



Maintaining Heart Health

As the reigning number-one cause of death in the United States, heart disease demands a preventive focus. Such a focus has long been provided by The American Heart Association (AHA), whose mission is to reduce disability and death from cardiovascular diseases and stroke (1). To this end, the AHA regularly identifies health goals and establishes dietary guidelines aimed specifically at lowering the risk of heart disease and stroke (2). The most recent of these guidelines, *The AHA 2006 Diet and Lifestyle Recommendations* were published at the end of 2006 and are described in this handout (2).

The 2006 AHA Lifestyle Goals for Cardiovascular Disease Risk Reduction include (2):

1. Consume an overall healthy diet.
2. Aim for a healthy body weight.
3. Aim for recommended levels of low-density lipoprotein (LDL) cholesterol, high-density lipoprotein (HDL) cholesterol, and triglycerides.
4. Aim for normal blood pressure.
5. Aim for normal blood glucose levels.
6. Be physically active.
7. Avoid the use of and exposure to tobacco products.

To help Americans meet the above stated goals, the AHA has established a set of Diet and Lifestyle Recommendations which are described briefly below.

Balance calorie intake and physical activity to achieve and/or maintain a healthy body weight.

The key to maintaining body weight is achieving energy balance, i.e., matching energy intake to energy expenditure. When it comes to energy intake, calories are key; not the macronutrient composition of the diet (i.e., the relative percentage of carbohydrates, protein, and fat), unless the macronutrient composition impacts total energy intake. To control energy intake individuals should become more aware of the calorie content of the

foods and beverages they consume and reduce portion sizes.

Increasing energy expenditure through physical activity is also important for achieving energy balance. The AHA recommends that all adults accumulate ≥ 30 minutes of physical activity on most days of the week. Additional benefits will likely be derived if activity levels exceed this recommendation. Matching energy intake to energy output is easier with a diet rich in fruits, vegetables, legumes and whole grains and low in saturated fat, cholesterol and added sugar (2).

Consume a diet rich in vegetables and fruits. Most vegetables and fruits are full of nutrients and fiber yet low in calories, thus they have a *high nutrient density*. Because these foods also have a high water content, they are considered to have a *low energy density* (few calories for their weight). The potato is a good example to demonstrate these concepts. The potato eaten with the skin provides 2 grams of dietary fiber, 45 percent daily value of vitamin C and 18 percent daily value of potassium – all for 110 calories per serving. People who consume high amounts of nutrient-dense foods, particularly fruits and vegetables, enjoy a reduced risk of heart disease, stroke, and hypertension (high blood pressure). Eating more foods that have a low energy density helps reduce total caloric intake and may help control body weight (2).

Choose whole grain and high fiber foods. Whole grains refer to those grains that have undergone minimal processing and, thus, contain the entire kernel including the fibrous bran and nutrient-rich germ. Research shows that diets that are high in whole grain foods and fiber are associated with increased diet quality and decreased risk of heart disease (3-5). Although scientists are not quite certain as to the exact reason for the cardio-protective effect of whole grains, it is believed to be largely due to the fiber content. Soluble or viscous

fibers (notably B-glucan and pectin) modestly reduce LDL-cholesterol levels beyond those achieved by a diet low in saturated and trans fatty acids and cholesterol alone. Insoluble fiber has been associated with decreased cardiovascular disease risk and slower progression of cardiovascular disease in high-risk individuals (2).

Consume fish, especially oily fish, at least twice a week. Fish, especially oily fish, contain essential fatty acids collectively known as “omega 3” fatty acids. Two particularly important omega 3 fatty acids found in oily fish are eicosapentaenoic acid (EPA) and docosahexanoic acid (DHA). Research has shown that the consumption of 2 servings of fish (approximately 8 oz) is associated with a reduced risk of death from coronary artery disease in adults (2). Concern has been raised about the possible contamination of fish with potentially toxic substances such as methyl mercury and polychlorinated biphenyls (industrial toxins no longer utilized in the US but still found in the environment). While certain subgroups of the population (i.e., young children and pregnant women) are advised by the FDA to limit their intake of those fish with the highest mercury and PCB levels, most Americans would derive substantial health benefits from increasing their fish intake to the recommended 2 servings per week. In fact, a recent review of the scientific literature concluded that the health benefits of consuming fish far outweigh any potential dangers (6).

