

## Health Disparities Related to Hypertension

Satellite Conference and Live Webcast  
 Tuesday, February 27, 2018  
 10:00 – 12:00 p.m. Central Time

Produced by the Alabama Department of Public Health  
 Distance Learning and Telehealth Division

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## Disclosures

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- **Other: No disclosures**

## Learning Objectives

- **To define hypertension based on systolic or diastolic blood pressure readings**
- **To learn the prevalence of hypertension and the risks of end-organ complications associated hypertension, with a focus on health care disparities**
- **To learn the risk factors for developing hypertension**
- **To become familiar with clinical evaluation and non-pharmacologic recommendations for the hypertensive patient**

## Definition of Hypertension

## Evolution of Definition of Hypertension



JAMA. 2014;311(5):507-520.

## Past Definitions of Hypertension

### Recommendation 2

In the general population younger than 60 years, initiate pharmacologic treatment to lower BP at DBP of 90 mm Hg or higher and treat to a goal DBP of lower than 90 mm Hg.

For ages 30 through 59 years, *Strong Recommendation - Grade A*  
For ages 18 through 29 years, *Expert Opinion - Grade F*

### Recommendation 3

In the general population younger than 60 years, initiate pharmacologic treatment to lower BP at SBP of 140 mm Hg or higher and treat to a goal SBP of lower than 140 mm Hg.

*Expert Opinion - Grade E*

JAMA. 2014;311(5):507-520.

## What is Hypertension in the Elderly?

### Recommendation 1

In the general population aged 60 years or older, initiate pharmacologic treatment to lower BP at systolic blood pressure (SBP) of 150 mm Hg or higher or diastolic blood pressure (DBP) of 90 mm Hg or higher and treat to a goal SBP lower than 150 mm Hg and goal DBP lower than 90 mm Hg.

*Strong Recommendation - Grade A*



But then . . . . .

JAMA. 2014;311(5):507-520.

## What is Hypertension in the Elderly?



Ann Intern Med. 2014;160:499-503.

## Current Definition of Hypertension



<http://hyper.ahajournals.org/content/hypertensionaha/early/2017/11/10/HYP.000000000000065.full.pdf>

## Current Definition of Hypertension

Table 6. Categories of BP in Adults\*

| BP Category  | SBP           | and | DBP         |
|--------------|---------------|-----|-------------|
| Normal       | <120 mm Hg    | and | <80 mm Hg   |
| Elevated     | 120–129 mm Hg | and | <80 mm Hg   |
| Hypertension |               |     |             |
| Stage 1      | 130–139 mm Hg | or  | 80–89 mm Hg |
| Stage 2      | ≥140 mm Hg    | or  | ≥90 mm Hg   |

\*Individuals with SBP and DBP in 2 categories should be designated to the higher BP category. BP indicated blood pressure (based on an average of 23 careful readings obtained on 22 occasions, as detailed in Section 4); DBP, diastolic blood pressure; and SBP systolic blood pressure.

\*No exceptions for persons > 60 years old.

J Am Coll Cardiol. Sep 2017, 23976.

## Prevalence of Hypertension

## Prevalence of Hypertension by Age

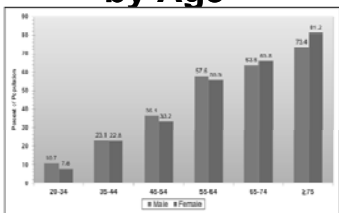


Chart 9-1. Prevalence of high blood pressure in adults ≥20 years of age by sex and age (NHANES 2011–2014). Hypertension is defined as systolic blood pressure ≥140 mm Hg or diastolic blood pressure ≥90 mm Hg, if the subject said "yes" to taking antihypertensive medications, or if the subject was told on 2 occasions that he or she had hypertension. NHANES indicates National Health and Nutrition Examination Survey. Source: National Center for Health Statistics and National Heart, Lung, and Blood Institute.

