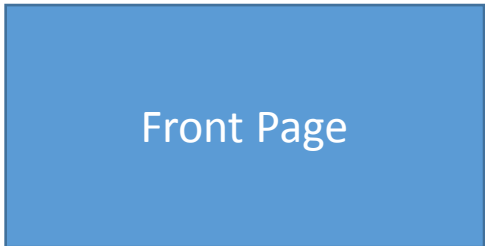


JNC-8 Hypertension Guidelines 2014

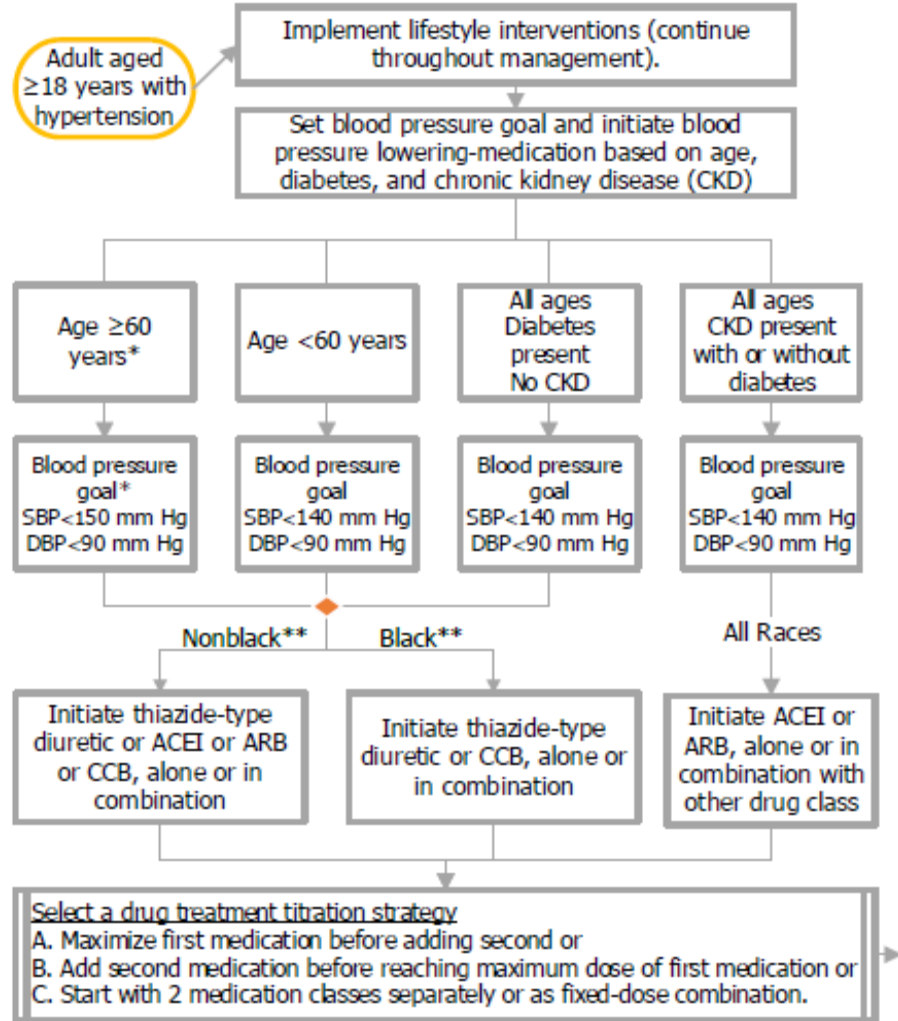
For May University of Best Practices





JNC-8 Hypertension Medication Algorithm 2014

Distributed by the Clinicians Group of the Capitol Region Right Care Initiative

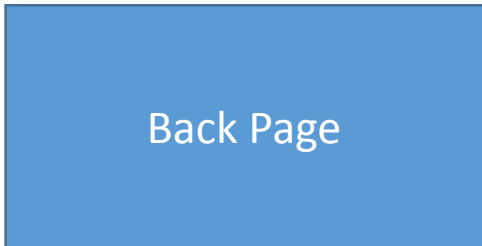


¹James PA, Oparil S, Carter BL, Cushman WC, Dennison-Himmelfarb C, Handler J, Lackland DT, LeFevre ML, Mackenzie TD, Oggedegbe O, Smith SC Jr, Svetkey LP, Taler SJ, Townsend RR, Wright JT Jr, Narva AS, Ortiz E. 2014 evidence-based guideline for the management of high blood pressure in adults: report from the panel members appointed to the Eighth Joint National Committee (JNC 8). *JAMA*. 2014 Feb 5;311(5):507-20. doi: 10.1001/jama.2013.284427.

