



Maine Cardiovascular Health Council

A Coordinated Approach to CVD Risk Reduction

A Heart Healthy Maine

At the Blaine House Summit in October, the Maine Bureau of Health announced funding from the Centers for Disease Control and Prevention for a comprehensive approach to cardiovascular health in Maine. The goal of the project is to develop a state-level and statewide public health infrastructure, building upon core capacity and leadership in the state Bureau of Health, to implement a comprehensive, statewide, multi-setting, prevention program demonstrating best practices in order to reduce the three major risk factors for cardiovascular disease.

Given that risk factors are so prevalent, we must use strategies for influencing the behavior of large numbers of individuals if we are to achieve an improvement in the health of the population in Maine. The focus is on changing environments (social, policy, physical) for reaching large numbers of people with sustainable interventions. An example of this is supporting physical activity by opening local schools outside of school hours for community members to walk.

Those of us working in heart health need to get the issue on the media agenda, the public agenda, and the policy agenda. To reduce CVD, we need to get high-level decision makers in our communities concerned about the magnitude of the problem and aware of the potential to make a difference. We need to work closely with those who are in a position to support environmental policy changes that can do

Campaign for a Healthy Maine Partners Chosen

On January 9, 2001, Human Services Commissioner Kevin W. Concannon announced the selection of 31 community partners for the *Campaign for a Healthy Maine*, a new state sponsored health prevention effort.

"It is time to take the next step in the fight against Big Tobacco. Now through these 31 community partners, who have each been awarded an annual grant which averages approximately \$250,000, every corner of our state will have an active and ongoing local effort to reduce smoking and improve the health of every Mainer," said Commissioner Concannon.

Funded through the National Tobacco Settlement, the *Campaign for a Healthy Maine* will support activities conducted by these 31 community partners to create healthier communities, making it easier for people to live a tobacco free life and one that includes physical activity and good nutrition.

"We know that four chronic diseases—cardiovascular disease, cancer, chronic lung disease, and diabetes—kill three-quarters of all Mainers," added Dr. Dora Anne Mills. "We also know that all four diseases can be prevented through a healthy lifestyle that is tobacco-free, physically active, and includes a nutritional diet. That is what the *Campaign for a Healthy Maine* is all about, and it is precisely what the community partners will be promoting from Fort Kent to Kittery.

Continued on page 2.

A Heart Healthy Maine

Continued from front page

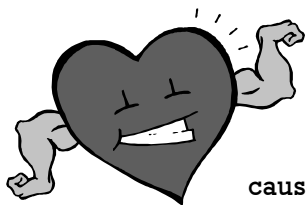
much to improve the health of our population.

This project seeks to foster a continued networking and communication, to share resources, and to link training and consultation in a collaborative way. The Division of Community Health and the Partnership for a Tobacco-Free Maine (within the Bureau of Health) are working together with communities, organizations, and individuals throughout the state to improve cardiovascular health in Maine.

For more information, please contact Patricia Jones, Community Health Promotion/Chronic Disease Prevention, Maine Bureau of Health, 207-287-5379 or patricia.r.jones@state.me.us.

Upcoming Training Workshops

The next Cardiovascular Health Screening Workshops will be held April 3, 4, and 5 at the Spectacular Event Center in Bangor. Day 1 will focus on Cardiovascular Disease and Cholesterol Update and Screening. Day 2 will focus on Blood Pressure Measurement and Equipment Calibration. And Day 3 will focus on Diet, Exercise, and Motivational Interviewing. For a copy of the brochure, please call 622-7566, ext. 204, or e-mail Maryb@mcd.org, or you can download a copy from our website (under the News & Events section) at www.maineheartiohealth.org.



February is American Heart Month

American Heart Month is significant because it is a time for all Americans to acknowledge the ongoing efforts of the American Heart Association and other noteworthy health organizations to reduce the deadly risks and consequences of heart disease and stroke.

The theme this year is **Be Prepared for Cardiac Emergencies. Know the signs of cardiac arrest. Call 9-1-1 immediately. Give CPR.**

This February the American Heart Association is asking the public to be prepared for cardiac emergencies by taking these three steps:

1. Know the signs of cardiac arrest in order to recognize a medical emergency when it occurs. During cardiac arrest, a victim loses consciousness, stops normal breathing, and loses pulse and blood pressure.
2. Call 9-1-1 immediately.
3. Give cardiopulmonary resuscitation. CPR can help keep the cardiac arrest victim alive until emergency help arrives.

Policy and Environmental Change

by Martin Hayden

The Maine Bureau of Health received a federal grant to give us the opportunity to confront in a new way what is perhaps the harsh fact of life that shadows us every day: that cardiovascular disease is Maine's leading cause of death, disability, and health care costs for both men and women. The grant allows us to develop statewide approaches to make Maine more heart healthy and cardiovascular disease less of a factor in our lives. For example, increasing the percent of highway funds devoted to transportation alternatives (bike lanes and rails to trails). The chance to alter the environment of the entire state to help our families have a better chance of becoming more heart healthy, while at the same time making our healthcare system more affordable, is unprecedented. We now have a chance to make real strides towards both objectives.

