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Adverse effects of Complementary and Alternative Medicine Use on Antihypertensive Medication Adherence: Findings from CoSMO

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Abstract

Objectives—To determine the association between complementary and alternative medicine (CAM) use and antihypertensive medication adherence in older black and white adults.

Design—Cross-sectional

Setting—Patients enrolled in a managed care organization

Participants—2180 black and white adults, 65 years of age and older and prescribed antihypertensive medication.

Measurements—CAM use (i.e., health food and herbal supplements, relaxation techniques) for blood pressure control as well as antihypertensive medication adherence were collected via telephone survey between August 2006 and September 2007. Low medication adherence was defined as scores < 6 using the 8-item Morisky Medication Adherence Scale.

Results—The mean age of participants was 75.0 + 5.6 years, 30.7% were black, 26.5% used CAM, and 14.1% had low antihypertensive medication adherence. In managing blood pressure, 30.5% of black and 24.7% of white participants used CAM in the last year and 18.4% of black and 12.3% of white participants reported low adherence to antihypertensive medication (P=0.005 and <0.001, respectively). After multivariable adjustment for socio-demographics, depressive

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symptoms and reduction in antihypertensive medications due to cost, the prevalence ratios of low antihypertensive medication adherence associated with CAM use were 1.56 (95% CI: 1.14–2.15; $P=0.006$) and 0.95 (95% CI 0.70, 1.29; $P=0.728$) among blacks and whites, respectively (P value for interaction=0.069).

Conclusion—In this cohort of older managed care patients, CAM use was associated with low adherence to antihypertensive medication among blacks but not whites.

Keywords

complementary and alternative medicine; hypertension; medication adherence; older adults

INTRODUCTION

Hypertension is a global health problem affecting 65 million persons in the United States (US) and about 1 billion persons worldwide¹. Despite the availability of effective pharmacologic therapies, low adherence to antihypertensive medication remains a public health challenge^{2–4} and is associated with increased health care costs and with high rates of cardiovascular disease and hospitalization^{5,6}. It is estimated that adherence rates are approximately 50% for chronic medications⁴. In a meta-analysis, the odds ratio of blood pressure control among patients adherent to antihypertensive medications compared to those not adherent was 3.44 (95% confidence interval (CI) 1.60, 7.37)⁷. Identifying modifiable factors that affect antihypertensive medication adherence in the older adults could help target interventions to reduce low medication adherence, improve blood pressure control and decrease cardiovascular morbidity and mortality.

Multiple factors influencing patient adherence to prescribed pharmacologic therapies have been described and include demographic, treatment, clinical, and behavioral variables^{3;8;9}. However, there is a lack of understanding of how various factors influence adherence in older adults and which patient groups are at greatest risk of low medication adherence. One such factor is the use of complementary and alternative medicine (CAM). CAM has been defined by the National Center for Complementary and Alternative Medicine as a group of diverse medical and health care systems, products, and practices that are not presently considered part of conventional medical care¹⁰. It is generally assumed that complementary medicine is used in conjunction with conventional medicine whereas alternative medicine is used in place of conventional medicine; however, many patients replace conventional medical care with complementary therapies. CAM use has been reported to be common among patients with hypertension^{11–16}. However, the relationship between CAM use and adherence to antihypertensive medications has not been well documented in older black and white adults.

Previous studies have reported lower adherence to medications among blacks compared to whites^{8;17;18}. In addition, prior research has identified different rates of CAM use among black and white adults^{19–21}. Therefore, CAM therapies for blood pressure control may affect conventional medical care for hypertension differently for blacks and whites. The purpose of this study is to investigate the relationship of CAM use to antihypertensive medication adherence in black and white older adults.

METHODS

Study population and timeline

These data are derived from the baseline interview of the Cohort Study of Medication Adherence among Older Adults [CoSMO]. Participants in CoSMO include older adults with

essential hypertension who were enrolled in Humana, a large managed care organization (MCO), and prescribed antihypertensive medication. The primary goal of CoSMO is to investigate the multiple factors that influence antihypertensive medication adherence; the study design and baseline characteristics have been previously described⁸. In brief, adults 65 years and older with essential hypertension were randomly selected from the roster of a large MCO in southeastern Louisiana and contacted to participate in a prospective cohort study. The catchment area for CoSMO reflects a demographically diverse group of individuals in urban and suburban areas. Recruitment was conducted from August 21, 2006 to September 30, 2007 and 2194 participants were enrolled. Compared to participants, those who refused to participate (n=2217) were more likely to be male (50.4% versus 41.5%, $p<0.001$), white (84.5% versus 68.8%, $p<0.001$), and older (76.3 years versus 74.5 years, $p<0.001$). For the current analysis, 14 participants who report their race to be other than white or black were excluded. All participants provided verbal informed consent, and CoSMO was approved by the Ochsner Clinic Foundation's Institutional Review Board and the privacy board of the MCO⁸.