Circulation. 2017 Mar 7;135(10):e146-e603

## Prevalence of Hypertension by Race or Ethnicity

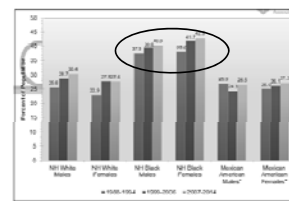


Chart 9-2. Age-adjusted prevalence trends for high blood pressure in adults ≥20 years of age by race/ethnicity, sex, and survey year (NHANES 1999–1994, 1999–2006, and 2007–2014). Hypertension is defined as systolic blood pressure ≥140 mm Hg or diastolic blood pressure ≥90 mm Hg, if the subject said "yes" to taking antihypertensive medications, or if the subject was told on 2 occasions that he or she had hypertension. NI indicates non-Hispanic, and NHANES, National Health and Nutrition Examination Survey. The category of Mexican Americans was consistently collected in all NHANES years, but the combined category of Hispanics was only used starting in 2007. Consequently, for long-term trend data, the category Mexican American is used. Source: National Center for Health Statistics and National Heart, Lung, and Blood Institute.

Circulation. 2017 Mar 7;135(10):e146-e603

## Hypertension Prevalence by Definition

Table 7. Prevalence of Hypertension Based on 2 SBP/DBP Thresholds\*\*

|                            | SBP/DBP ≥130/90 mm Hg or Self-Reported Antihypertensive Medication† | SBP/DBP ≥140/90 mm Hg or Self-Reported Antihypertensive Medication† |
|----------------------------|---|---|
| Overall, number            | 348   | 476   |
| Overall, sex:rank adjusted | 48%   | 42%   |
| Age group, y               |   |   |
| 20–44                      | 33%   | 23%   |
| 45–54                      | 46%   | 33%   |
| 55–64                      | 70%   | 52%   |
| 65–74                      | 75%   | 64%   |
| 75+                        | 79%   | 71%   |
| Race/ethnicity‡            |   |   |
| NI non-Hispanic white      | 47%   | 41%   |
| NI non-Hispanic black      | 59%   | 54%   |
| NI Hispanic black          | 55%   | 48%   |
| NI Hispanic white          | 44%   | 41%   |

\*\*The prevalence estimates have been rounded to the nearest full percentage.  
†130/90 and 140/90 mm Hg in 9623 participants 120 years of age in NHANES 2011–2014. SBP and DBP for definition of hypertension in the second guideline.  
‡NI indicates non-Hispanic, and NHANES, National Health and Nutrition Examination Survey. Self-reported use of antihypertensive medication in 2011–2014.  
§Self-reported use of antihypertensive medication in 2011–2014.  
¶Self-reported use of antihypertensive medication in 2011–2014.  
‡‡SBP indicates systolic blood pressure, DBP indicates diastolic blood pressure, NHANES, National Health and Nutrition Examination Survey, and SBP, systolic blood pressure.

J Am Coll Cardiol. Sep 2017; 23976.

## Awareness, Treatment and Control

Table 9-2. Hypertension Awareness, Treatment, and Control: NHANES 1999 to 2006 and 2007 to 2014, by Race/Ethnicity and Sex

|                          | Awareness |           | Treatment |           | Control   |           |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                          | 1999–2006 | 2007–2014 | 1999–2006 | 2007–2014 | 1999–2006 | 2007–2014 |
| NI white males           | 71.8      | 81.3      | 61.8      | 73.9      | 51.9      | 53.9      |
| NI white females         | 76.9      | 85.5      | 68.1      | 80.6      | 48.0      | 56.9      |
| NI black males           | 20.7      | 29.9      | 19.9      | 28.2      | 14.7      | 27.6      |
| NI black females         | 25.3      | 38.9      | 16.6      | 31.2      | 13.0      | 23.4      |
| Mexican American males   | 57.7      | 68.5      | 41.8      | 57.7      | 25.0      | 37.0      |
| Mexican American females | 69.8      | 80.8      | 67.9      | 75.1      | 51.9      | 60.2      |

Values are percentages. Hypertension is defined in terms of NHANES blood pressure measurements and health interview. A subject was considered hypertensive if systolic blood pressure was ≥140 mm Hg or diastolic blood pressure was ≥90 mm Hg, or if the subject said "yes" to taking antihypertensive medication. NI indicates non-Hispanic, and NHANES, National Health and Nutrition Examination Survey. The category of Mexican Americans was consistently collected in all NHANES years, but the combined category of Hispanics was only used starting in 2007. Consequently, for long-term trend data, the category Mexican American is used. Source: NHANES (1999–2006, 2007–2014) and National Heart, Lung, and Blood Institute.

