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CARDI•OH
Ohio Cardiovascular and Diabetes Health Collaborative

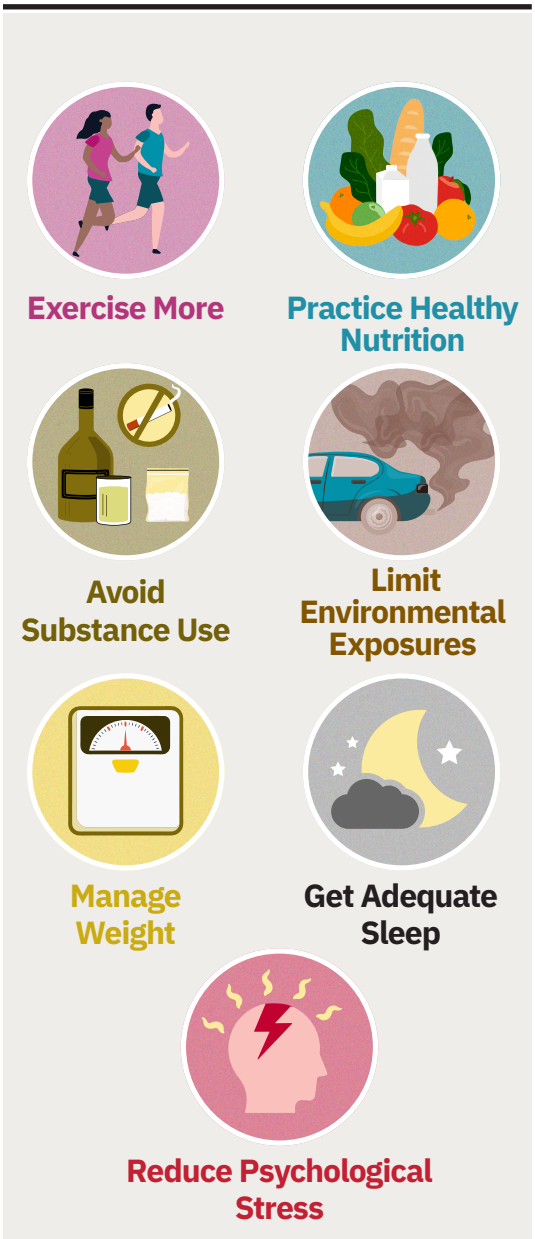
Seven Healthy Lifestyle Priorities to Promote Heart Health

Contributing authors on behalf of Team Best Practices:
Bree Meinzer, PharmD, BCACP, University of Toledo
Kate Gawlik, DNP, RN, APRN-CNP, The Ohio State University
Eileen Seeholzer, MD, MS, Case Western Reserve University
Lauri E. Nandyal, MD, University of Cincinnati
Harini Pallerla, MS, University of Cincinnati
Trygve Dolber, MD, Case Western Reserve University
Rosellen Roche, MD, Ohio University
Robert Bales, MD, MPH, Case Western Reserve University
Kristen A. Berg, PhD, Case Western Reserve University

There are seven key lifestyle priorities that can significantly contribute to cardiometabolic health.

These priorities involve exercise, nutrition, substance use, environmental exposures, weight, sleep, and stress, and align with the American Heart Association's (AHA) Life Essential 8™ and the American Diabetes Association's 2025 Standards of Care.[1,2]

Although these priorities are crucial to heart health, an individual's ability to adopt and maintain these changes often depends on social drivers of health. Individuals who are socially marginalized—excluded, disadvantaged, or pushed to the edges of society—face disproportionate impacts due to factors such as race, ethnicity, socioeconomic status, gender identity, sexual orientation, disability, or immigration status.



Exercise

Regular exercise is proven to support cardiovascular health. Adults should be encouraged to maintain a physically active lifestyle. Guidelines from the U.S. Preventive Services Task Force (USPSTF), American College of Cardiology (ACC)/(AHA), U.S. Department of Health and Human Services, and American College of Sport and Medicine® (ACSM), support the following recommendations for adults:[3-6]

Aerobic Exercise

- Engage in at least 150 minutes per week of moderate-intensity aerobic exercise or 75 minutes per week of vigorous-intensity exercise.
- An equivalent combination of moderate- and vigorous-intensity exercise is also effective to reduce risk for atherosclerotic cardiovascular disease (ASCVD).
- Avoid more than 2 consecutive days without exercise.[3,5]