Study measures

The baseline survey was administered by telephone using trained interviewers and lasted 30–45 minutes. Of relevance to the current analyses, the survey included assessment of sociodemographic factors, clinical factors, health care system factors, antihypertensive medication treatment-related variables, CAM use for blood pressure management and adherence to antihypertensive medication (Figure 1)³. Data on co-morbid conditions and antihypertensive medication persistency were obtained from the administrative and pharmacy databases, respectively, of the MCO. These domains are described in detail below.

Socio-demographic and clinical variables—Sociodemographic characteristics and duration of hypertension were obtained through self-report. Comorbid conditions were extracted from the administrative database of the MCO and used to generate the Charlson comorbidity index^{22;23}. Body mass index (BMI) was calculated using self-reported height and weight. Depressive symptoms were determined with the 20-item National Institute of Mental Health Center for Epidemiologic Studies Depression Scale (CES-D). CES-D scores can range from 0 to 60 with a score ≥ 16 used to define the presence of depressive symptoms in the current study²⁴.

Health care system and antihypertensive treatment variables—Participant satisfaction with health care was assessed using three components of the previously validated Group Health Association of America (GHAA) Consumer Satisfaction Survey: overall satisfaction, access to care and communication^{25;26}. For each question in the component scales, there was a 5 point Likert-scale response option ranging from poor to excellent. Responses of poor and fair were classified as not satisfied and responses of good, very good and excellent were classified as satisfied. A question, “*In the last year, have you ended up taking less high blood pressure medication than was prescribed because of the cost*” was used to assess whether participants reduced their antihypertensive medication because of cost. The number of classes of antihypertensive medication being taken was obtained from the pharmacy database of the MCO.

CAM—Use of CAM was assessed with questions derived from a previously validated survey²⁷. The CAM modalities selected for the survey instrument (see Appendix) focused on the use of CAM most frequently cited as effective means of reducing blood pressure: health food (*including fish oil, fiber, L-arginine, co-enzyme Q10*) and herbal (*including garlic, snakeroot, yarrow, Chinese herbs*) supplements, and relaxation techniques (*including*

yoga, meditation, or other relaxation techniques). CAM use was defined as the use of these modalities at least several times or on a regular basis in the year prior to the baseline survey.

Medication Adherence

Self-reported adherence to antihypertensive medications was ascertained using the eight-item Morisky Medication Adherence Scale (MMAS-8). This measure was designed to facilitate the recognition of barriers to and behaviors associated with adherence to chronic medications such as antihypertensive drugs. Previously published in its entirety⁹, this scale provides information on behaviors related to medication use that may be unintentional (e.g., forgetfulness) or intentional (e.g., not taking medications due to side effects). A sample question is “Do you sometimes forget to take your high blood pressure medication?” The MMAS-8 has been determined to be reliable ($\alpha = 0.83$) and significantly associated with blood pressure control ($p < 0.05$) in individuals with hypertension (i.e., low adherence levels were associated with lower rates of blood pressure control)⁹. Also, the MMAS-8 has been shown to have high concordance with antihypertensive medication pharmacy fill rates²⁸. Scores on the MMAS-8 can range from zero to eight with scores of < 6 , 6 to < 8 , and 8 reflecting low, medium and high adherence, respectively^{9;28}. In order to focus on identifying participants with low medication adherence, we grouped the MMAS-8 into 2 categories: low (MMAS-8 < 6) and not low adherence (MMAS-8 ≥ 6) for the current analyses.

