance of healthy lifestyle behaviors are influenced by knowledge, motivation, health beliefs, self efficacy and outcome expectations, readiness for change, and perceived barriers and benefits (Bandura, 1997; Garber, Allsworth, Marcus, Hesser, & Lapane, 2008; Prochaska & DiClemente, 1992). However few studies have been conducted in ethnic minorities. Given the escalating disparities in CV health, there is an urgent need to test therapeutic lifestyle change approaches with sufficiently sized samples of ethnic minority participants (Yancy, 2004a, 2004b).

### Physical Activity

Studies specifically examining physical activity behaviors in AA have reported culturally relevant factors that influence self efficacy, perceived barriers and benefits. Low physical activity levels have been linked to low education, low income, high general life stress, multiple caregiver roles and ensuing fatigue, lack of childcare, inaccurate health beliefs about the need

for physical activity, preference for leisure activities that are relaxing, unappealing incentives to engage in exercise, and poor health perceptions (Dunn, 2008; Mannucci, Bardini, Rotella, & Rotella, 2003; Miles, Panton, Jang, & Haymes, 2008; Tudor-Locke et al., 2004; Wanko et al., 2004; Whitt, Kumanyika, & Bellamy, 2003; Wilbur, Chandler, Dancy, & Lee, 2003). AA women have been found to be less likely to be in active stages for exercise (preparation, action and maintenance) than other minority groups; (Bull, Eyler, King, & Brownson, 2001) they also report that family and friends may disapprove of physical activity (Felton, Boyd, Bartoces, & Tavakoli, 2002). Facilitators of physical activity in AA women include role models, knowing people who exercise, spirituality, and social support, (Ainsworth, Wilcox, Thompson, Richter, & Henderson, 2003; Felton et al., 2002; Keyserling et al., 2002) whereas AA men report less reliance on social support (Bopp et al., 2006; Rose, Kim, Dennison, & Hill, 2000).

### **Diet and weight control**

Cultural values deemphasizing thinness, greater tolerance for increased adiposity, lower physical activity levels, high fat/low fiber diets, poor health perceptions, and depressed mood have been associated with overweight/obesity in AA (Blixen, Singh, & Thacker, 2006; Lynch, Chang, Ford, & Ibrahim, 2007; Miles et al., 2008; Nwasuruba et al., 2007; Padgett & Biro, 2003; Sachs-Ericsson et al., 2007; Weinrich et al., 2007). Studies examining correlates of weight loss in low-income women suggest that AA are less likely to diet or exercise than Caucasians, and may resort to maladaptive strategies including diet pills and purging (Breitkopf & Berenson, 2004). Contrasting data from another study indicated that although AA women were more likely to use liquid meals and diet pills than AA men, exercise and caloric reduction also were attempted (James, Hudson, & Campbell, 2003). Two major predictors of diet enhancement, friends' attitudes toward weight and positive beliefs about weight loss, have implications for education and social support in weight loss interventions with AA (Clarke, Freeland-Graves, Klohe-Lehman, & Bohman, 2007; Hawkins, Hornsby, & Schorling, 2001).

### **Diet composition**

Although consumption of fruits and vegetables may prevent diabetes, (Lindström et al., 2006; Oldroyd, Unwin, White, Mathers, & Alberti, 2006) their consumption tends to be lower in people with MetS (Ford, Mokdad, Giles, & Brown, 2003). Among hypertensive AA, intake of dietary sodium appears to be inversely related to education and income, and exceeds that of Caucasians (Ganguli et al., 1997, 1999). A recent review of nutrient intake patterns of AA with hypertension living in a northern urban area revealed significantly fewer servings of fruit, vegetable and grains than recommended by the USDA (Jen, Brogan, Washington, Flack, & Artinian, 2007). Data from a southern region demonstrated significantly lower consumption of total energy, protein, carbohydrate, dietary fiber, total fat, fruits and vegetables as well as minerals and vitamins between AA men and women and Whites (Champagne et al., 2004). The Dietary Approaches to Stop Hypertension (DASH) feeding studies have demonstrated significant benefits of diets low in sodium and high in fruits, vegetables, whole grains and low-fat dairy products in both Caucasians and AA (Sacks et al., 2001). Regular consumption of diets that meet the recommended nutrient intake levels, such as the DASH, has been suggested to be an effective approach for reducing CV disease risk in AA (Reusser, DiRienzo, Miller, & McCarron, 2003). There is a need for developing clinically feasible approaches to support self selection of these types of foods (Hooper, 2002; Jen et al., 2007).

