

James L. Holly, M.D.

Cardiovascular Disease Risk Factors Part XIV Gender 2

By James L. Holly, MD

Your Life Your Health

The Examiner

September 29, 2005

The significance of gender in the establishment of risk for cardiovascular disease is not fully understood. However, many studies are being launched to fill in the gaps in our knowledge. One such study is being launched by the McGill University Health Center in Canada. The project, known as GENESIS, is Canada's largest multidisciplinary initiative to study the causes of cardiovascular disease — the leading cause of death in Canada.

GENESIS will investigate key unknowns in the way cardiovascular disease is manifested between men and women. Specifically, the project will address both the biological and genetic factors (sex) and social and behavioral factors (gender) involved in cardiovascular disease. It is expected that this and numerous other studies will begin to help clinicians to improve the diagnosis and treatment of cardiovascular diseases in men and women.

The current state of knowledge was summarized by the American Heart Association's Science Statement on Evidenced-Based Guidelines for Cardiovascular Disease Prevention in Women which was published in February of 2004. The clinical recommendations for lifestyle interventions included the following:

- Cigarette smoking -- Consistently encourage women not to smoke and to avoid environmental tobacco.
- Physical activity -- Consistently encourage women to accumulate a minimum of 30 minutes of moderate-intensity physical activity (eg, brisk walking) on most, and preferably all, days of the week.
- Cardiac rehabilitation -- Women with a recent acute coronary syndrome or coronary intervention, new-onset or chronic angina should participate in a comprehensive risk-reduction regimen, such as cardiac rehabilitation or a physician-guided home- or community-based program.
- Heart-healthy diet -- Consistently encourage an overall healthy eating pattern that includes intake of a variety of fruits, vegetables, grains, low-fat or nonfat dairy products, fish, legumes, and sources of protein low in saturated fat (eg, poultry, lean meats, plant sources). Limit saturated fat intake to <10% of calories, limit cholesterol intake to <300 mg/d, and limit intake of trans fatty acids.
- Weight maintenance/reduction -- Consistently encourage weight maintenance/reduction through an appropriate balance of physical activity, caloric intake, and formal behavioral programs when indicated to maintain/achieve a BMI between 18.5 and 24.9 kg/m² and a waist circumference <35 in.

The clinical recommendations for psychosocial factors included encouraged that women with CVD should be evaluated for depression and referred/treated when indicated.

The clinical recommendations for supplementation included:

- Omega 3 fatty acids -- As an adjunct to diet, omega 3 fatty-acid supplementation may be considered in high-risk women. High risk is defined as CHD or risk equivalent, or a global risk great than 20%.as measured by the Framingham Cardiovascular Risk Score.
- Folic acid -- As an adjunct to diet, folic acid supplementation may be considered in high-risk women (except after revascularization procedure) if a higher-than- normal level of homocysteine has been detected.

The American Heart Association’s clinical evidence-based recommendations are classified as follows:

:

Class I	Intervention is useful and effective
Class IIa	Weight of evidence/opinion is in favor of usefulness/efficacy
IIb	Usefulness/efficacy is less well established by evidence/opinion
Class III	Intervention is not useful/effective and may be harmful

CVD Prevention Strategies for Clinical Practice.

One size does not fit all. The American Heart Association recommended treatment strategies based on the risk categories into which women fell. There are three categories:

- high,
- intermediate,
- lower, or
- optimal risk categories.

These are categories are based on the Framingham Cardiovascular Risk Score. Your healthcare provider can quickly and easily calculate your risk for you at each visit.

Lifestyle approaches which include

- smoking cessation,
- regular exercise,
- weight management, and
- heart-healthy diet to prevent CVD

are Class I recommendations for all women and a top priority in clinical practice.

Priorities for Prevention in Practice According to Risk Group

High-Risk Women (>20% risk)

Class I recommendations:

- Smoking cessation
- Physical activity/cardiac rehabilitation
- Diet therapy
- Weight maintenance/reduction
- Blood pressure control
- Lipid control/statin therapy
- Aspirin therapy
- β -Blocker therapy
- ACE inhibitor therapy (ARBs if contraindicated)
- Glycemic control in diabetics

Class IIa recommendation:

- Evaluate/treat depression

Class IIb recommendations:

- Omega 3 fatty-acid supplementation
- Folic acid supplementation **Intermediate-**

risk women (10% to 20% risk) Class I

recommendations:

- Smoking cessation
- Physical activity
- Heart-healthy diet
- Weight maintenance/reduction
- Blood pressure control
- Lipid control

Class IIa recommendations:

- Aspirin therapy

Lower-risk women (<10% risk)

Class I recommendations:

- Smoking cessation
- Physical activity
- Heart-healthy diet
- Weight maintenance/reduction
- Treat individual CVD risk factors as indicated

Stroke prevention among women with atrial fibrillation

Class I recommendations:

High-intermediate risk of stroke – risk based on Framingham Stroke Risk Score

- Warfarin therapy

Low risk of stroke (<1%/y) or contraindication to warfarin

- Aspirin therapy

Blood Pressure Recommendations

- Drug Therapy is indicated when blood pressure is 140/90 mm Hg or an even lower blood pressure in the setting of blood pressure–related target-organ damage (kidney disease) or diabetes.
- Thiazide diuretics should be part of the drug regimen for most patients unless contraindicated.

Lipid, lipoproteins, Cholesterol Recommendations

Optimal levels of lipids and lipoproteins in women are:

- LDL-C <70 mg/dL,
- HDL-C >50 mg/dL,
- Triglycerides <90 mg/dL, and
- non-HDL-C (total cholesterol minus HDL cholesterol) <130 mg/dL and

should be encouraged through lifestyle approaches.

In high-risk women or when LDL-C is elevated, saturated fat intake should be reduced to <7% of calories, cholesterol to <200 mg/d, and trans fatty acid intake should be reduced.

Lipids – drugs in high risk women

Initiate LDL-C–lowering therapy (preferably a statin) simultaneously with lifestyle therapy in high-risk women with LDL-C 100 mg/dL and initiate statin therapy in high- risk women with an LDL-C <100 mg/dL unless contraindicated .

Initiate niacin or fibrate therapy when HDL-C is low, or non-HDL-C elevated in high- risk women.

Lipids – drugs in intermediate risk women

Initiate LDL-C-lowering therapy (preferably a statin) if LDL-C level is 130 mg/dL on lifestyle therapy, or niacin or fibrate therapy when HDL-C is low or non-HDL-C elevated after LDL-C goal is reached

Lipids – drugs in lower risk women

Consider LDL-C-lowering therapy in low-risk women with 0 or 1 risk factor when LDL-C level is 190 mg/dL or if multiple risk factors are present when LDL-C is 160 mg/dL or niacin or fibrate therapy when HDL-C is low or non-HDL-C elevated after LDL-C goal is reached.

Diabetes

Lifestyle and drugs should be used to achieve near normal HbA1C (<7%) in women with diabetes.

Preventive drug interventions

Aspirin—high risk

- Aspirin therapy (75 to 162 mg), or clopidogrel (Plavix) if patient is intolerant to aspirin, should be used in high-risk women unless contraindicated.
- Aspirin—intermediate risk
- Consider aspirin therapy (75 to 162 mg) in intermediate-risk women as long as blood pressure is controlled and benefit is likely to outweigh risk of gastrointestinal side effects.

β-Blockers

β-Blockers should be used indefinitely in all women who have had a myocardial infarction or who have chronic ischemic syndromes unless contraindicated.

ACE inhibitors

ACE inhibitors should be used (unless contraindicated) in high-risk women.

ARBs (Angiotensin Receptor Blockers)

ARBs should be used in high-risk women with clinical evidence of heart failure or an ejection fraction <40% who are intolerant to ACE inhibitors..

Atrial fibrillation/stroke prevention

Warfarin—atrial fibrillation

Among women with chronic or paroxysmal atrial fibrillation, warfarin should be used to maintain the INR at 2.0 to 3.0 unless they are considered to be at low risk for stroke (<1%/y) or high risk of bleeding.

Aspirin -- atrial fibrillation

Aspirin (325 mg) should be used in women with chronic or paroxysmal atrial fibrillation with a contraindication to warfarin or at low risk for stroke (<1%/y).

Class III interventions

The following therapies should not be used according to the American Heart Associations evidenced-based recommendations.

Hormone therapy

- Combined estrogen plus progestin hormone therapy should not be initiated to prevent CVD in postmenopausal women.
- Combined estrogen plus progestin hormone therapy should not be continued to prevent CVD in postmenopausal women.
- Other forms of menopausal hormone therapy (eg, unopposed estrogen) should not be initiated or continued to prevent CVD in postmenopausal women pending the results of ongoing trials.

Antioxidant supplements

Antioxidant vitamin supplements should not be used to prevent CVD pending the results of ongoing trials.

Aspirin—lower risk

Routine use of aspirin in lower-risk women is not recommended pending the results of ongoing trials.

Remember, it is your life and it is your health.