Statistical analysis

Analyses were stratified by race because of previously published differences in CAM use and medication adherence in blacks and whites. The interaction of CAM use and race on low antihypertensive medication adherence was marginally significant ($p = 0.069$). Rates of CAM use and low medication adherence were calculated by race and by participant characteristics. Chi-square tests were used to determine the statistical significance of differences. Prevalence ratios of low antihypertensive medication adherence associated with CAM use were calculated using separate log binomial regression models for blacks and whites adjusted for age, gender, education, marital status, depressive symptoms, and the reduction of antihypertensive medication due to cost. Given that there are multiple comparisons, we provide exact P-values. All analyses were performed using SAS 9.1 (Cary, NC).

RESULTS

Participant characteristics, CAM use, and medication adherence

The mean age of study participants ($n = 2180$) was 75.0 ± 5.6 years, 30.7% were black, 58.8% were women, 14.1% had low antihypertensive medication adherence⁸, and 26.5% used CAM in managing their blood pressure. Compared to whites, blacks were significantly younger, less likely to be a high school graduate, and married, and were more likely to have a hypertension diagnosis longer than 10 years, more comorbid conditions, and a higher BMI⁸.

A significantly higher percentage of blacks compared to whites were CAM users and had low antihypertensive medication adherence (Figure 2). In assessing types of CAM use by race, blacks were more likely to use herbal supplements compared to whites (15.7% versus 5.4% respectively; $P < 0.001$); there were no differences across racial groups in use of health food supplements (14.2% for blacks versus 16.3% for whites; $P = 0.210$) or relaxation techniques (8.1% for blacks versus 7.6% for whites; $P = 0.680$). The majority of participants who used CAM for blood pressure management on a regular basis had discussed this use with their health care provider and the results were similar across race with the exception of

health food supplements: 76.1% of blacks and 87.5% of whites using health food supplements regularly had told their health care provider ($P=0.012$); 69.6% of blacks and 70.9% of whites using herbal supplements had told their health care provider ($P=0.592$); and 65.6% of blacks and 50.7% of whites using relaxation techniques had discussed the use with their health care provider ($P=0.177$).

Variables associated with CAM use and low antihypertensive medication adherence by race

Among blacks, participants with a high school education or more and those reducing antihypertensive medications due to cost were more likely to be CAM users. Among whites, participants who were younger than 75 years, had a comorbidity index ≥ 2 , and were filling 3 or more classes of antihypertensive medication were more likely to be CAM users (Table 1).

Black participants with depressive symptoms and those reducing antihypertensive medication due to cost were more likely to have low antihypertensive medication adherence (Table 2). Among whites, participants younger than 75 years, with a BMI ≥ 25 kg/m², depressive symptoms, and who were reducing antihypertensive medications due to cost were more likely to have low antihypertensive medication adherence.

CAM use and low antihypertensive medication adherence

Among blacks, low antihypertensive medication adherence was more common among those using CAM (Table 3). There was no difference in low antihypertensive medication adherence among whites using versus not using CAM. After multivariable adjustment for socio-demographics, depressive symptoms and reduction of medications due to cost, the prevalence ratio of low antihypertensive medication adherence associated with CAM use was 1.56 (95% CI: 1.14–2.15) and 0.95 (95% CI 0.70, 1.29) among blacks and whites, respectively (P value for interaction=0.069).

DISCUSSION

A substantial portion of older adults with hypertension in the CoSMO study used CAM in addition to prescribed medications to help control their blood pressure. It has been speculated that CAM use may negatively affect adherence to prescribed therapies³. In the current study, black participants reporting CAM use were more likely to have low adherence to antihypertensive medications; thus, CAM use may be an important modifiable barrier or a signal of other barriers (e.g. side effects and costs of medications) to antihypertensive medication adherence and subsequent blood pressure control in older black patients.

The use of CAM is occurring despite the fact that the manufacturing of these remedies is not regulated by the Food and Drug Administration and the risks and benefits of these therapies are not well-defined²⁹. Rates of CAM use among older adults in previous studies have varied widely^{11;12;30–33}. Rates of CAM use in prior studies are higher than the use reported in our study; however, we inquired about the use of CAM specifically for hypertension management. Use of CAM *to control blood pressure* was higher in our study (i.e., 26.5%) than previously reported by Bell where only 7.8% of older adults used CAM to treat their hypertension¹².