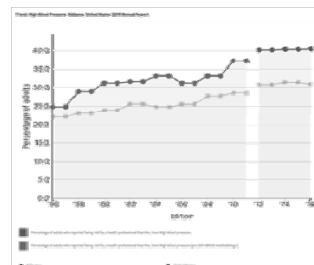
Circulation. 2017 Mar 7;135(10):e146-e603

## Geographic Variation in Hypertension Prevalence



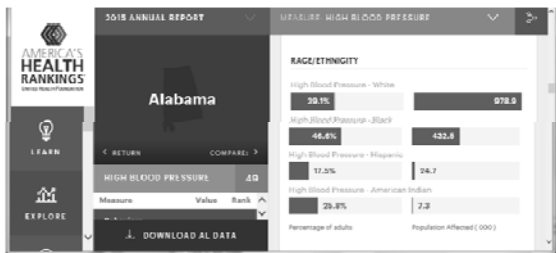
[https://www.cdc.gov/dhdsp/data\\_statistics/fact\\_sheets/docs/fs\\_bloodpressure.pdf](https://www.cdc.gov/dhdsp/data_statistics/fact_sheets/docs/fs_bloodpressure.pdf)

## Prevalence of Hypertension in Alabama



<http://www.americashealthrankings.org/explore/2015-annual-report/measure/Hypertension/state/AL>

## Disparities in Hypertension in Alabama



<http://www.americashealthrankings.org/explore/2015-annual-report/measure/Hypertension/state/AL>

## Hypertension Disparities in Alabama

HEART DISEASE AND STROKE: Cardiovascular Disease: Prevalence of Reported High Blood Pressure

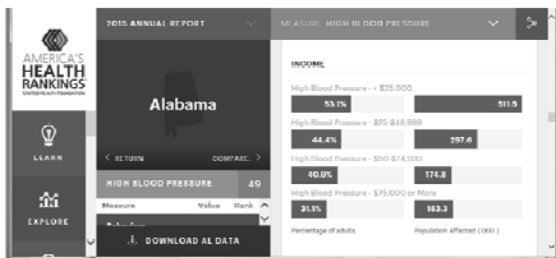
| Group            | 2000        | 2009        | Rate Change | Disparity |
|------------------|-------------|-------------|-------------|-----------|
| TOTAL POPULATION | 31.2 (1999) | 37.1 (2009) | 18.9        | increased |
| AFRICAN AMERICAN | 36.4 (1999) | 43.1 (2009) | 18.4        | increased |
| WHITE            | 30.6 (1999) | 35.3 (2009) | 15.4        | increased |

The disparity has worsened from 19 percent higher for African Americans to 22 percent higher.

To calculate the rate/percentage change: Take the Old value (2000) and subtract from the New value (2008), then divide by the Old value (2000), and then multiply by 100. Formula = (2008-2000)/2000 x 100. The disparity is based on the rate ratio between African Americans and Whites. A rate ratio is calculated by dividing the African American Rate by the White Rate in a given year. The disparity is represented as a percentage.

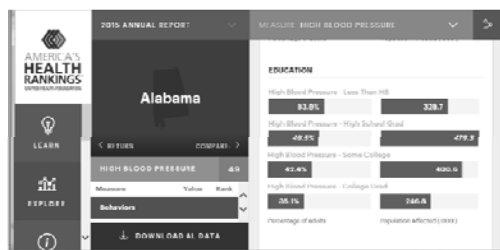
<http://www.astho.org/Programs/Health-Equity/Alabama-Health-Equity-Report/>

## Hypertension Disparities in Alabama



<http://www.americashealthrankings.org/explore/2015-annual-report/measure/Hypertension/state/AL>