If you have an interest in helping or in sharing information, please feel free to get in touch with me at 207-622-7566, ext. 261, or mhayden@mcd.org.

New Faces



Andy Spaulding

Andy Spaulding joined Medical Care Development on January 29, 2001, as Worksite Health Coordinator, Cardiovascular Health Programs. This position is funded by the Maine Bureau of Health with Cardiovascular Health Federal funding. Andy will be working with organizations to implement policy and environmental changes that create a workplace environment supportive of individual behavior change, and ultimately may lead to a reduction in cardiovascular disease risks. He will be working with companies based on many factors including region, size of the workforce, priority populations, and organizational need. For example, worksites may create policies such as flex-time for physical activity and offer heart healthy food choices in vending machines.

Andy is originally from Searsport and currently living in Freeport. He received his B.S. in Health & Fitness at the University of Maine in 1994 and his M.S. in Exercise Science at the University of Massachusetts in 1997. At the University of Massachusetts he taught undergraduate students how to conduct submaximal fitness assessments and write exercise prescriptions. In addition, he served as the worksite health coordinator for the U.S. Fish & Wildlife Service, a partner organization of the university. After graduate school he worked for Oxford Health Plans in White Plains, New York, as a Health Promotion Project Manager.



Martin Hayden

Martin Hayden joined Medical Care Development on January 22, 2001, as Director of Policy and Environmental Health, Cardiovascular Health Programs. This position is funded by the Maine Bureau of Health with Cardiovascular Health Federal funding and will direct efforts to reduce heart disease in Maine through policy and environmental changes at the state level. Martin will be working closely with individuals and groups, some of who may not be in the habit of sitting down together on these issues. It is a unique opportunity to demonstrate the benefits that improving cardiovascular health can have on the culture of the entire state and vice versa.

Over the past 25 years Martin has practiced law focused on public policy, negotiation, and mediation. From 1980 to 1986 he served in the Maine Legislature and was elected Majority Whip of the House of Representatives from 1984-1986. Throughout his career he has worked extensively within the health care system: both with injured people and health care providers. He has also consulted on national environmental and technology issues.

Martin lives in Brunswick with his wife, Anne, who works as a marine ecologist and his three daughters.

NECON/AHA/DuPont CVD Prevention Award

This award will be given to recognize a community organization/agency in each New England state that provides programs or services to a targeted population with demonstrated impact in reducing disability and death from cardiovascular diseases and stroke. Deadline for applications is April 30, 2001.

Applications are available at www.NECONinfo.org or write to AWARDS, c/o NECON, One Meeting Street, Providence, RI 02903.

Year 2000 Blue Ribbon Commission on Health Care

On February 1, 2000, Governor Angus King appointed the Year 2000 Commission on Health Care by Executive Order. The commission had four primary charges:

- identify the cost of Maine's health care system, taking into account the state's demographic profile;
- determine the current allocation of costs and cost shifting among participants in the health care delivery system;
- recommend potential strategies for stabilizing overall health care costs;
- identify payment options for health care services, including the impact of such options on costs and utilization.

The commission's first task was to examine the myths and realities of the state's health care system. Among the things they discovered:

- We don't allow health care delivery to operate as a market in the true economic sense.
- Mainers are not particularly healthy.
- "Health care" is much broader than services in a physician's office or hospital.
- Federal policy drives much of Maine's health care delivery system.
- Maine has the highest percentage of uninsured people in New England.

The commission performed a significant study of the actual cost of health care in the state. Among its many findings:

- The citizens of Maine spend almost five billion dollars a year for personal health (an average of nearly \$4,000 per person).
- Compared to the nation as a whole, Maine spends more on home health care, nursing home care, and insurance administration. It spends less, however, on hospital care and physician services. It also spends much less than the national average on public health efforts.
- Maine receives less federal reimbursement for Medicare than most other states: about 80 cents for each dollar spent.
- The cost of health services differs widely across Maine, sometimes by thousands of dollars.
- Charity care and bad-debt write offs account for about \$163 million annually in Maine.
- Drivers of high health care costs include both the concrete and the abstract.
- Cost shifting occurs in many forms and contributes to system complexity and uneven treatment of consumers.

With an understanding of the social factors that affect health care in Maine, as well as with data analysis upon which to peg our real work, the commission arrived at a three-part statement of the problem with health care in Maine:

- The health care delivery and financing system is inefficient, unreasonably complicated, and unfair.
- People in Maine are not as healthy as they could be, and efforts to improve health status are inadequate.
- Many in Maine are unable to obtain health care of the type and quality that they need.