In our study, blacks compared to whites were significantly more likely to use CAM in general and herbal supplements in particular to help control their blood pressure. High use of CAM among blacks has been previously reported^{19;21}. Prior research has revealed also that many patients did not disclose the use of CAM to their health care provider^{11;34} and blacks compared to whites, Hispanics and Asians were less likely to inform their physician or

pharmacist about CAM use³⁵. In the current study, a higher percentage of participants disclosed their CAM use to their health care providers than previously reported and may be attributable to differences in wording of questions, sample selection, or secular trends. Despite the high rates of disclosure of CAM use in this study, blacks were less likely than whites to discuss use of health food supplements for blood pressure control with their health care providers. It is possible that in the CoSMO population, use of herbal supplements including home remedies may be a prominent part of the black culture^{19;21} and may not be viewed as relevant in traditional health care settings. In a study of CAM use in older community dwelling adults, the primary reasons for not disclosing CAM use were “not being asked” (38.5%), “didn’t think about it” (22.0%), and “didn’t think it was important to my care” (22.0%)³¹. Not informing one’s health care provider and substituting CAM for conventional medical care may be especially problematic in older adults who are at risk for health complications related to concomitant use of conventional and CAM or to low medication adherence resulting in poor blood pressure control. Although there is evidence that some supplements (e.g. fish oils) may reduce blood pressure, they may not work as well as prescribed medications^{13;36–38}.

Regarding variables associated with CAM use, there were differences between black and white participants. For blacks, higher educational status and reducing antihypertensive medications because of the cost were associated with CAM use. The associations between higher education and CAM use and costs of conventional care and CAM use have been previously reported^{11;20}. White participants younger than 75 years of age were more likely to use CAM therapies for blood pressure control. Although differences in CAM use by age among older adults have been inconsistently reported in the literature^{11;31}, higher use of CAM by the younger age group may be a cohort, rather than an age, effect¹¹. That is, recent generations have had increased exposure to CAM through media and social networks and therefore may be more familiar and comfortable with using these therapies. Related to previous findings revealing that worsening self-perceived health status was associated with CAM use in whites^{20;21;39}, white participants in CoSMO with more comorbid conditions and increased number of antihypertensive medications were more likely to use CAM therapies for blood pressure control.

With respect to the association between variables and low antihypertensive medication adherence, there were common factors among blacks and whites: depressive symptoms and reducing antihypertensive medications because of costs were associated with low antihypertensive medication adherence in both groups. Depression is common in patients with chronic diseases including hypertension and is associated with poor health outcomes^{40–43}. Prior reports have demonstrated that depressive symptoms are associated with worse blood pressure control and with the onset of complications of hypertension⁴⁴. More recently, investigators have reported cross-sectional associations of depressive symptoms with low antihypertensive medication adherence^{45–47}. The relationship between cost of medications and low antihypertensive medication adherence has been well described even in insured populations^{48;49}. Additionally, younger white participants were more likely to be low adherers- a finding that has been previously reported^{18;50}. White participants with BMI ≥ 25 kg/m² had a higher prevalence of low medication adherence. Given that high BMI is often reflective of low adherence to lifestyle modifications, it is possible that patients who are not adherent to lifestyle modifications may not be adherent to other recommendations for blood pressure management.

Prior published reports indicated adherence to antihypertensive medications is related to faith in the physician⁵¹. Other researchers have found that patient-physician trust may moderate low adherence to medication due to cost pressures⁵². These findings suggest that satisfaction with the doctor-patient relationship may be an important determinant of

medication adherence. Although we did not capture faith and trust in the health care provider as part of the baseline survey, we did measure 3 components of satisfaction including communication with the health care provider. While there was a trend for white and black participants who were not satisfied with the communication with the health care provider to have a higher prevalence of low antihypertensive medication adherence, the difference was not statistically significant in either group. No relationship between satisfaction and CAM use was identified in this study. Further research examining the effect of the provider-patient relationship on medication adherence is warranted.

Consistent with our conceptual model, blacks using CAM for blood pressure control were significantly more likely to have low antihypertensive medication adherence; however, low adherence was not associated with CAM use among whites. These findings suggest that blacks may be substituting CAM therapies for conventional medical care whereas whites may be complementing conventional care with CAM therapies. As mentioned earlier, this dissimilarity may reflect cultural differences in CAM use between whites and blacks. Although others have investigated the relationship between CAM use and antihypertensive medication adherence in a small convenience sample of patients attending an outpatient clinic in the United Kingdom¹⁶, differential effects by race have not been fully explored.