For AA with MetS, the optimal therapeutic lifestyle goals would be to initiate and maintain weight loss, improve nutrient intake and healthy eating patterns, and adopt a sustained pattern of moderately intense physical activity behaviors. However, little is known about AA views on what is helpful as well as not helpful when trying to promote successful lifestyle changes.

Therefore, the aims of this phase of a larger study were twofold: first, to obtain the perspective of AA with MetS about making lifestyle changes related to eating patterns and physical activities and second, to gain perspectives on the feasibility and acceptability of a lifestyle intervention that will subsequently inform the development and testing of a culturally appropriate self-management intervention focused on lifestyle change. To develop a culturally acceptable intervention for lifestyle changes one needs to understand the values and beliefs of the group, barriers and facilitators to make lifestyle changes, as well as their knowledge about metabolic syndrome and related medical conditions. Our long term goal is to develop a cardiovascular risk reduction program that can be implemented for community groups.

## METHOD

### Design

This qualitative study was part of a larger multi-component project (Morehouse and Emory Team up to eliminate cardiovascular health disparities; META-HEALTH) designed to address CV health disparities in AA. One aim of the study was to develop and test a culturally relevant educational/counseling intervention aimed at improving eating patterns and increasing physical activity. In the initial phase of the intervention study, focus groups were used to obtain the perspective of AA in the community about making lifestyle changes. For this study, focus groups offered a safe forum for perspectives to be shared and heard, and an efficient way to elicit perceptions, attitudes, and opinions of participants. Group discussions were used instead of individual interviews because they allowed the perceptions of a particular group, AA with MetS, to be expressed and explored. Group discussions provide an opportunity for the topics to be richly explored through the participants' interactions with each other as well as with the moderator. Because opinions regarding the proposed intervention and intervention materials were also sought, this elicitation is viewed as an important first step in designing and tailoring an intervention to a specific population, increasing the likelihood that the intervention will be culturally sensitive and appealing, resulting in greater participation and adherence (Fisher & Fisher, 1992).

### Participants

Three focus groups were held between May and July 2005. Participants (n=11) were recruited from community physician primary care and internal medicine practices that provide care predominantly to AA patients. The sample was purposefully selected to include adults who had at least three components of MetS and were between the ages of 30–65 years. Participants sought for focus groups were those who had either been successful at making lifestyle changes (loss of 5 lbs over a year), had been unable to make sustained lifestyle changes (gain of 5 lbs over a year), or were newly diagnosed (within six months) with hypertension.

### Data Collection

Research assistants identified potential participants from medical records of a community physician practice database in a large southeastern urban area in consultation with the primary care physician. Once individuals who met the study criteria were identified, the research assistants contacted them, explained the study, and confirmed that the individual met eligibility criteria. If eligible, they were invited to participate in one of the focus groups.

An interview guide was initially developed based on the literature and in consultation with one of the authors with expertise in behavior change and use of focus groups (RM). The guide was reviewed by experts, refined, and was deemed appropriate to elicit the desired information. The final interview guide used open-ended questions that asked about the group's understanding of MetS, perceived facilitators and barriers, and family involvement in making

lifestyle changes (See Table 1). Additionally, potential intervention materials were shared, and opinions about the appropriateness, feasibility and appeal of the approach were sought.