## Hypertension Disparities in Alabama



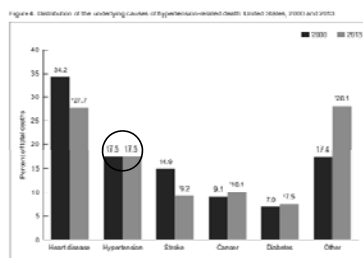
<http://www.americashealthrankings.org/explore/2015-annual-report/measure/Hypertension/state/AL>

## Disparities in Hypertension in Alabama



<http://www.americashealthrankings.org/explore/2015-annual-report/measure/Hypertension/state/AL>

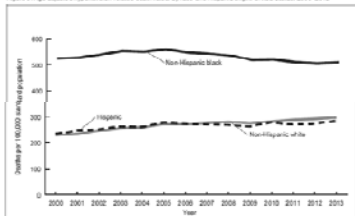
## Cause-Specific Mortality



<https://www.cdc.gov/nchs/data/databriefs/db193.pdf>

## Racial Disparities in Hypertension-Related Mortality

Figure 3. Age-adjusted hypertension-related death rates, by race and Hispanic origin: United States, 2000–2013



NOTE: Data are presented for the total population, with the exception of the 2000 through 2004 period for the Hispanic population, which is presented for the total Hispanic population. Data are presented for the total population, with the exception of the 2000 through 2004 period for the Hispanic population, which is presented for the total Hispanic population. Data are presented for the total population, with the exception of the 2000 through 2004 period for the Hispanic population, which is presented for the total Hispanic population.

<https://www.cdc.gov/nchs/data/databriefs/db193.pdf>

## Hypertensive Complications

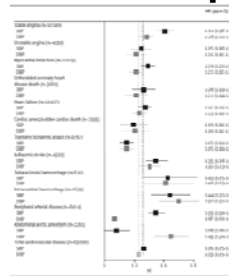


Figure 3. Prevalence of hypertension-related complications, by population group and country (percentage of population with hypertension-related complications)

Lancet 2014; 383: 1899–911

## Risk Factors for Hypertension

### Risk Factors for Hypertension

- **Demographics**
  - Age
  - Race/ethnicity
  - Lower education
  - Socioeconomic status
- **Genetic/Hereditary**
  - Family history of hypertension
  - Genetic factors

### Risk Factors for Hypertension

- **Psychosocial stressors**
- **Comorbidities**
  - Sleep apnea
- **Behavioral/Lifestyle**
  - Lower physical activity
  - Higher BMI
  - Tobacco use

### Risk Factors for Hypertension

- **Dietary factors**
  - Dietary fats
  - Higher sodium intake
  - Lower potassium intake
  - Excessive alcohol intake

## Risk Factors for Hypertension

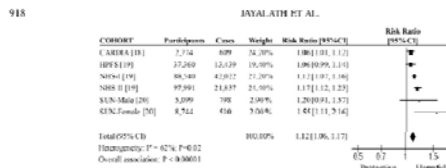
**Table 2. Multivariable Relative and Hypertension Population Attributable Risk (PAR) of Incident Hypertension Among 63,662 Young Women With Different Low-Risk Factors**

| No. of low-risk factors   | No. (%) of Participants | No. of Hypertension Cases | Hypertension Values       |               |                 |
|---|-------------------------|---------------------------|---------------------------|---------------|-----------------|
|   |                         |                           | Multivariable HR (95% CI) | NIH For 10 Y* | PAR % (95% CI)† |
| 3: Highest 25th percentile daily vigorous exercise and BMI <25            | 2950 (3.1)              | 143                       | 0.46 (0.39-0.54)          | 6.02          | 16.0            |
| 4: The 25th percentile alcohol intake and 100% fruit and vegetable intake | 1242 (1.3)              | 98                        | 0.42 (0.32-0.54)          | 5.40          | 13.9            |
| 5: The 4 factors above plus nonconcomitant pragmatic use of statins       | 671 (0.8)               | 21                        | 0.28 (0.19-0.42)          | 3.76          | 12.9            |
| 6: The 6 factors above plus folic acid supplementation >500 µg/d          | 252 (0.3)               | 6                         | 0.22 (0.10-0.51)          | 6.37          | 11.0            |