*While the Eighth Joint National Committee currently uses a goal of <150/90 for adults age 60 and older, this recommendation is undergoing discussion and refinement by multiple national organizations (AHA, ACC, CDC, etc.) based on evolving evidence...^{2,3}

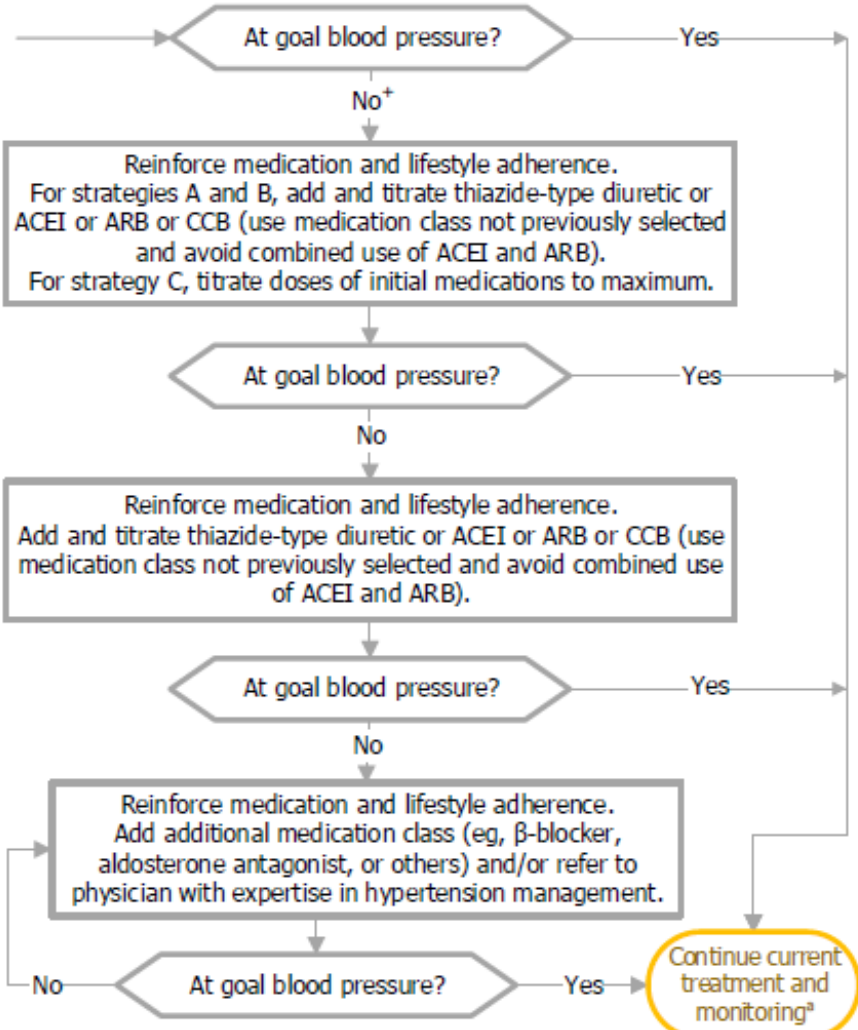
**In the general black population, including those with diabetes, initial antihypertensive treatment should include a thiazide-type diuretic or CCB. (For general black population: Moderate Recommendation – Grade B; for black patients with diabetes: Weak Recommendation – Grade C)¹

SBP indicates systolic blood pressure; DBP, diastolic blood pressure; ACEI, angiotensin-converting enzyme; ARB, angiotensin receptor blocker; and CCB, calcium channel blocker.