Muscle-Strengthening Activities

- Perform muscle-strengthening activities (e.g., resistance training or weight lifting) at least 2 days per week.[3,5]

Flexibility Training

- Engage in flexibility training at least 2 to 3 times per week; daily flexibility training is most effective.[3,5]

Cardi-OH Resources

- Helping Patients Achieve an Active Lifestyle
  cardi-oh.org/resources/helping-patients-achieve-an-active-lifestyle
- Taking Steps: Exercising to Promote Heart Health
  cardi-oh.org/resources/taking-steps-exercising-to-promote-heart-health

Nutrition

Making good nutritional choices is one of the most impactful ways a person can maintain a healthy heart.

Healthy Food Choices: Starting Points for Patients

- Maintain a diet low in sodium (i.e., < 2,300 mg daily) and saturated fat (i.e., 5% to 6% of daily calories).
- Eat a wide variety of fruits, vegetables, fish, poultry, and low-fat dairy products.[7]
- Limit processed or "take-out" foods, minimizing sugars, and limit alcohol.[7-9]

Heart Healthy Diets

- Studies have shown that the Dietary Approaches to Stop Hypertension (DASH) diet can help to lower the risk of hypertension and heart failure.[8,10] DASH is based on choosing lean proteins and a variety of fruits and vegetables, as well as beans, nuts, and low-fat dairy products, to eat on a daily basis.
- The Mediterranean Diet is rich in fish, vegetables, beans and whole grains, and can help to lower blood pressure and keep the heart healthy.[8]

Food Insecurity

- Food insecurity is the inability to afford or access enough food for an active, healthy life due to cost or other resource constraints.[11] It is associated with hypertension; diabetes, including worse glycemic control and more diabetes complications; coronary heart disease; congestive heart failure; stroke; and chronic kidney disease.[12]
- As a part of the patient visit, clinicians can screen for food insecurity and document in the electronic health record. One common screening tool is the Hunger Vital Sign survey.[13] If patients agree with either of the following two items, they are at risk of food insecurity:
  - Within the past 12 months we worried whether our food would run out before we got money to buy more.
  - Within the past 12 months the food we bought just didn't last and we didn't have money to get more.
- Clinicians can provide resources to patients with food insecurity to encourage/support/promote eating a heart healthy diet on a budget and/or may partner with a local food bank to help ensure access to healthy foods.

Cardi-OH Resources

- Building a DASH Diet Plate
  cardi-oh.org/resources/building-a-dash-diet-plate
- Diet: Guidelines and Recommendations for Improving Cardiovascular Health
  cardi-oh.org/resources/diet-guidelines-and-recommendations-for-improving-cardiovascular-health
- Dietary Guidelines
  cardi-oh.org/resources/dietary-guidelines2
- Food Environments and Health Equity
  cardi-oh.org/resources/food-environments-and-health-equity2

Additional Resource

- Heart-Healthy Eating on a Budget
  hopkinsmedicine.org/health/wellness-and-prevention/heart-healthy-eating-on-a-budget

Substance Use

Substance use, including the consumption of alcohol, tobacco, and illicit drugs, has been consistently associated with increased cardiometabolic risk.

Alcohol

Regular alcohol consumption, especially in excessive amounts, can lead to hypertension, cardiomyopathy, and dyslipidemia.[14,15]

- The AHA recommends no more than one drink per day for women and two drinks per day for men.[16]
- A standard size drink is one 12-ounce beer, one 8-ounce malt liquor, one 5-ounce glass of wine, or 1.5 ounces of 80-proof liquor.

Tobacco

Tobacco use is a well-known risk factor for cardiovascular disease and is a leading cause of preventable death and disease. Tobacco use accelerates atherosclerosis and increases the risk for myocardial infarction, cardiac arrhythmias, sudden cardiac death and stroke.[17]

- Secondhand smoke, vaping, and chewing tobacco all pose similar risks and should be avoided.
- The USPSTF recommends that clinicians screen for tobacco use, explain to patients the risks of nicotine, advise them to quit, and provide treatment.[18]

Illicit Drugs

The use of illicit drugs (e.g., cocaine, opioids, methamphetamine) has been linked to acute cardiovascular events, including myocardial infarction and arrhythmias, as well as chronic conditions, such as premature cardiovascular disease, hypertension, and cardiomyopathy.[19]

