

Intensive prevention key to fighting coronary artery disease

Intensively managing risk factors enhances survival, reduces recurrent events and the need for interventional procedures, and improves the quality of life for coronary heart disease patients, according to new American Heart Association (AHA) American College of Cardiology (ACC) guidelines on secondary prevention. This statement was endorsed by the National Heart, Lung, and Blood Institute.

The “AHA/ACC Guidelines for Secondary Prevention for Patients With Coronary and Other Atherosclerotic Vascular Disease: 2006 Update” was published as an update to the 2001 guidelines. The guidelines for secondary prevention are based on evolving evidence from clinical trials, said Sidney C. Smith, M.D., chairman of the AHA/ACC writing group.

The new recommendations:

- lower target levels for low-density lipoprotein (LDL or ‘bad’) cholesterol;
- expand use of established therapies; and,
- for the first time, flu shots for patients with chronic cardiovascular disease.

“These guidelines provide the level of evidence for each recommendation and are published in a concise tabular form for easy use by practicing physicians,” said Smith, professor of medicine and director of the Center of Cardiovascular Science at the University of North Carolina in Chapel Hill.

The guidelines recommend goals for six major risk factors:

1. Smoking: complete cessation; no exposure to environmental tobacco smoke;
2. Blood pressure less than 140/90 millimeters of mercury (mm Hg) or less than 130/80 mm Hg if the patient has diabetes or chronic kidney disease;
3. Lipid management: LDL-C should be less than 100 milligrams per deciliter (mg/dL), and it is reasonable to aim for a level less than 70 mg/dL. If triglycerides are equal to or greater than 200 mg/dL, non-HDL-C should be less than 130 mg/dL, and it is reasonable to aim for a level less than 100 mg/dL.
4. Physical activity: 30-60 minutes seven days per week (minimum five days per week);
5. Weight management: body mass index: 18.5 to 24.9 kg/m²; waist circumference: men less than 40 inches, women less than 35 inches.
6. Diabetes management: HbA1c (a test to measure the average amount of sugar in your blood over the past two to three months) levels less than 7 percent.

The guidelines recommend that LDL-C should be less than 100 mg/dL for all patients with CHD and other forms of atherosclerotic vascular disease, and state that it is now considered reasonable to bring LDL-C levels to below 70 mg/dL for patients with CHD.

Almost two years ago the National Cholesterol Education Program recommended an optional LDL-C goal below 70 mg/dL in very high risk patients. Since that time, new clinical trials strengthen this recommendation and extend it to all patients with established CHD. Although it is reasonable to reduce LDL-C to below 70 mg/dL, clinical trial evidence is somewhat less compelling than for a goal of below 100 mg/dL for all types of patients with CHD.

When a target LDL-C below 70 mg/dL is chosen, it may be prudent to increase statin therapy in a graded fashion to determine the patient’s response and tolerance, the authors wrote. It’s generally possible to achieve LDL-C reduction of more than 50 percent by using statins or LDL-C lowering drug combinations, Smith said.

Evidence from trials also has led to recommendations for the use of clopidogrel in patients with acute coronary syndrome (people suffering from a heart attack or unstable angina) after post percutaneous coronary intervention (PCI), especially in patients undergoing stent placement.

The guidelines also recommend:

- Lowering the dose of aspirin to between 75mg/d and 162 mg/d for chronic therapy for patients with established coronary or atherosclerotic vascular disease. It was 75mg/d to 325 mg per day in the previous guidelines.
- Administering 75 mg/d clopidogrel with aspirin for up to 12 months for ACS and for patients undergoing a percutaneous coronary intervention (PCI), depending on the type of stent placed. Stent patients initially should receive a higher-dose aspirin of at 325 mg/d for less than a month for bare metal stents, for three months for sirolimus-eluting stents, and more than six months for paclitaxel-eluting stents.
- Prescribing ACE inhibitors, unless contraindicated, for patients with left ventricular ejection fractions less than or equal to 40 percent, as well as patients with high blood pressure, diabetes or chronic kidney disease. Ejection fraction is a measure of the heart's pumping ability (the percentage of blood the heart pumps out); a left ventricular ejection fraction (LVEF) of 40 percent or less is considered heart failure.
- Considering ACE inhibitors in all patients. However, using ACE inhibitors is optional in lower-risk patients with normal LVEF, where cardiovascular risk factors are well controlled and in whom revascularization has been performed.
- Giving inactivated influenza vaccine to people with chronic cardiovascular disorders because of their increased risks for complications from the flu. "This is an important new addition to our guidelines that should significantly improve outcomes for patients with cardiovascular disorders," Smith said.
- Increasing the amount of exercise from 30 to 60 minutes three or four times a week to 30 to 60 minutes of moderate intensity aerobic activity such as brisk walking a minimum of five days a week and preferably seven days a week. Adding resistance training two days a week is encouraged.
- Having the initial goal of weight-loss therapy to reduce body weight by 10 percent from baseline, then to attempt further weight loss. The ideal final goal remains a waistline of less than 40 inches in men and 35 inches in women and a body mass index of between 18.5 and 24.9.

The authors said that in the nine years since the guidelines were first published, the "graying" of the population has increased the number of cardiovascular patients who might benefit from these therapies. Multiple studies have shown that patients who would benefit aren't receiving recommended therapies.

"Taken together, these therapies are capable of significantly improving survival and quality of life for our patients, yet studies show that many patients do not receive them," Smith said. "It is important that physicians and patients alike understand the benefit and be certain that therapies are implemented as recommended if we are to make progress in reducing the toll of the nation's No. 1 killer."

Other authors are: Jerilyn Allen, R.N., ScD; Steven N. Blair, P.E.D.; Robert O. Bonow, M.D.; Lawrence M. Brass, M.D.; Gregg C. Fonarow, M.D.; Scott M. Grundy, M.D., Ph.D; Loren Hiratzka, M.D.; Daniel Jones, M.D.; Harlan M. Krumholz, M.D.; Lori Mosca, M.D., Ph.D, M.P.H.; Richard C. Pasternak, M.D.; Thomas Pearson, M.D., Ph.D.; Marc A. Pfeffer, M.D., Ph.D.; and Kathryn A. Taubert, Ph.D.