JNC-8 Hypertension Medication Algorithm 2014

Distributed by the Clinicians Group of the Capitol Region Right Care Initiative



²Go AS, Bauman MA, Coleman King SM, Fonarow GC, Lawrence W, Williams KA, et al; American Heart Association. An effective approach to high blood pressure control: a science advisory from the American Heart Association, the American College of Cardiology, and the Centers for Disease Control and Prevention. *Hypertension*. 2014;63:878-85. [PMID: 24243703] doi:10.1161/HYP.000.000000000003

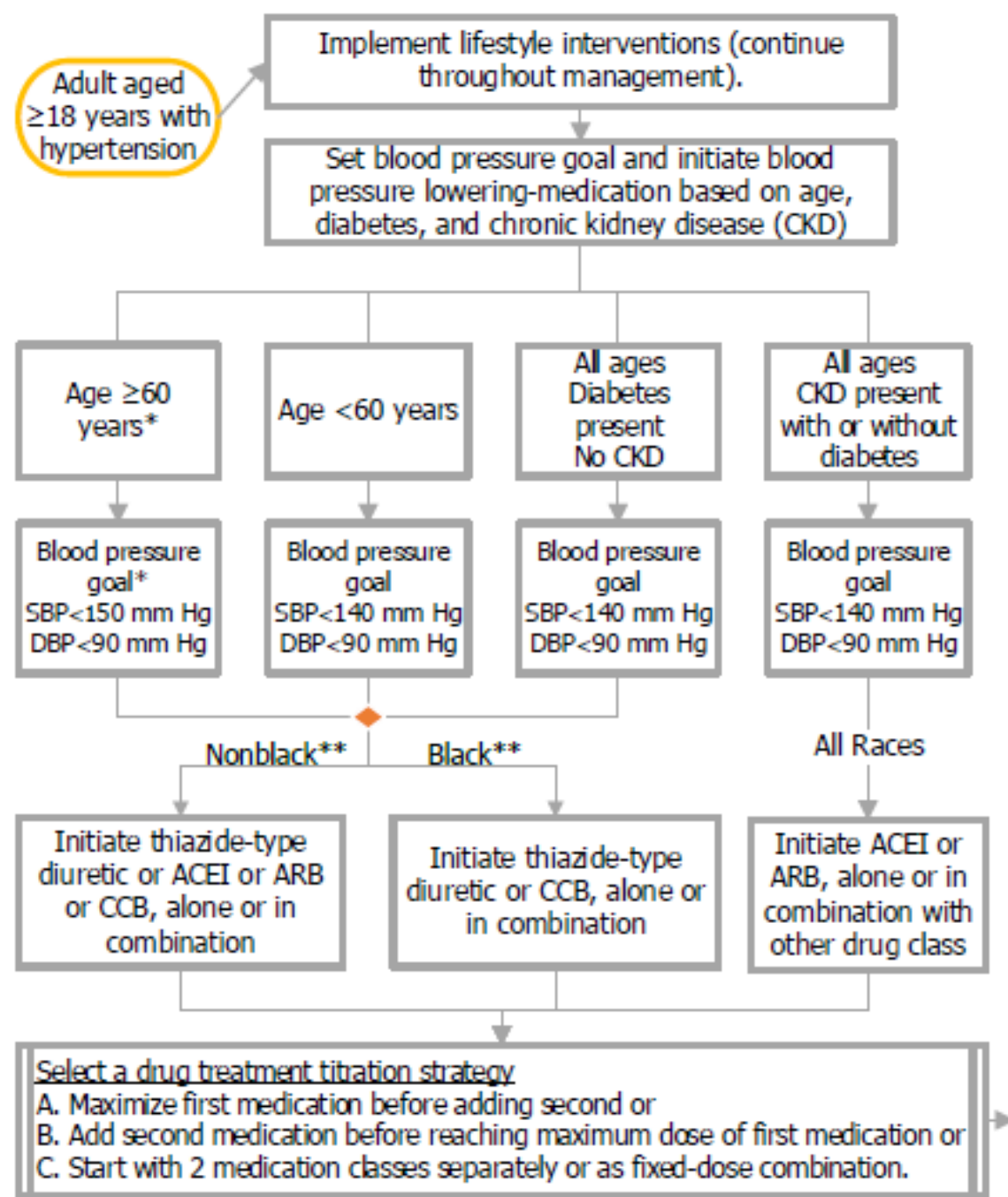
³Bangalore S, Gong Y, Cooper-DeHoff R, Pepine C, Messeri F. 2014 Eighth Joint National Committee Panel Recommendations for Blood Pressure Targets Revisited: Results from the INVEST Study. *Journal of the American College of Cardiology*. 2014; 64(8): 784-793.