Focus groups were held in the evenings in a convenient community location, and healthy refreshments were provided to create a more relaxed atmosphere. The session was led by an AA master's prepared nurse (KK) with experience in leading groups and knowledge of MetS. Each session lasted around 90 minutes. The sessions were audio taped, and a research team member took field notes during each session. The tapes were transcribed verbatim, and team members typed their field notes and added them to the data to be analyzed for each session.

### **Ethical Considerations**

Screening and invitations to participate were conducted using partial HIPPA waivers. All participants gave written informed consent and all procedures were approved by the Emory University and Morehouse School of Medicine Institutional Review Boards. The written informed consent included information that the focus groups would be audio taped for accuracy.

### **Data Analysis**

Transcribed data from sessions were given to six team members for review and analysis using methods recommended by Kruger (Krueger & King 1998). These data also included field notes that provided information about the context of the sessions. Members of the interdisciplinary analysis team included content experts (e.g. medicine, nutrition, nurses). Thus, credibility was enhanced by triangulation of both data sources and researchers. In addition, each member received a copy of the audiotape to listen to as they reviewed the transcripts. Each member read the transcripts, marked key lines and content, and identified preliminary themes. Members met on several occasions to discuss the commonalities and differences in the emerging themes. In the initial meeting, all the members provided their themes with supporting quotes noted. Common themes were grouped to generate broader themes and the team members discussed the overall relevance of supporting quotes. During this process the interpretation of each focus group's transcript was continuously compared against the others for similarities and differences. This continued process resulted in elimination of some themes and synthesis of others. The process was iterative resulting in a set of key themes with supporting data in the form of participant quotes. Group consensus was reached regarding the most salient themes. The final set of themes was reviewed by all team members for accuracy. An audit trail, consisting of the data and analysis notes, was retained for later review if needed. This comprehensive process insured consistency of interpretation, supported transferability, and overall, enhanced trustworthiness.

## **FINDINGS**

Participants (n = 11) attended focus groups for those who had either been successful and making lifestyle changes (loss of 5 lbs over a year) (n = 4), had been unable to make sustained lifestyle changes (gain of over 5 lbs over a year) (n = 5), or were newly diagnosed (within six months) with hypertension (n = 2). On average participants were 51 ( $\pm$  10.3) years old, ranging in age from 26 to 64. The majority were women (73%), not married (73%) and all had equal to or more than a high school education. Slightly less than half 46% were employed full-time. All participants had hypertension as one MetS criteria.

In general, participants were unfamiliar with MetS as a diagnosis. Most were unaware of the term and had not been told by their doctors that their combination of health problems was referred to as "Metabolic Syndrome". Based on their individual risk factors, participants were aware of the need to make lifestyle behavior changes to improve their health. In addition, they

had knowledge of appropriate behaviors in which they should be engaged. For example, several were aware that the appropriate serving size of meat is about the size of a deck of cards. However, they expressed a need for skill building to successfully make behavior changes.

## Major Themes

**Threat of Poor Health**—Many participants shared their fears of being less healthy, or of being in such poor health that they could not continue in their normal roles, and how this motivated them to make changes in their lives. Several told stories of persons they knew who had strokes or other chronic illnesses and how these illnesses had limited them. The participants expressed that they did not want their health compromised to the extent that they could not take care of themselves or their families. As one woman said, when talking about all the things she still planned to do in life. “I’ve made up in my mind that you know, I’m not ready to go yet.”

Another commented:

...I’m the sole person in my family that takes care of everybody so (if) I go, you know, there’s nobody to take care of me, they can’t take care of me and so I realize that I had to make a change.

The following quote is from a participant who shared how providing care for two stroke patients motivated her to make changes:

Couple weeks ago I got some patients in that was 50 and 53 years old. Couldn’t move, couldn’t do nothing and young women ...it really started all of us thinking. So that’s when I started... went to the store and stopped buying ice cream and this week-- see I was going to start back walking-- that really did something to me to see these women that was working last year laying up in bed and will never work again....

Although several participants acknowledged how fear motivated them to action, some expressed opposite views indicating that fear alone was not enough to sustain lifestyle changes.