Prior to identifying various approaches to affect the long-term costs of health care, the commission determined a set of principles they believe should serve as a starting place for discussion:

- All Maine citizens should have ready access to basic health care regardless of income, location, or pre-existing or chronic conditions.
- Maine's health care system should be characterized by excellence, zero tolerance for medical errors, and appropriateness of care in accordance with outcome-based evidence.
- An increasing portion of the state's health care expenditures should go directly to disease prevention and public health efforts.

Check out the commission's website at www.mdf.org/chc for more information.

New Website Launched

The Governor's Council on Physical Fitness and Sports launched its website on February 12th.

www.mainephysicalactivity.org

This site features the activities of the Council and other important physical activity links and news. Check it out.

Did You Know ...

... Surgery to fight obesity is gaining popularity. Last year, some 43,000 people underwent gastric bypass surgery or other operations that bring about weight loss by drastically limiting the amount of food that can fit in the stomach. Recognizing obesity's health risks, some insurance companies now cover the surgery—a good thing, since it costs about \$20,000. (*Tufts University Health & Nutrition Letter, January 2001.*)

... A recent article in the *Journal of Cardiovascular Risk* reports that work-related stress, including long hours, low reward, a hectic pace, and a lack of social support in the workplace, can actually increase a person's risk of heart disease.

Study author Christopher Tennant of the department of psychological medicine at Sydney University and the Royal North Shore Hospital in St. Leonards, Australia, reviewed several studies on work stress and heart disease published from 1990 to 2000. In one study, bus drivers who worked in high intensity traffic areas were found to be more likely to die from heart disease than those whose routes were less hectic. And in six of nine studies, excessive hours also increased the risk for heart disease.

Other factors that were shown to raise risk of heart disease included poor social support, job insecurity, inability to relax after work, and lack of decision-making authority.

But certain factors in the workplace, including stressful relations with co-workers and superiors, social isolation, and even physical factors such as heat, cold, noise, and excessive physical labor, may have a negative effect on health, Schnall says.

People in stressful jobs may be more likely to smoke, drink alcohol, engage in unhealthy eating habits, and lead sedentary lifestyles.

(*From WebMDMed News, December 14, 2000.*)

... A decline in mental function immediately after heart bypass surgery may be an indication that further intellectual decline will occur down the road, according to a new study.

If future research confirms the findings, patients who experience mental decline shortly after surgery may benefit from aggressive treatment to protect mental function, according to the study's authors.

Many doctors have downplayed the importance of any changes in intellectual abilities that occur after bypass, which can affect 50% to 80% of people who have the surgery, because the decline often appears to be temporary. But even though decline in mental function is often temporary after bypass surgery, it may predict an increased risk of intellectual decline several years later, the researchers report.

(*New England Journal of Medicine 2001; 344:395-402, 451-452.*)

ME Care Update

Medical Care Development has been selected as one of 15 sites across the country for a HCFA demonstration grant to test the effectiveness of coordinated care services to Medicare beneficiaries with chronic illness. The ME Cares Project at MCD will participate in the research study over four years to determine if the design of nurse-physician support care can improve medical treatment plans, reduce avoidable hospital admissions, and promote other desirable outcomes for patients with congestive heart failure and coronary heart disease. Between 27 and 30 Maine hospitals will participate in this study allowing for the hospitals' reimbursement of Medicare patients enrolled in the project. During the past year, 17 hospitals have provided this service to over 500 patients with cardiovascular disease.

This is an exciting opportunity for Maine to provide an alternative model of care in chronic heart disease which, ultimately, Medicare may include as a standard service across the country.

Women & Heart Health

Majority of Primary Care Physicians Unaware of Differences in Heart Disease in Men and Women

Results from a national Gallup Survey announced in November 2000, found nearly 2/3 of the nation's primary care physicians inaccurately reported "no difference" in the symptoms, warning signs, and diagnosis of heart disease in women, compared to men. The survey, commissioned by Washington Hospital Center, queried 256 internists and family practitioners across the country to determine front-line physicians' awareness of the prevalence, severity, and signs of heart disease in women. "If a physician follows the classic male model for diagnosing heart disease, a huge number of women with heart disease will be missed," said Washington Hospital Center cardiologist Patricia Davidson, MD. "Both women and their physicians must be aware that the symptoms of women's heart disease are different from men's."

Heart disease is the leading cause of death among American women, each year claiming 233,000 lives – six times the number of women who die of breast cancer annually. Prevalence of the disease among women is also high. Each year, 625,000 women suffer a heart attack. Over 28 million American women are living with the effects of cardiovascular disease, including heart disease, high blood pressure, and stroke. Of these, more than one-half are under the age of 65. While angina (chest pain) is a major indicator of heart disease in both women and men, other symptoms in women, such as shortness of breath and chronic fatigue, are very common and are often being ignored. Although two out of three physicians surveyed identified shortness of breath as a warning sign of heart disease in women, chronic fatigue was listed by less than one out of five respondents and only 10% mentioned other important symptoms for women, including nausea, dizziness or swelling of the ankles. Just as important, women also do not recognize their risk. In another survey of 1,000 women living in the Washington metropolitan region, which was conducted by Washington Hospital Center last December, women relegated heart disease to third place when ranking their health concerns, with breast cancer and stress topping the list. In addition, another Gallup survey released last fall, 70% of

women stated that the symptoms of heart disease are the same for both women and men.