Limit your intake of saturated and *trans* fat and cholesterol. Diets low in saturated fats, trans fatty acids, and cholesterol are associated with a lower levels of LDL-cholesterol and, thus, a lower risk for heart disease (2).

- **Saturated fatty acids** are found primarily in fatty meats, full-fat dairy products, and tropical oils (i.e., coconut oil, palm kernel oil).
- ***Trans*-fatty acids** have been found not only to increase LDL (“bad”) cholesterol but also to lower HDL (“good”) cholesterol. *Trans*-fatty acids lurk in hydrogenated fats, like shortenings and margarines, and prepared foods containing partially hydrogenated oils as an ingredient, like cookies, crackers, and other baked goods. Also, *trans*-fatty acids are used in many restaurants to prepare fried items.

- **Dietary cholesterol**, or the cholesterol found in foods, elevates LDL-cholesterol but to a lesser degree than saturated fat. A major source of dietary cholesterol is found in foods of animal origin. It’s not surprising then that many foods high in saturated fats are also high in dietary cholesterol, like fatty meats and full-fat dairy products. Nonetheless, some cholesterol-rich foods can be fairly low in saturated fat, like egg yolks and shellfish, so they have smaller effects on LDL-cholesterol in the body. That’s why eggs and shellfish can be an occasional part of a healthy eating plan (2).

The AHA recommends that intakes of < 7 percent of energy as saturated fat, < 1 percent of energy as trans fats, and < 300 mg of cholesterol per day (2). These goals can be achieved by choosing lean meats, selecting non-fat or low-fat dairy products and limiting the intake of foods containing partially hydrogenated fats.

Minimize your intake of beverages and foods with added sugars. Research suggests that individuals who regularly consume large amounts of beverages and foods with added sugars consume more total calories and are at an increased risk for obesity, a key risk factor for heart disease (7). Thus, reducing one’s intake of these foods may aid in weight management and, indirectly, reduce heart disease risk.

Choose and prepare foods with little or no salt. There is much scientific evidence showing that high intake of salt (sodium) raises blood pressure and elevated blood pressure or hypertension is a strong risk factor for heart disease (2). The effect of sodium on blood pressure is dose-responsive, such that blood pressure increases progressively as sodium intake increases. This is why setting a recommended “upper” level of sodium intake is so difficult. It is currently recommended that Americans consume no more than 2300 mg/d of sodium, but intakes as low as 1500 mg/d may be optimal for those with hypertension.

Limiting sodium intake can be difficult due to the abundance of processed foods that contain salt. Another dietary strategy for reducing blood pressure is to consume more fruits and vegetables which contain a variety of nutrients that have blood pressure lowering effects-- most notably, potassium. In fact, research indicates that diets rich in

potassium not only lower blood pressure, but counter the blood pressure-raising effects of sodium (8). And when it comes to potassium-rich foods, potatoes are a natural powerhouse. A medium potato (5.3 oz) with the skin on contains 630 mg of potassium ranking it the highest in potassium content among the top 20 most frequently consumed raw vegetables and raw fruits. In fact, potatoes meet the FDA requirements for the following health claim, "Foods, such as potatoes, that are good sources of potassium and low in sodium, may reduce the risk of high blood pressure and stroke."

If you consume alcohol, do so in moderation.

The effect of alcohol on heart disease risk is a perfect example of the necessity of weighing benefits against potential risks. Research does indicate that moderate alcohol consumption may lower the risk of heart disease. However, alcohol is highly addictive and research also indicates that high or excessive intakes may negatively impact risk factors for heart disease including increase blood lipid levels and blood pressure, as well as other

negative health consequences (e.g., liver disease, and various cancers). For these reasons, the AHA recommends that if alcoholic beverages are consumed, they are limited to no more than 2 drinks per day for men and 1 drink per day for women (9).

Taking on the challenge of reducing your risk for our nation's number-one killer, heart disease can seem daunting. But is truly easier than you think. Consuming a diet that is rich in fruits, vegetables, and whole grains and contains adequate amounts of low-fat or non-fat dairy products and lean meats (or meat alternatives) as recommended by the most recent issue of Dietary Guidelines for Americans and its pictorial counterpart, MyPyramid will not only help you achieve the major goals outlined by the American Heart Association, but also ensure you'll achieve an overall balance of nutrient intake. Following these guidelines, along with physical activity and abstention from smoking, can help you make great strides toward enjoying a longer, healthier life.

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For healthy recipes and nutrition information, go to: www.potatogoodness.com.