*Recheck for goal within one month per JNC-8 Recommendation 9¹

¹If blood pressure fails to be maintained at goal, re-enter the algorithm where appropriate based on the current individual therapeutic plan.

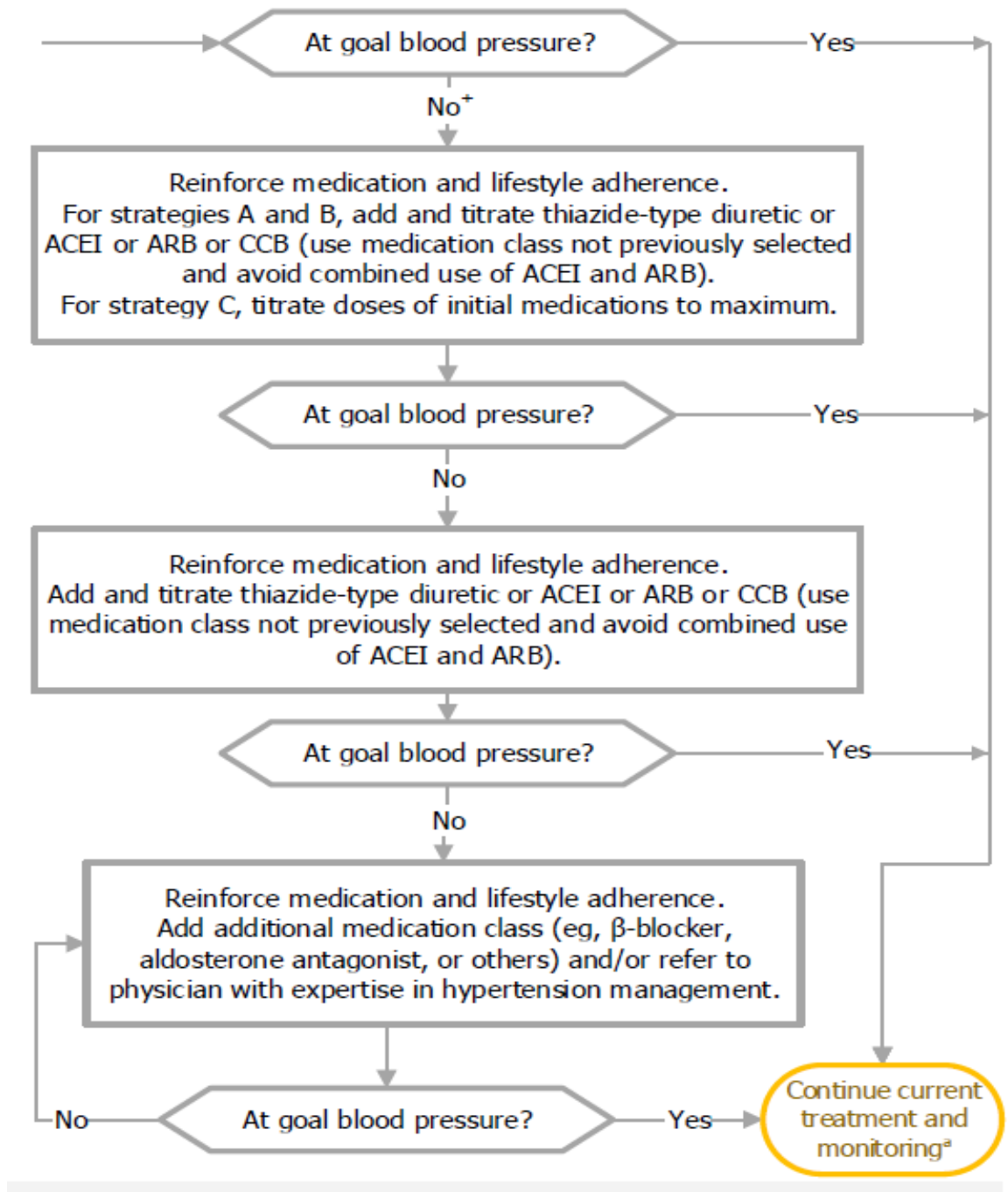
Distributed by Clinicians Group Capital Region Right Care 2015