Important Findings of the National Gallup Survey

- Only 39% responded that they had extensive medical training in diagnosing heart disease in women, compared to 69% who said they had extensive training in diagnosing the same disease in men.
- 68% said there is no difference in diagnostic tests for men and women.
- While physicians said they discuss hormone replacement therapy (HRT) with 80% of their female patients, only 45% said they had extensive medical training in the use of HRT in menopausal and post-menopausal women.
- Half of those surveyed listed health problem OTHER THAN HEART DISEASE as the greatest health risk facing women over 50; 18% listed breast cancer and 10% said osteoporosis. Yet twice as many women die of cardiovascular disease each year than die of all forms of cancer combined.

Larry Johnson Memorial Award

We invite members to submit nominations for the 2001 Larry Johnson Memorial Award, which will be presented at the Governor's Fifth Cardiovascular Health Summit on June 21, 2001.

The award is given to a person(s) who has made unique and outstanding contributions to the cause of reducing morbidity and mortality from cardiovascular disease in Maine and was established in 1990 in honor of the late Larry Johnson.

For an official nomination form, please call or e-mail the MCHC at 622-7566, ext. 230 or dianec@mcd.org. Nominations should be received no later than May 1, 2001.



Briefs



Cardiovascular disease (CVD) claims the lives of more women than men in the United States, over half a million in 1996. Mortality rates from CVD are particularly high among women of lower socioeconomic groups and ethnic minorities. Black women have a 35% higher age-adjusted mortality rate from coronary heart disease and a 71% higher age-adjusted mortality rate from stroke than white women. A recent study suggests that rates of coronary events may actually be increasing among black women. Primary prevention trials designed to decrease the incidence of CVD among minorities and the socioeconomically disadvantages are encumbered by significant barriers to participation.

Many women may not view themselves as being at risk for CVD. Although one in two women dies from heart disease and one in 27 dies from breast cancer, most women are more concerned about breast cancer than CVD. A major public health question is how to reach more women at risk for CVD.

This study showed that expanding existing cancer screening programs to include CVD intervention was feasible and may be an effective means for promoting healthful dietary practices among low-income women.

(Cardiovascular Disease Risk Factor Intervention in Low-Income Women: The North Carolina WISEWOMAN Project, Preventive Medicine 31, 370-379 (2000).

A study in Sweden indicates that marital stress but not work stress predicts poor prognosis in women aged 30 to 65 years with CHD. These findings differ from previous findings in men and suggest that specific preventive measures be tailored to the needs of women with CHD. For more information see related article in *JAMA*, December 20, 2000, Vol. 284, No. 23.

Recent studies have shown that serum triglycerides pose an independent risk factor for CVD, unrelated to HDL:LDL ratios. The possibility that elevated triglycerides may be a more important risk factor for myocardial infarction in women than in men has also been reported previously. Two recent studies of women receiving HRT showed no beneficial effect on CVD risk despite improvements in their HDL:LDL ratios. In both studies, significant increases in triglyceride were reported with HRT. Fish oils containing n-3 fatty acids have been shown to specifically reduce triglyceride concentration in humans; consequently, supplementation with fish-oil could benefit women, even if they are receiving HRT.

Future studies will help to elucidate the interactions between fish-oil therapy and HRT while determining the long-term effect on n-3 fatty acid supplementation on postmenopausal women.

(From Stark, Ken D., et al. Effect of fish-oil concentrate on serum lipids in postmenopausal women receiving and not receiving hormone replacement therapy in a placebo-controlled, double-blind trial. Am. J. Clin Nut 2000; 71:389-94.)

Women's Perceived and Real Health Risks

PERCEPTION	PERCENT	CAUSE OF DEATH	PERCENT
Breast cancer	46	Heart disease	34
Unspecified cancer	16	Other cancer	12
Heart disease	4	Stroke	8
AIDS	4	Lung cancer	5
Uterine/Ovarian cancer	3	Breast cancer	4

Source: Vital Statistics of the U.S., National Center for Health Statistics

(excerpted from Agenda for Research on Women's Health for the 21st Century, NIH, 1999.)

What's New

Hypertension Experts Recommend New Focus on the Systolic Reading

Speaking at a late summer press conference sponsored by Novartis Pharmaceuticals Corp in conjunction with the 18th Scientific Meeting of the International Society of Hypertension, George Bakris, MD, said recent research shows a need for aggressive treatment of hypertension.

The aggressive approach has just been endorsed by the National Kidney Foundation (NKF) with regard to patients with diabetes. In the September edition of the *American Journal of Kidney Diseases*, the NKF recommends that physicians lower the blood pressure of diabetic patients to less than 130/80 mm Hg – a reduction from the goal of less than 130/85 mm Hg recommended in the *Sixth Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure* (JNC VI), issued by the National Institutes of Health (*Am J Kidney Dis.* 2000; 36:646-661).