One person commented that threat of poor health concerned her, but she didn’t feel threatened enough to change the way she lived.

**Building Trust with Providers**—Trusting health care providers was important to the participants. Examples were represented by participants’ stories of doctors prescribing medications without discussing side effects, why the medications were needed or other non-pharmacological options such as diet and exercise to reduce the risk of CV disease. Most participants described relatively little or no discussion with health care providers about healthy eating and exercise, and they perceived doctors were rushed during visits. Interestingly, no participants shared experiences either positive or negative representing nursing counseling from within the community practice offices. Several participants voiced concerns that some illnesses were being used to financially benefit companies. This led to distrust for most participants, and communication and trust with their health care providers was a concern. One participant commented “...the doctors act like they work for the pharmacy.” Two others commented:

Doctors tell all black people over 40 or 50 that they have high blood pressure. I think that it’s just a trend.

I think if you take five or six different medicines something’s going to cancel out something.

Some of these statements may reflect a lack of participant understanding of how many AA are disproportionately affected with certain illnesses. Because of this, health care providers should

work to build trust and clearly explain their reasons for treatment recommendations. Participants clearly viewed good communication as a building block to establishing trust in the patient-provider relationship. One gentleman reminisced about the relationship he had with his former physician which was grounded in good communication.

...I had a real good relationship with my doctor ..... and we used to sit and talk about exercising and food and I don't know if he just loved to talk or whatever. He was never in a hurry. You know a lot of doctors rush in, check you out and then are gone in five minutes. That does help if the doctors slow down just a little bit and go over some of this stuff.

**Gaining Social Support**—Participants voiced the need for support when making lifestyle changes. Individuals described different support that they received. For example, one participant talked about family members routinely walking with her. Participants gave examples of how individuals had given primarily positive support. The need to have friends or family support the person in making lifestyle changes was a strong theme. Four comments from participants were:

I don't have that support, I get discouraged and then, you know, I stop.

If I had somebody to walk with me, I believe I could walk a little bit.

I think that, means a lot when you got somebody else that's in the family that's uh, weight conscious as well as health conscious.

...but I used to go to the parks and walk by myself and [occasionally I'd run into somebody that I'd see everyday and we'd start walking.] You know and you establish a friendship and then they are there everyday... and that's a good way to do it really. And it's cheap, it doesn't cost anything.

If one does not have support it can be especially challenging as evident in this quote from a participant:

Dieting is hard to do in my household though. We have family, children, I have a husband and he loves to eat. And I have to cook for him, it's kind of hard. I try to put him on my get- him-to-eat- like- I- need- to- eat, but he won't stay on {the diet} so it's kind of hard.

**Seeking Culturally Acceptable Alternatives**—Another important theme dealt with making healthy food choices that were culturally acceptable. Changing the traditional ways of preparing food seemed to be difficult for some participants. Other participants discussed how much they enjoyed fried foods and that alternatives did not have the same taste for them. They discussed the traditions of food and the comfort of having food prepared to eat as it had been done since childhood. One participant noted, "...my thing of it is your culture, what you're used to eating and you know it needs to be a change." Making familiar foods in a healthy way seemed the most appealing alternative. Many participants described ways they had tried to modify their eating habits to eat healthier.

#### **Other participants' comments were**

But when you been looking at meat in your vegetables as long as I have, it's going to look funny without some meat in it.

So I had to really find an alternative to fried foods so [I started grilling and even baking] and stuff like that so. And it worked and I don't eat fried food maybe once or twice a month

**Getting on Track and Staying on Track**—Many participants had made lifestyle changes for a while, but then went back to previous habits. For many, it was hard to continue to make life style changes related to healthy eating and increased exercise. The participants really viewed changing eating and physical activity for the long term as a “battle” and something they had to control. One participant pointed out that “once you have been off a diet-- and I mean the right way of eating-- and go back, it’s just it’s hard to go – it’s harder to go back.”