Abbreviations: BMI, absolute body mass index (calculated as weight in kilograms divided by height in meters squared); DGI-1, Dietary Approaches to Stop Hypertension; HR, hazard ratio; NIH, number needed to treat.  
 \*Indicates the adjusted difference in hypertension incidence rate among the higher risk group versus the incidence rate among the lower risk group.  
 †Indicates the portion of higher incidence that would have to be prevented in 10 years to prevent the occurrence of hypertension cases.  
 ‡Indicates the percentage of total hypertension cases in the population that would have been prevented if all women had been in the lowest risk group.  
 §Adjusted for age, race, family history of hypertension, use of oral contraceptives, smoking status, alcohol use, nonconcomitant statin use, and supplemental folic acid intake.  
 ¶The NIH is based on mean BMI of 25 by itself using the 1995 CDC data.  
 ††Adjusted for everything in footnote §, except nonconcomitant statin use.  
 ‡‡Adjusted for everything in footnote §, except nonconcomitant statin use and alcohol use.  
 †††Adjusted for everything in footnote §, except nonconcomitant statin use and alcohol use and supplemental folic acid intake.

JAMA. 2009;302(4):401-411

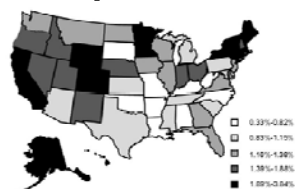
## Risk Factors for Hypertension



**FIGURE 2.** Forest plot of prospective cohorts that investigated the association between sugar-sweetened beverage intake and incident hypertension. The pooled-effect estimate is represented as a diamond. P values are for specific between-study random-effects models. Between-study heterogeneity was assessed via Cochran's Q (chi-square) statistics at a significance of P < 0.10 and quantified with the use of the I<sup>2</sup> statistic where I<sup>2</sup> > 50% was considered to be evidence of substantial heterogeneity. CARDIA, Coronary Artery Risk Development in Young Adults Study; HERS, Health Professionals Follow-Up Study; NRS-1, Nurses' Health Study 1; NRS-2, Nurses' Health Study 2; SUN, Seguirnos Universidad de Navarra Project.

Am J Clin Nutr 2015;102:914-21

## Lifestyle Factors in Hypertension Population



**Figure 1.** Age-standardized prevalence of reporting 5 healthy lifestyle behaviors among adults with self-reported hypertension, by quintiles of US states—Behavioral Risk Factor Surveillance System, 2013.

J Am Soc Hypertens. 2016 Mar; 10(3): 252-262

## Lifestyle Factors in Hypertension Population

Table 3

Age-Standardized Prevalence, Low and High 95% Confidence Interval of Adherence to Healthy Lifestyle Behaviors, by State—Behavioral Risk Factor Surveillance System, 2013

| State   | Alcohol consumed (total 14.7) |        |        |        | Fruit and/or vegetable consumption or more |        |        |        | Saturated fat or trans fat consumption or less |        |        |        | Physical activity or more |        |        |        | Salt intake or less |        |        |      |
|---------|-------------------------------|--------|--------|--------|--|--------|--------|--------|--|--------|--------|--------|---------------------------|--------|--------|--------|---------------------|--------|--------|------|
|         | %                             | 95% CI | 95% CI | 95% CI | %  | 95% CI | 95% CI | 95% CI | %  | 95% CI | 95% CI | 95% CI | %                         | 95% CI | 95% CI | 95% CI | %                   | 95% CI | 95% CI |      |
| Alabama | 20.1                          | 19.2   | 21.0   | 22.2   | 12.2                                       | 11.8   | 12.6   | 13.0   | 13.9   | 13.5   | 14.3   | 14.7   | 15.1                      | 15.5   | 15.9   | 16.3   | 16.7                | 17.1   | 17.5   | 17.9 |

J Am Soc Hypertens. 2016 Mar; 10(3): 252-262

## Access to Care and Hypertension



**Figure 2.** Age-standardized prevalences of three indicators of poor access to health care among adults aged ≥18 years with self-reported hypertension, by quintile distribution of US states, Behavioral Risk Factor Surveillance System, 2011: (a) Age-standardized percentage of those without health insurance among those with self-reported hypertension. (b) Age-standardized percentage of those without a personal doctor or health-care provider with self-reported hypertension. (c) Age-standardized percentage of those with an inability to visit a doctor due to cost among those with self-reported hypertension.