Joel D. Kopple, MD, president of the NKF, said physicians and patients need to recognize the importance of substantially reducing hypertension. “Physicians are going to have to be more aggressive in the management of blood pressure,” Kopple said. “One of the ways to do this is to get patients to be participants in their treatment and to understand why their physicians are treating them in certain ways.”

For nondiabetic patients, aggressive blood pressure reduction is also beneficial, said participants in the press conference. They also stressed that physicians ought to pay more attention to systolic blood pressure rather than the diastolic reading they’ve been taught to follow.

Stanley S. Franklin, MD, clinical professor of medicine at the University of California, Irvine, College of Medicine, said isolated systolic hypertension – i.e., systolic blood pressure of 140 mm Hg or more and diastolic blood pressure of less than 90 mm Hg – is the most frequent form of uncontrolled hypertension in the United States, occurring in 65% of patients diagnosed as having hypertension. He noted that isolated systolic hypertension tends to occur in individuals over age 50, and it is in these people that most of the heart attacks, strokes, and kidney disease occur.

If lifestyle changes don’t work, then the *JNC VI* recommends single-drug therapy, using an initial low dosage of a drug that is slowly titrated upward to reach an optimal formulation that provides 24-hour efficacy with a once-daily dose, with at least 50% of the peak effect remaining at the end of the 24 hours.

But the researchers at the press conference said they would move aggressively into combination drug therapy if lifestyle changes aren’t helping the patient reach the target blood pressure.

(From *Medical News & Perspectives, JAMA, October 4, 2000—Vol. 284, No. 13*)

New Guidelines for Common Cardiac Disease

New guidelines to help physicians quickly diagnose and treat two related forms of heart disease have just been issued jointly by the American College of Cardiology (ACC) and the American Heart Association (AHA).

The guidelines concern unstable angina and non-ST segment elevation myocardial infarction (NSTEMI). Both conditions can appear identical in their early stages and cause people to head to the emergency department, but people with NSTEMI experience permanent myocardial injury, whereas in those with unstable angina, ischemia is not initially severe enough to cause irreversible damage.

The guidelines—which aim to help physicians distinguish between the two conditions and treat each appropriately—were developed by an expert panel of the ACC and the AHA and are based on the most recent scientific findings published in the Agency for Healthcare Research and Quality’s evidence report on *The Prediction of Risk for Patients with Unstable Angina*.

The new guidelines recommend that a thorough clinical history and 12-lead electrocardiography remain the foundation of early diagnosis and assessment. But cardiac marker laboratory tests, which rapidly detect the presence of proteins released into the blood when heart muscle is damaged, are essential.

Unstable angina and NSTEMI, which account for about 1.4 million hospitalizations annually, develop

when too little blood and oxygen reach heart tissue. This usually occurs because a thrombus intermittently (unstable angina) or completely (NSTEMI) occludes a coronary artery.

Triple Therapy Recommended

To help inhibit the formation of coronary thrombi, the guidelines recommend using a triple antithrombotic therapy for patients who continue to have ischemia or who are scheduled for a revascularization procedure.

The triple therapy includes giving aspirin to all patients who can tolerate it, or an aspirin substitute such as clopidogrel or ticlopidine. The administration of glycoprotein IIb/IIIa inhibitors, including eptifibatid and tirofiban (or abciximab for up to one day in certain patients), is recommended. And the guidelines say that patients should receive an infusion of heparin or an injection of a low-molecular-weight version of heparin.

The full text of the guidelines appear in the September issue of the *Journal of the American College of Cardiology* and is available online, free to ACC members, at <http://www.cardiosource.com>. An executive summary appears in the September 5 issue of *Circulation: Journal of the American Heart Association*.

(From *Medical News & Perspectives, JAMA, October 4, 2000—Vol. 284, No. 13.*)

National Cholesterol Education Program

The Coordinating Committee of the National Cholesterol Education Program met on December 5, 2000, in Reston, Virginia. The entire agenda was devoted to discussion of the revised draft of the Adult Treatment Panel Guidelines (ATP III).

The new guidance is evidence-based and comprehensive. Its primary focus is on secondary prevention and clinical intervention. There are some similarities to ATP II and also some new features, particularly with regard to risk assessment. The recommendations were finalized in January. The revised timeline for issuing the new guidelines is probably May 2001.

Much of the full Committee's discussion centered on issues of dietary therapy—who should be doing it, whether the recommendations were congruent with those recently issued by the American Heart Association, the extent to which reimbursement for medical nutrition therapy currently pending before

Congress would influence compliance with the guidelines, and so on. There is strong support among the representatives of the full committee for a real health professional team approach to working with people (as distinguished from "patients") and recognition of informed choice relative to compliance issues.