#### Others said

You know, I want to get uh, in control, back in control where it used to be when I didn’t have all these problems, but I know it’s going to be a battle, uphill battle for me.

...once you change, you know, once you started to eat right and you (are) stuck, bored and then you fry you a piece of chicken. You going to fry some chicken every day for a week.....it’s hard.

This process of beginning to make changes “getting on track” was viewed as very difficult. Likewise, if participants returned to old habits, it was hard to get “back on track,” eating healthy foods and increasing physical activity. The feelings of discouragement of relapse came through very clearly in the sessions. One participant described getting off track as:

...my problem is I’m always saying, Ok, I’m going to get up at 5:00am and exercise, which... I can’t do it. And then when I try to schedule it for afternoons and do it for a while, something’s going to distract you, something’s going to come up. You got a meeting or something...so it’s hard to stay on track.

Another participant shared her way of making sure that she gets her exercise:

So now if I’m home in the afternoons, if [I’m watching TV then I have to exercise] so, that’s my way of making sure that I exercise. If I can watch TV, I can exercise. So that’s what I’m doing.

## DISCUSSION

### Study limitations

The limitations of this study include the sample size, which is small and from a limited urban geographic area. Although the small size of the focus groups is a limitation, the findings offer important insights. Participants also were receiving some level of health care as they were recruited from community physician practices in a large southeastern city. Therefore, these findings may not reflect perspectives of AA from rural areas, or other geographic regions, and those not receiving health care.

### Discussion of findings

Adoption of healthy lifestyle behaviors in mid-life has beneficial health outcomes (King et al., 2007). Designing effective interventions to help people make behavior changes is challenging, and including the perspective of individuals in the target group is extremely valuable. Results of this focus group further shaped the direction and content in designing an intervention to be tested among AA in a large southern city. Table 2 summarizes the themes identified and implications for education designed to facilitate lifestyle behavior change. The finding of how difficult it was to “stay on track” emphasized the need for additional content on motivation and how to help oneself get “back on track”. Content on stress management and coping to help individuals stay on track are important to address when facilitating behavior change. When discussing healthy eating and food choices, culturally relevant recipes are needed that emphasize familiar foods with healthy revisions and substitutions to traditional recipes.



The finding that participants viewed poor health as a threat is consistent with findings from a large study of 71 AA men using focus groups to examine perceptions of health and factors influencing health where being healthy included fulfilling social roles such as caring for family and self-empowerment (education) (Ravenell, Johnson, & Whitaker, 2006). In this group, as well as in our study, participants felt that a negative factor influencing health was stress, and a positive factor was social support.

In focus groups of AA and Caucasian women (Blixen et al., 2006) there were differing views, with AA women expressing less negative views about obesity and perceiving less stigma about their weight than Caucasians. AA women identified key barriers to successful weight loss including how their eating habits were influenced by their culture and ethnicity, food cravings, and family. In relation to help from their primary health care providers, AA women indicated a preference for group meetings with the health care team and/or other women trying to lose weight. In developing interventions one may consider conducting group sessions to capitalize on learning in groups, and so that participants have opportunities to learn and gain support from others trying to maintain a healthy life style through weight loss and increasing physical activity.

The strength of perceived social support in making changes cannot be underestimated, and the theme of the need for social support was repeatedly expressed. Greater family intimacy and support has been found to be more strongly associated with increased physical activity in AA adolescent girls in an urban setting than neighborhood violence (Kuo, Voorhees, Haythornthwaite, & Young, 2007). Thus a focus on seeking social and family support will be an important part of the intervention to be tested.

Helping people identify ways to communicate with health care providers has the potential to foster a trusting relationship in which vital information is shared in both directions (clinician to patient and vice versa). Teaching individuals skills such as self-monitoring, reading and interpreting food labels, problem solving, and planning may foster lifestyle changes.

The groups also made it clear that they did not want more literature to read. Therefore, active, hands-on activities which engage participants and reinforce skills were incorporated in the activities. Demonstrations and activities the participants can be involved in during the educational session are more likely to be effective.