- The USPSTF recommends that clinicians should for unhealthy drug use when services are in place or can be referred for accurate diagnosis and effective treatment.[20]
- Treatment should be evidence-based and individualized and should include pharmacotherapy and psychosocial options.[21]

Cardi-OH Resources

- Podcast 32 - Addressing Unhealthy Alcohol Use: Strategies for Primary Care
  cardi-oh.org/resources/podcast-32--addressing-unhealthy-alcohol-use-strategies-for-primary-care
- Podcast 38 - Strategies for Addressing Tobacco Use as Part of the Primary Care Visit
  cardi-oh.org/resources/podcast-38--strategies-for-addressing-tobacco-use-as-part-of-the-primary-care-visit
- Smoking Cessation: Frequently Asked Questions
  cardi-oh.org/resources/smoking-cessation-frequently-asked-questions

Environmental Exposures

More than 85 million Americans live and work in counties with air pollution levels that exceed national standards. Breathing unclean air contributes to heart disease, stroke, and chronic lung disease. Air pollution with particulate matter smaller than 2.5 microns ($PM_{2.5}$) produced from the combustion of fossil fuel is hazardous.[22]

Populations most at risk for $PM_{2.5}$ exposure include individuals who are 65 years of age and older, living with diabetes and ASCVD, pregnant, and regularly exposed to high $PM_{2.5}$ levels. Social drivers of health, such as poverty and housing inequality, can increase exposure to air pollution, disproportionately affecting the respiratory and cardiovascular health of socially marginalized populations.

Steps to Reduce $PM_{2.5}$ Exposure:

- Indoors, keep windows closed and use portable air cleaners and high-efficiency air filtration systems.
- In vehicles, close windows, use air conditioning, and regularly change air filters.[23]
- During high-exposure times, the use of personal air-purifying respirators and masks is advisable.[21]
- During peak pollution times, at-risk patients are advised to monitor local air quality and avoid areas with high $PM_{2.5}$, such as high traffic areas; stay indoors; and modify outdoor exercise and activities.

Cardi-OH Resources

- Particulate Matter Pollutants and Cardiovascular Risk Management
  cardi-oh.org/resources/particulate-matter-pollutants-and-cardiovascular-risk-management
- Podcast 30 - Air Pollution Exposure and the Heart
  cardi-oh.org/resources/podcast-30--air-pollution-exposure-and-the-heart

Weight Management

For adults, a significant risk factor for cardiovascular disease is being overweight or having obesity, especially abdominal obesity. The body mass index is the most practical way to assess for overweight and obesity, although it allows for underestimation of obesity in older persons and those with low muscle mass and overestimation in persons with higher muscle mass. Risk also varies with race/ethnicity and is increased for some groups at > 23.5 kg/m^2.

Multi-Faceted Approach

It is important for clinicians to talk to patients about the health risks of obesity. Patients can improve their health outcomes by following lifestyle recommendations and participating in intensive behavioral lifestyle programs. These strategies work best when combined with weight loss surgery or obesity medications, as recommended by guidelines.[25-26]

Lifestyle Treatment

Obesity is a chronic condition that requires lifestyle treatment.

- Skills tailored to adopt and adapt healthy behaviors long-term need to be developed.
- Intensive behavioral lifestyle interventions that last at least a year with long-term follow-up are the best proven lifestyle interventions to lose and sustain weight loss for all levels of obesity.

Bariatric Surgery

The best medical results, those with > 10% weight loss, are rarely sustained with lifestyle changes alone.[25,27]

- To significantly reduce cardiac risks and improve medical and social outcomes and mortality, evaluation for bariatric surgery is recommended in persons with a body mass index of > 35 kg/m^2 with comorbid medical problems and those with a body mass index of > 40 kg/m^2 without comorbidities, and are cost-effective to cost-saving.

Medications

- Medications, combined with lifestyle management, are shown to improve weight loss and sustainment for those with a body mass index of 25 to 29.9 kg/m^2 with comorbid conditions and > 30 kg/m^2 without comorbidities.
- The long-term impact of obesity treatment medications on obesity and related conditions is not known, overall, but is supported for persons with diabetes, cardiovascular disease, and sleep apnea.