Study limitations and strengths

The results presented are observational. Additionally, recruitment of participants was restricted to one region of the US and older adults. While the current manuscript provides important new data on the relationship between CAM use for blood pressure management and adherence to antihypertensive medications among blacks and whites, future work is needed to determine the effects of types of CAM on medication adherence for other chronic conditions. In addition, the data are self-reported and, thus, there is a potential for misclassification. Information on whether participants' health care providers had prescribed CAM for blood pressure management was not available. Finally, the current study is limited to English-speaking older adults with health insurance. Despite these limitations, the study includes many strengths including its large sample size and broad data collection. The study population is diverse with respect to socio-demographics and the presence of cardiovascular risk factors allowing analysis of the relationship between use of CAM and low antihypertensive medication adherence across race subgroups to distinguish which groups of older adults are at greatest risk of low adherence. The restriction of our sample to older adults in a managed care setting minimizes the confounding effects of health insurance, access to medical care, and employment status in the older adult population. Because hypertension is a prevalent disease among older adults, the results of this study may be useful in the evaluation and management of a substantial segment of the population.

CONCLUSION

Our findings indicate that a substantial proportion of black and white older adults enrolled in a MCO are combining CAM use with conventional medical care in the management of their hypertension. As suggested by the current study, CAM use may have a negative effect on antihypertensive medication adherence in older black adults. Further work is required to understand the attitudinal, cultural and generational beliefs that lead to the use of CAM in hypertension management³², and the role of CAM use on medication adherence and blood pressure control. Studies of CAM use in clinical practice and how patients use CAM to manage their chronic diseases will improve both communication between patients and their health care providers and clinical care^{14;53}. Health care providers should ask their patients about CAM use, and among those using CAM, discuss the importance of adherence to their prescribed medication.

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Use of MMAS-8: Permission for use of MMAS-8 is required. Licensure agreement is available from: Donald E. Morisky, ScD, ScM, MSPH, Professor, Department of Community Health Sciences, UCLA School of Public Health, 650 Charles E. Young Drive South, Los Angeles, CA 90095-1772.

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Figure 1. Conceptual Framework of Variables, Complementary and Alternative Medicine Use, and Low Antihypertensive Medication Adherence (*modified from Curr Opin Cardiol 2004*³)

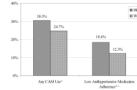


Figure 2.

Prevalence of Complementary and Alternative Medicine Use and Low Antihypertensive Medication Adherence by Race. **CAM use**-complementary/alternative medicine use to help control blood pressure includes any of the following: **health food supplements** include fish oil, fiber, L-arginine, co-enzyme Q10; **herbal supplements** include garlic, snakeroot, yarrow, or Chinese herbs; and **relaxation techniques** include yoga, meditation, or other relaxation techniques. $p=0.005$ $p<0.001$

Table 1

Participant Characteristics by Complementary and Alternative Medicine Use

	Any CAM Use	
	Blacks (N=670)	Whites (N=1510)
<i>Socio-demographic Variables</i>		
Male, %	30.8	24.2
Female, %	30.3	25.1
Under 75 years old, %	31.9	27.6
75 years or older, %	28.5	22.0*
High School graduate or more, %	34.9	24.4
Did not complete High School, %	23.0**	26.6
Married, %	29.7	24.7
Not married, %	31.1	24.7
<i>Clinical Variables</i>		
Hypertension duration ≥ 10 years, %	30.5	25.0
Hypertension duration < 10 years, %	30.5	24.4
Co-morbid index score ≥ 2, %	29.4	27.3
Co-morbid index score < 2, %	31.8	22.4*
Body mass index: ≥ 25 kg/m ² , %	31.5	24.5
Body mass index: < 25 kg/m ² , %	25.0	25.4
Depressive symptoms present, %	35.0	27.1
Depressive symptoms absent, %	29.6	24.4
<i>Health Care System Variables</i>		
Satisfied with overall healthcare, %	30.5	24.4
Not satisfied with overall healthcare, %	31.0	31.7
Satisfied with communication, %	30.0	24.6
Not satisfied with communication, %	35.0	25.8
Satisfied with access to healthcare, %	30.5	24.7
Not satisfied with access to healthcare, %	29.7	25.0
Reduced antihypertensive medication due to cost, %	55.8	35.3
Did not reduce antihypertensive medication due to cost, %	28.7 [†]	24.5
<i>Antihypertensive Treatment Variables</i>		
3+ classes of antihypertensive medication, %	32.4	27.6
1 or 2 classes of antihypertensive medication, %	28.0	22.2*