Many of the people who stated they started to make lifestyle changes because they were afraid of dying or being debilitated were often unable to maintain those changes. Therefore, fear may be an initial motivator but other strategies may be required for sustained behavior change.

Therefore, specific strategies from the literature on relapse, such as “how to stop negative thoughts” are needed to help people get back on track and continue behavior change. Empowering people to make sustained lifestyle changes is very important given the fact that MetS is often a silent or asymptomatic condition.

Cardiovascular nurses provide much of the patient education about lifestyle changes and culturally sensitive knowledge and experience will help them foster successful approaches to provide culturally congruent education. Conducting formative research such as this study may help design interventions that will be more relevant to diverse groups. Effective lifestyle interventions that truly meet the needs of communities are needed to empower individuals to change their habits. Without a clear understanding of the perspective of AA as to what will facilitate them in making behavior changes, the existing distrust in health care providers may be perpetuated. Asking individuals about their experiences is an indicator of caring and likely will facilitate a therapeutic relationship (Shellman, 2004). Use of the focus group methodology

has been useful for developing culturally relevant instruments (Willgerodt, 2003) and interventions designed to effect behavior change (McGarvey et al., 2006).

## CONCLUSION

Adopting healthy lifestyle behaviors in middle age can result in lower CV disease and mortality (King et al., 2007). Thus, developing culturally relevant interventions that are effective in helping people with MetS are needed to reduce the long term negative outcomes.

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**Table 1**

## Content Areas Addressed in the Focus Group Discussion Guide

Content Area	Sample Questions
Understanding of Metabolic Syndrome	Have you had a conversation with your doctor about metabolic syndrome?
What helped the person make a change in diet and physical activity	What happened that helped you realize you needed to change your lifestyle? What things are critical for a person who is just getting started on changing the way they eat and their lifestyle? We want to help people manage their weight. How would you recommend doing this? What kinds of tools do you need? We want to help people make healthy choices at the grocery store. What would help you do this?
What hindered individuals in making a change in their diet and physical activity	How did your family and friends influence (good or bad) your behavior? Share a story with us about a particular behavior that was a challenge for you to change (eating, exercise, meditation etc.). Share how you handled the change.
What hindered individuals in making a change in their diet and physical activity	What kinds of changes have you tried to make? Which ones were the most difficult? Did you continue to try to make the changes even if you didn't succeed the first time you tried?
Previous knowledge/ education about healthy eating and physical activity	What has been the most helpful learning experience for you in managing the way you eat and live? Sometimes people with high blood pressure are told by their physicians that they should make certain lifestyle changes such as increasing physical activity or changing eating habits. Tell us about any conversations that you have had with your doctor about lifestyle changes. We want to help people make healthy choices in their meal preparations or meals eaten out. What would be a good way to do this?

**Table 2**

## Themes and Implications for Facilitating Lifestyle Behavior Change

Themes	Implications
Threat of Poor Health	Give overview of the percentages of persons by ethnicity affected by the combination of hypertension, diabetes, obesity, hyperlipidemia and the increased risk for CV disease. Emphasize that CV disease is not inevitable and that risk can be changed. Combine this information with evidence that making lifestyle changes, even small ones, are beneficial.
Building Trust with Providers	Provide approaches for talking with providers, such as making list of questions before a visit. Give individuals the opportunity to practice; role play communicating with their provider about medications or other aspects of treatment.
Gaining Social Support	Provide lists of community centers, schools or malls where walking is encouraged. Teach strategies to involve family and friends in activities. Provide tips on how to ask for support from friends and family.
Seeking Culturally Acceptable Alternatives	Have patients provide favorite recipes and give those recipes a “make over” to reduce fat and sodium. Teach label reading and interpretation; practice selection of healthy choices.
Getting on Track and Staying on Track	Provide strategies to reduce negative thoughts. Provide inspirational messages. Teach and practice stress management activities.