Am J Hypertens. 2014 Nov;27(11):1377-86.

## Evaluation of Hypertensive Patient

## Evaluation of the Hypertensive Patient

- **History**
  - **Prior CVD events**
    - **TIA/CVA**
    - **CAD**
    - **Heart Failure**
    - **Peripheral arterial disease**

J Clin Hypertens (Greenwich). 2014 Jan;16(1):14-26

## Evaluation of the Hypertensive Patient

- **Comorbidities**
  - **Diabetes**
  - **Chronic kidney disease**
  - **Sleep apnea**

J Clin Hypertens (Greenwich). 2014 Jan;16(1):14-26

## Evaluation of the Hypertensive Patient

- **Physical Exam**
  - **Measure BP**
  - **BMI and waist circumference**
  - **Neuro**
  - **Signs of heart failure**
  - **Peripheral pulses**
  - **Ocular exam**

J Clin Hypertens (Greenwich). 2014 Jan;16(1):14-26

## Evaluation of the Hypertensive Patient

- **Labs**
  - **Electrolytes**
  - **Fasting glucose or Hemoglobin A1C**
  - **Serum creatinine and BUN**
  - **Urine Albumin**
    - **Microalbuminuria and proteinuria**

J Clin Hypertens (Greenwich). 2014 Jan;16(1):14-26

## Racial Differences in HTN Risk Factors

TABLE 1. Description of Black and White Hypertensive Adults Aged 60 to 79 Years: NHANES 2005-2012

|                            | Black      | White      | P     |
|----------------------------|------------|------------|-------|
| Other CVD risk factor data | 156.5±11.6 | 141.2±11.1 | .002  |
| Non-HDL cholesterol, %     | 41.2±11.5  | 44.4±11.3  | .32   |
| Smoker, %                  | 15.5±11.5  | 11.1±10.9  | <.001 |
| DM, %                      | 47.9±11.7  | 37.7±11.4  | <.001 |
| CKD, %                     | 22.1±11.5  | 22.7±11.3  | .62   |
| DM and/or CKD, %           | 56.4±11.9  | 40.0±11.2  | <.001 |
| ASVD <sub>10</sub> , %     | 36.7±11.4  | 26.0±11.5  | .06   |
| ASVD <sub>20</sub> , %     | 22.9±10.7  | 21.1±10.4  | <.001 |

Abbreviations: ASVD<sub>10</sub>, 10-year estimated 10-year risk for atherosclerotic cardiovascular disease; BMI, body mass index; CKD, chronic kidney disease; CVD, cardiovascular disease; DBP, diastolic blood pressure; HDL, high-density lipoprotein; NHANES, National Health and Nutrition Examination Survey; Rx, medication; SBP, systolic blood pressure. Data are presented as mean and standard error. \*P for contrast of all adults 60 to 79 years by race group with hypertension defined as having treatment and blood pressure (BP) ≥140/90 mm Hg (SBP) or having had untreated adults with SBP or diastolic blood pressure ≥140/90 mm Hg (SBP). †Percentage of all adults 60 to 79 years by race group with BP controlled to <140/90 mm Hg if diabetes mellitus (DM) and/or chronic kidney disease (CKD) and to <130/80 mm Hg if no DM or CKD.