Coordinating Committee members and staff recognize that the panel's recommendations are only the beginning—that success turns on the degree to which the guidelines are institutionalized and widely applied. Initial plans include distribution of the executive summary with the core of the clinical document; creation of pocket cards with the algorithms; CME materials such as a 10 year risk calculator and palm pilot applications; slide sets (power point and 35 mm) for teaching; patient publications; public factsheets; and web applications.

Smaller working groups made additional implementation suggestions. One such important suggestion was to segment and customize the executive summary for the various health professional audiences.

ATP III guidelines will be a centerpiece of two major national meetings that are being organized. NHLBI and NCQA are collaborating to develop a conference on June 3-5, 2001, in Washington, DC. And a Cardiovascular Health Conference cosponsored by the Centers for Disease Control and Prevention, NHLBI, and the American Heart Association is scheduled for April 11-13, 2002, in Washington, DC.

Cardiologists Turn to Radiation to Keep Arteries Clear

Radiation is the latest tool doctors are employing to keep arteries serving the heart free from blockage. The procedure is used in conjunction with balloon angioplasty, which works well as an initial procedure to open blocked arteries. But in one of three patients the blockages quickly return. Cardiologists have tried various methods to keep the arteries open with mixed success. The latest technique is to treat the area for 15 to 20 minutes with radioactive material at the tip of a heart catheter. Specialists say the radiation seems to affect the lining of the artery, discouraging reblockage. Problems have arisen with blood clots in some cases. But a study in the *New England Journal of Medicine* showed that the procedure cut the rate of reblockage.

(*NEJM, January 25, 2001, Vol. 344, No. 4.*)

Very Interesting

A Supplement Helps Melt Fat and Build Muscle?

A team of Scandinavian researchers has identified a pill that appears to melt away fat while boosting muscle mass. While the supplement—conjugated linoleic acid (CLA)—is no magic bullet, it may prove to be a useful tool in combination with even light exercise.

A study published in the December issue of the *Journal of Nutrition* found that consuming 3.4 grams of CLA daily helped overweight and obese individuals mobilize fat from cells while revving up muscle metabolism. There was no net weight loss, however.

“The present data indicate that consumption of CLA reduces (body fat mass) in overweight and moderately obese healthy volunteers,” according to Dr. Henrietta Blankson from Scandinavian Clinical Research in Norway, and colleagues.

If further research confirms the effects of CLA seen in the present study, the supplement could prove useful to the millions of people—nearly two thirds of Americans—who are overweight and obese. Excess weight has been shown to raise a person’s risk of developing heart disease, certain forms of cancer, high blood pressure, and type 2 diabetes.

Individuals taking CLA also saw reductions in their total cholesterol and LDL (‘bad’) cholesterol. While HDL, or ‘good’ cholesterol also declined, the overall ratio of LDL to HDL remained the same, Wadstein noted.

(The Journal of Nutrition, 2000; 130: 2943-2948.)

Substance in Spider Venom May Correct Heart Rhythm

In experiments in rabbit hearts, a substance found in tarantula venom inhibited atrial fibrillation without affecting other normal functions of the heart.

Atrial fibrillation, which can increase the risk of stroke, is the most common type of arrhythmia, or heart-rhythm disorder. The condition causes the upper heart chambers (atria) to contract so quickly that they do not pump enough blood into the heart’s lower chambers (ventricles). Drugs may be

prescribed to keep the potentially life-threatening condition under control.

Previous research has suggested that certain ion channels are involved in atrial fibrillation. Dr. Frederick Sachs, of the State University of New York at Buffalo, and colleagues set out to find a substance that blocks the channels that trigger abnormal heart rhythms.

Dr. Sachs and his colleagues tested the venom of many types of insects and spiders, but only the venom from one type of tarantula blocked the ion channels. When the investigators analyzed the venom, they identified a short protein called GsMtx-4 that was responsible for the effect.

When the researchers tested the protein on rabbit hearts that were induced to beat irregularly, the substance blocked atrial fibrillation.

The protein looks promising since it blocks atrial fibrillation without causing any harmful effects to the heart. It makes sense that the substance would not be toxic, since it comes from a type of tarantula whose bite is not harmful to people. The next step is to test the protein in live rabbits to make sure that it does not affect other parts of the body besides the heart.

GsMtx-4 could be the first of a new class of anti-arrhythmic agents to be directed against the causes rather than the symptoms of fibrillation.

For more information see the journal of *Nature* 2001; 409:35-36.

Diabetes and the Missing Link With Obesity

Type II diabetes is the most common form of diabetes in the Western world, and is strongly linked to obesity—over 80% of sufferers are obese. The molecular basis for this link has remained a mystery. In the January 18 issue of *Nature*, Stepan and colleagues describe how they have identified a new hormone, which they have named ‘resistin,’ that is produced by fat cells. Their results indicate that resistin may form at least part of the missing link between obesity and diabetes.