Updated 4/20/15



Distributed by Clinicians
Group Capital Region
Right Care 2015

Updated 4/20/15



Distributed by Clinicians
Group Capital Region
Right Care 2015

Updated 4/20/15



Recommended Lifestyle Changes for Hypertension Management 2015

Distributed by the Clinicians Group of the Capitol Region Right Care Initiative

| Therapeutic Lifestyle Changes ¹ | | |
|--|--|------------------------------------|
| Modification | Recommendation | Approximate SBP Reduction (Range)* |
| Reduce Weight | Maintain normal body weight (body mass index 18.5–24.9 kg/m ²) | 5–20 mmHg/10 kg |
| Adopt DASH eating plan** | Consume a diet rich in fruits, vegetables, and low-fat dairy products with a reduced content of saturated and total fat | 8–14 mm Hg |
| Lower sodium intake | a. Consume no more than 2,400 mg of sodium/day; b. Further reduction of sodium intake to 1,500 mg/day is desirable, since it is associated with even greater reduction in BP; and c. Reduce sodium intake by at least 1,000 mg/day since that will lower BP, even if the desired daily sodium intake is not achieved | 2–8 mm Hg |
| Physical activity | Engage in regular aerobic physical activity such as brisk walking (at least 30 min per day, most days of the week) | 4–9 mm Hg |
| Moderation of alcohol consumption | Limit consumption to no more than 2 drinks [‡] (e.g., 24 oz beer, 10 oz wine, or 3 oz 80-proof whiskey) ^{‡‡} per day in most men, and to no more than 1 drink per day [‡] (e.g., 12 oz beer, 4-5 oz wine, or 1.5 oz 80-proof whiskey) ^{‡‡} in women and lighter weight persons | 2–4 mm Hg |
| Tobacco cessation | Use Motivational Interviewing (MI) techniques versus usual care for smoking cessation to demonstrate a significant increase in quitting. MI delivered by primary care physicians nearly 4 times more effective than usual care but delivery by counselors closer to 1.25 (still a significantly higher quit rate than usual care) [‡] | 3–5 mm Hg [‡] |

| Components of the Dietary Approaches to Stop Hypertension Diet ⁵ | |
|---|-----------------|
| Dietary Component | Amount |
| Total fat | 27% of calories |
| Saturated fat | 6% of calories |
| Cholesterol | 150 mg |
| Carbohydrates | 55% of calories |
| Fiber | 30 g |
| Protein | 18% of calories |
| Sodium | 1,500 mg |
| Potassium | 4,700 mg |
| Calcium | 1,250 mg |
| Magnesium | 500 mg |