Cardi-OH Resources

- Effective Diabetes Prevention for Adults: Prediabetes Screening and Treatment
  cardi-oh.org/resources/effective-diabetes-prevention-for-adults-prediabetes-screening-and-treatment
- Podcast 43 - Obesity and Weight Loss Management: Pharmacotherapy, Part 1
  cardi-oh.org/resources/podcast-43--obesity-and-weight-loss-management-pharmacotherapy-part-1
- Podcast 44 - Obesity and Weight Loss Management: Surgical Interventions, Part 2
  cardi-oh.org/resources/podcast-44--obesity-and-weight-loss-management-surgical-interventions-part-2

Sleep

Getting good sleep provides significant cardiometabolic benefits, which promote overall health and well-being. Adequate and quality sleep is associated with a reduced risk of obesity and diabetes.[28,29] Good sleep also supports cardiovascular health by helping the body maintain optimal blood pressure levels and potentially reducing inflammation and oxidative stress, which are risk factors in preventing heart disease. Restful sleep may also help regulate stress hormones.[30-32]

- For optimal cardiometabolic health, adults should aim for 7 to 9 hours of high-quality sleep each day.[30]
- Persons who work the night shift or who have frequent sleep interruptions have increased medical risks.[33]
- Individuals living in more socioeconomically vulnerable neighborhoods have greater exposure to sleep deterrents, such as noise or light pollution.
- Disparities may be key factors underlying cardiovascular health inequities.[34]

Cardi-OH Resources

- Heart Health and the Science of Sleep
  cardi-oh.org/resources/heart-health-and-the-science-of-sleep
- Recognizing Sleep Disorders to Manage Cardiovascular Disease Risk
  cardi-oh.org/resources/recognizing-sleep-disorders-to-manage-cardiovascular-disease-risk

Psychological Stress Reduction

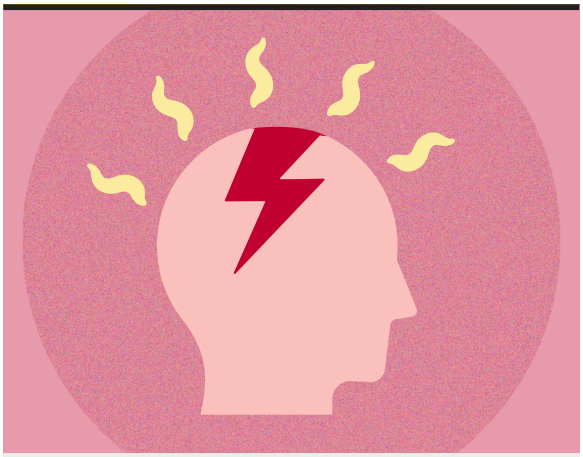
Chronic stress, including work-related, financial, and social stressors, is linked to heart disease and disproportionately affects socially marginalized individuals.[35,36] Anxiety and depression increase the risk of developing heart attack or stroke just as much as obesity or smoking.[37] While more research is needed to understand whether stress reduction can decrease the risk of heart disease, studies suggest that techniques to minimize stress and increase coping skills decrease the risk of further cardiovascular events when paired with cardiac rehabilitation.[38]

Stress Reduction Approaches

The AHA recommends several techniques that are proven to reduce stress:[39]

- Maintain social connection.
- Pick up a hobby.
- Practice gratitude and relaxation techniques.
- Spend time in nature.

Implementing these techniques can be challenging for individuals facing barriers that perpetuate chronic stress (e.g., inequitable access to resources, safe living environments, or comprehensive healthcare that addresses both physical and mental well-being).[39] Therefore, it is essential for clinicians to take a person-centered approach to stress reduction, working in partnership with patients to identify techniques that are perceived as potentially useful and feasible, then following up and modifying as needed.



Cardi-OH Resources

- Podcast 20 - The Heart-Mind-Body Connection: Mental Health and Cardiometabolic Conditions
  cardi-oh.org/resources/podcast-20--the-heart-mind-body-connection-mental-health-and-cardiometabolic-conditions
- Talking With Patients About Stress
  cardi-oh.org/resources/talking-with-patients-about-stress

Additional Resources

- American Heart Association Life's Essential 8™
  heart.org/en/healthy-living/healthy-lifestyle/lifes-essential-8
- American Diabetes Association Facilitating Positive Health Behaviors and Well-Being to Improve Health Outcomes
  diabetesjournals.org/clinical/article/42/2/193/154452/Section-5-Facilitating-Positive-Health-Behaviors
- 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines
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