Obesity is characterized by the increased storage of triglycerides (fat molecules) in adipose tissue and causes insulin resistance. But how does this

increased energy storage in fat cells (adipocytes) promote insulin resistance in muscles, the liver, and elsewhere in the body? For many years it looked as if free fatty acids would provide the link. These products of triglyceride metabolism are the main form in which energy is transferred from stores in adipose tissue to other sites in the body for metabolic use. Levels of free fatty acids in the bloodstream are higher in obese than in non-obese people, and free fatty acids can induce insulin resistance in tissues other than adipose tissue. However, as well as having a role in energy storage, adipocytes also secrete numerous peptides that might lead to insulin resistance or other complications of obesity.

For more information, see The Hormone Resistin Links Obesity to Diabetes, *Nature*, Vol. 409, 18 January 2001; 307-312.

Pet Ownership and Risk Factors for Cardiovascular Disease

This study compared risk factors for cardiovascular disease in pet owners and non-owners.

Accepted risk factors for cardiovascular disease were measured in 5,741 participants attending a free screening clinic at the Baker Medical Research Institute in Melbourne, Australia. Blood pressure, plasma cholesterol, and triglyceride values were compared in pet owners (n=784) and non-owners (n=4,957).

Pet owners had significantly lower systolic blood pressure and plasma triglycerides than non-owners. In men, pet owners had significantly lower systolic but not diastolic blood pressure than non-owners, and significantly lower plasma triglyceride levels

and plasma cholesterol levels. In women over 40 years old, systolic but not diastolic pressure was significantly lower in pet owners and plasma triglycerides also tended to be lower. There were no differences in body mass index and self reported smoking habit were similar, but pet owners reported that they took significantly more exercise than non-owners, and ate more meat and “takeaway” foods. The socioeconomic profile of pet owners and non-owners appeared to be comparable.

Pet owners in this clinic population had lower levels of accepted risk factors for cardiovascular disease, and this was not explicable on the basis of cigarette smoking, diet, body mass index, or socioeconomic profile. The possibility that pet ownership reduces cardiovascular factors should therefore be investigated.

(Medical Journal Australia, 1992; 157:298-301)

Heart Healthy Recognition Award

We invite members to submit nominations for the third annual “Heart Healthy” recognition award, which will be presented at the Governor’s Fifth Cardiovascular Health Summit on June 21, 2001.

The goal in presenting this award is to recognize and encourage the efforts of individuals of all ages, in schools, at the workplace, in communities and/or businesses who are working to promote healthy hearts in the community.

For an official nomination form, please call or e-mail the MCHC at 622-7566, ext. 230 or dianec@mcd.org. Nominations should be received no later than April 15, 2001.

FYI

Weight-Loss Supplement Warning

Now that nonprescription diet aids containing phenylpropanolamine (PPA) are being removed from store shelves, dieters may be tempted to try an alternative product often promoted for weight loss: the potent thyroid hormone tiratricol, sold as a dietary supplement under various brand names,

usually as a diet aid. But using tiratricol is also a bad idea, according to the FDA, which recently reissued a warning that tiratricol can cause heart attacks, strokes, and other severe health problems. Since the FDA’s original warning about tiratricol in November 1999, many of the supplements have been removed from store shelves. But the FDA reissued the statement because the substance may still be commercially available. For more information, check out the FDA website at www.fda.gov.

Briefs

Physicians have the potential to impact health behaviors, especially those related to diet, through simple discussions during routine checkups, but only about half are using this opportunity.

(Physician-Patient Interactions Regarding Diet, Exercise, and Smoking, Preventive Medicine 31, 652-657, 2000.)

Cholesterol matters, even for the young. In a study of men younger than 40, those with blood cholesterol levels below 200 had an estimated life expectancy that was 3.8 to 8.7 years longer than that of men with cholesterol levels of 240 or more. The lower their cholesterol, the longer the men lived.

(J. Amer. Med. Assoc. 284: 311, 365, 2000)

The same statin drugs that lower cholesterol also prevent bone fractures. Studies suggest that statins may actually build bone in postmenopausal women.

(J. Amer. Med. Assoc., 283: 3205, 3211, 2000 and Lancet 355: 2185, 2000)

If you have high blood pressure (hypertension), you might want to skip that second cup of coffee, according to a study in the July *Hypertension*. Researchers divided 182 men into several groups based on blood pressure (BP), ranging from optimal/normal (average 112/64) to hypertensive (average 138/91). The men then consumed 250 milligrams of caffeine (equivalent to two to three cups of coffee) and had their blood pressure measured 45 minutes later. Caffeine raised blood pressure in all participants, but the BP-related caffeine response in the hypertensive group was 1.5 times greater than among those in the optimal/normal group, none of whom became hypertensive after caffeine consumption. Although the participants with definite hypertension had been taken off blood pressure-lowering drugs prior to the study, the authors say anyone with diagnosed hypertension may be particularly sensitive to caffeine.