¹American Heart Association/American Stroke Association. Controlling Hypertension in Adults. 2013. http://www.heart.org/kc/groups/heart-public/@wcm/@hcm/documents/downloadable/ucm_461839.pdf
²The effects of implementing these modifications are dose and time dependent, and could be greater for some individuals.
³DASH, Dietary Approaches to Stop Hypertension. DASH-sodium has a greater effect than DASH alone.
⁴National Heart, Lung, and Blood Institute (NHLBI). What is the DASH Eating Plan? 6 June 2014. <http://www.nhlbi.nih.gov/health/health-topics/topics/dash/>
⁵<http://www.mayoclinic.org/diseases-conditions/high-blood-pressure/expert-answers/blood-pressure/faq-20058254>
⁶http://www.heart.org/HEARTORG/GettingHealthy/nutritionCenter/HealthyEating/Alcohol-and-Heart-Health_UCM_305173_Article.jsp
⁷Miyami T, Shimizu T, Matsuka H. Effects of Smoking Cessation on Blood Pressure and Heart Rate Variability in Habitual Smokers. *Hypertension*. 1999;33:586-590. doi: 10.1161/01.HYP.33.1.586
⁸Lindson-Hawley N, Thompson TP, Begh R. Motivational Interviewing for smoking cessation. *Cochrane Database of Systematic Reviews* 2015, Issue 3. Art. No.: CD006936. DOI: 10.1002/14651858.CD006936.pub3.
⁹Langan R, Jones K. Common Questions About the Initial Management of Hypertension. *American Family Physician*. 2015; 91(3): 172-177

Distributed by Clinicians Group Capitol Region Right Care 2015

Updated 4/20/15



Right Care Initiative

Therapeutic Lifestyle Changes¹

| Modification | Recommendation | Approximate SBP Reduction (Range)* |
|-----------------------------------|---|------------------------------------|
| Reduce Weight | Maintain normal body weight (body mass index 18.5–24.9 kg/m ²) | 5–20 mmHg/10 kg |
| Adopt DASH eating plan** | Consume a diet rich in fruits, vegetables, and low-fat dairy products with a reduced content of saturated and total fat | 8–14 mm Hg |
| Lower sodium intake | a. Consume no more than 2,400 mg of sodium/day; b. Further reduction of sodium intake to 1,500 mg/day is desirable, since it is associated with even greater reduction in BP; and c. Reduce sodium intake by at least 1,000 mg/day since that will lower BP, even if the desired daily sodium intake is not achieved | 2–8 mm Hg |
| Physical activity | Engage in regular aerobic physical activity such as brisk walking (at least 30 min per day, most days of the week) | 4–9 mm Hg |
| Moderation of alcohol consumption | Limit consumption to no more than 2 drinks [±] (e.g., 24 oz beer, 10 oz wine, or 3 oz 80-proof whiskey) ^{±±} per day in most men, and to no more than 1 drink per day [±] (e.g., 12 oz beer, 4-5 oz wine, or 1.5 oz 80-proof whiskey) ^{±±} in women and lighter weight persons | 2–4 mm Hg |
| Tobacco cessation | Use Motivational Interviewing (MI) techniques versus usual care for smoking cessation to demonstrate a significant increase in quitting. MI delivered by primary care physicians nearly 4 times more effective than usual care but delivery by counselors closer to 1.25 (still a significantly higher quit rate than usual care). ⁴ | 3–5 mm Hg ³ |

Updated 4/20/15

Components of the Dietary Approaches to Stop Hypertension Diet⁵

| Dietary Component | Amount |
|-------------------|-----------------|
| Total fat | 27% of calories |
| Saturated fat | 6% of calories |
| Cholesterol | 150 mg |
| Carbohydrates | 55% of calories |
| Fiber | 30 g |
| Protein | 18% of calories |
| Sodium | 1,500 mg |
| Potassium | 4,700 mg |
| Calcium | 1,250 mg |
| Magnesium | 500 mg |