Excludes persons with race other than white or black (n=14); Includes 2180 older adults in a managed care setting; survey collected from August 2006-September 2007

CAM use-complementary/alternative medicine use to help control blood pressure includes any of the following: **health food supplements** include fish oil, fiber, L-arginine, co-enzyme Q10; **herbal supplements** include garlic, snakeroot, yarrow, or Chinese herbs; and **relaxation techniques** include yoga, meditation, or other relaxation techniques.

* p < 0.05;

**
p <0.01;

†
p <0.001 for comparisons within race groups

Table 2

Participant Characteristics by Low Antihypertensive Medication Adherence

	Low Antihypertensive Medication Adherence	
	Blacks (N=670)	Whites (N=1510)
<i>Socio-demographic Variables</i>		
Male, %	16.4	12.1
Female, %	19.2	12.4
Under 75 years old, %	19.6	14.7
75 years or older, %	16.7	10.0**
High School graduate or more, %	19.7	12.1
Did not complete High School, %	16.1	13.3
Married, %	19.7	12.0
Not married, %	17.2	12.7
<i>Clinical Variables</i>		
Hypertension duration \geq 10 years, %	17.8	11.4
Hypertension duration < 10 years, %	19.6	13.6
Co-morbid index score \geq 2, %	20.1	12.1
Co-morbid index score < 2, %	16.5	12.4
Body mass index: \geq 25 kg/m ² , %	19.2	13.6
Body mass index: < 25 kg/m ² , %	13.0	8.8*
Depressive symptoms present, %	34.0	17.7
Depressive symptoms absent, %	15.5 [†]	11.5*
<i>Health Care System Variables</i>		
Satisfied with overall healthcare, %	17.7	12.1
Not satisfied with overall healthcare, %	28.6	16.7
Satisfied with communication, %	17.6	11.9
Not satisfied with communication, %	25.0	15.9
Satisfied with access to healthcare, %	18.0	12.1
Not satisfied with access to healthcare, %	24.3	15.0
Reduced antihypertensive medication due to cost, %	39.5	44.1
Did not reduce antihypertensive medication due to cost, %	16.9 [†]	11.5 [†]
<i>Antihypertensive Treatment Variables</i>		
3+ classes of antihypertensive medication, %	19.0	12.6
1 or 2 classes of antihypertensive medication, %	17.5	11.9

Excludes persons with race other than white or black (n=14); Includes 2180 older adults in a managed care setting; survey collected from August 2006-September 2007

* p < 0.05;

** p < 0.01;

[†] p < 0.001 for comparisons within race groups

Table 3

Prevalence and Prevalence Ratios of Low Antihypertensive Medication Adherence associated with CAM Use for Blacks and Whites.

	Prevalence, %	P-Value	Sociodemographic- adjusted [^] Prevalence Ratio (95% CI)	P- Value	Multivariable- adjusted ^{^^} Prevalence Ratio (95% CI)	P- Value
Blacks						
No CAM Use	26.0%		I (reference)		I (reference)	
CAM Use	15.0%	<0.001	1.71 (1.24, 2.36)	0.001	1.56 (1.14, 2.15)	0.006
Whites						
No CAM Use	12.3%		I (reference)		I (reference)	
CAM Use	12.2%	0.956	0.97 (0.71, 1.33)	0.872	0.95 (0.70, 1.29)	0.728

Excludes persons with race other than white or black (n=14); Includes 2180 older adults in a managed care setting; survey collected from August 2006-September 2007

CAM use-complementary/alternative medicine use to help control blood pressure includes any of the following: **health food supplements** include fish oil, fiber, L-arginine, co-enzyme Q10; **herbal supplements** include garlic, snakeroot, yarrow, or Chinese herbs; and **relaxation techniques** include yoga, meditation, or other relaxation techniques.

CI-confidence interval

[^] Adjusted for age, gender, marital status, and education

^{^^} Adjusted for age, gender, marital status, education, depressive symptoms, and reduction of antihypertensive medication due to cost