J Clin Hypertens (Greenwich). 2015;17:252-259

## Measuring Blood Pressure

- **Cuff placement - brachial artery (vs. finger or wrist)**
- **Correct cuff size**
- **Auscultatory sphygmomanometer vs. electronic oscillometric monitor**

### Tips for Accurate Blood Pressure Measurement

7 SIMPLE TIPS TO GET AN ACCURATE BLOOD PRESSURE READING

Source: Manning, et al. *Cardiology, Obesity and Obesity: An Update* 2010

<https://wire.ama-assn.org/delivering-care/one-graphic-you-need-accurate-blood-pressure-reading>

### Lifestyle Counseling

- Diet
  - Decreased sodium
  - Increase potassium
- Weight loss
  - DASH diet
  - Physical Activity
  - Alcohol intake
  - Up to 2 drinks daily

J Clin Hypertens (Greenwich). 2014 Jan;16(1):14-26

### Lifestyle Counseling

- Smoking Cessation
- Opportunities for improvement among African Americans

J Clin Hypertens (Greenwich). 2014 Jan;16(1):14-26

### DASH Diet

Following the DASH Eating Plan

Use this chart to help you plan your meals. It lists 1400 foods that you can eat on the plan.

| Food Item         | Calories | Total Fat (g) | Sodium (mg) | Carbohydrate (g) | Protein (g) | Key Nutrients                | Preparation and Serving   | Preparation and Serving |
|-------------------|----------|---------------|-------------|------------------|-------------|------------------------------|---------------------------|-------------------------|
| Apple             | 95       | 2.5           | 0           | 25               | 0.5         | Vitamin C, Fiber             | Wash, slice, eat          | 1 medium                |
| Banana            | 105      | 0.5           | 0           | 27               | 1.1         | Potassium, Fiber             | Wash, slice, eat          | 1 medium                |
| Bran cereal       | 100      | 1.5           | 0           | 22               | 2.0         | Fiber, B vitamins            | Use water or low-fat milk | 1 cup                   |
| Low-fat milk      | 80       | 1.0           | 0           | 12               | 2.0         | Calcium, Protein             | Use water or low-fat milk | 1 cup                   |
| Whole grain bread | 75       | 1.0           | 0           | 15               | 3.0         | Fiber, B vitamins            | Use water or low-fat milk | 1 slice                 |
| Chicken breast    | 165      | 3.6           | 0           | 0                | 31.0        | Protein, B vitamins          | Use water or low-fat milk | 3 oz                    |
| Ground beef       | 250      | 15.0          | 0           | 0                | 25.0        | Protein, B vitamins          | Use water or low-fat milk | 3 oz                    |
| Salmon            | 200      | 11.0          | 0           | 0                | 35.0        | Protein, Omega-3 fatty acids | Use water or low-fat milk | 3 oz                    |
| Spinach           | 7        | 0.1           | 0           | 1                | 0.4         | Vitamin K, Iron              | Use water or low-fat milk | 1 cup                   |
| Tomato            | 18       | 0.2           | 0           | 4                | 0.5         | Vitamin C, Lycopene          | Use water or low-fat milk | 1 cup                   |

[https://www.nhlbi.nih.gov/files/docs/public/heart/dash\\_brief.pdf](https://www.nhlbi.nih.gov/files/docs/public/heart/dash_brief.pdf)

### Racial Differences in Benefit of DASH Diet

Fig. 1 Effect of ethnicity and hypertension status on (a) systolic blood pressure and (b) diastolic blood pressure response to Dietary Approaches to Stop Hypertension (DASH) combination diet, adjusted for site and cohort effect

Arch Intern Med. 1999;159: 285-93.

### Physical Activity

- For most healthy people, at least 150 minutes (two hours and 30 minutes) per week of moderate-intensity physical activity
  - Brisk walking.
- Physical activity should be performed in episodes of at least 10 minutes, and preferably, it should be spread throughout the week.

[http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/MakeChangesThatMatter/Getting-Active-to-Control-High-Blood-Pressure\\_UCM\\_301882\\_Article.jsp#.W0fKok11roY](http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/MakeChangesThatMatter/Getting-Active-to-Control-High-Blood-Pressure_UCM_301882_Article.jsp#.W0fKok11roY)



## **Physical Activity**

- **Include flexibility and stretching exercises.**
- **Include muscle-strengthening activity at least two days each week.**

[http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/MakeChangesThatMatter/Getting-Active-to-Control-High-Blood-Pressure\\_UCM\\_301882\\_Article.jsp#.WofKok11roY](http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/MakeChangesThatMatter/Getting-Active-to-Control-High-Blood-Pressure_UCM_301882_Article.jsp#.WofKok11roY)

# **Questions?**