(Heart Watch, September/October 2000)

Consumption of fish and omega-3 fatty acids was associated with a reduced risk of total stroke and thrombotic infarction primarily among women who did not take aspirin regularly. Consumption of fish and omega-3 fatty acids was not related to risk of hemorrhagic stroke. These results suggest that regular intake of fish may be beneficial for the prevention of thrombotic infarction in middle-aged US women. For more on this 14 year study, see the January 17, 2001, issue of *JAMA*.

Several lines of evidence suggest that there are connections between cardiovascular disease and osteoporosis. Epidemiological studies suggest an association between low bone mass and mortality from coronary artery disease and stroke. Insights into the molecular mechanisms of vascular calcification suggest parallels with bone formation. New information about the actions of statins, a class of cholesterol-lowering drugs, suggest that they may have effects in both bone and vascular tissue. A Working Group was convened in 1999 by the National Heart, Lung, and Blood Institute and the National Institute of Arthritis and Musculoskeletal and Skin Disease to bring together researchers from the bone and cardiovascular fields to review recent observations bearing on possible links between cardiovascular disease and osteoporosis and identify future research directions.

Future Directions

Much of the evidence available at this time is suggestive, rather than definitive. Further efforts across a broad range of scientific and medical disciplines will be necessary to refine these indications into clear conclusions. The goals stated below are illustrative of those identified in the course of the 1999 meeting, but are not intended to be comprehensive or exclusive of other relevant research areas.

Epidemiology

- Define the relationship between cardiovascular disease, osteoporosis, and related pathologies.
- Characterize the relationship between lipid metabolism and skeletal health.
- Determine significance of vascular calcification in progression and outcome of cardiovascular disease.

- Determine similarities and differences in the mechanism of vascular calcification and bone mineralization.
- Determine the mechanisms underlying the phenotypes of animal models in which pathological vascular calcification or osteoporosis/osteogenesis is observed.
- Determine the effects of statins and bisphosphonates on the skeleton and the cardiovascular system.

- Determine whether commonly used therapeutic and preventive treatments for osteoporosis have an impact on cardiovascular disease progression and conversely, whether treatments for atherosclerosis have an impact on skeletal health.
- Explore refinements of statin administration to optimize effects on bone.
(NIAMS-NHLBI Working Group, September 14-15, 1999, Bethesda, Maryland.)

Book Review

Saving the Heart: The Battle to Conquer Coronary Disease

by Stephen Klaidman, 272 pp., \$25, ISBN 0-19-511279-2, New York, NY, Oxford University Press, 2000

The Plague of the 20th and 21st centuries is atherosclerotic coronary artery disease, which causes approximately 500,000 deaths in the United States every year. Therefore a book that describes the types of treatment and the evolution of the different treatments of coronary artery disease should be of special interest to clinicians and patients who are confronted with this common medical problem.

In *Saving the Heart*, Stephen Klaidman does not simply describe the remarkable history of the people and the institutions that have made the most important contributions to the treatment of coronary artery disease during the 20th century. Rather, Klaidman, a journalist and senior research fellow at the Kennedy Institute of Ethics, Georgetown University, Washington, DC, critically examines from the perspective of an ethicist the unique personalities of the major contributors to cardiovascular care and the intricate and often lucrative relationships between some of these cardiovascular pioneers and the medical industry in what has become the medical-industrial complex.

Klaidman depicts the major developers of modern cardiovascular surgery and medicine as innovative, aggressive, persistent, and hardworking individuals who often began with simple tools but nevertheless established the basis for the modern treatment of coronary artery disease.

Klaidman documents in his book the impressive technological advances that have been made in the treatment of coronary artery disease because of the

medical-industrial complex.

But Klaidman's harshest criticism is directed toward the medical-industrial complex, which he says on occasion aggressively promotes new medical devices, procedures, and drugs in patients who are not aware of possible conflicts of interest. Klaidman describes the fascinating development of coronary angioplasty and atherectomy, coronary stents, and minimally invasive coronary bypass surgery on beating hearts. Each of these procedures requires complex equipment that has been developed with the aid of 20th-century technology and would not be readily available today without innovative physician entrepreneurs working closely with the medical industry. Klaidman states that money, rather than patient welfare, is often a significant motivator in these enterprises.

He cautions that practicing physicians will be pressured by the medical industry, colleagues, and the public to use new devices and drugs for the treatment of coronary artery disease. In this regard, physicians must approach such new devices and treatments with both open-mindedness and healthy skepticism. Good clinical judgment must never be replaced by expensive new technology.

(*JAMA*, January 17, 2001 – Vol. 285, No. 3.)

SAVE THE DATE

Governor's 5th Cardiovascular Health Summit

June 21, 2001 • Augusta Civic Center

This year's theme:

"Realizing Effective Policies for Cardiovascular Health Promotion in Maine"

Abstracts

Exercise, Smoking Cessation, and Short-Term Changes in Serum Lipids in Women: A Preliminary Investigation

Niura, R., et. al. (*Medicine and Science in Sports and Exercise*, Vol. 30(90), pp. 1414-1418)

The level of HDL is the most important cholesterol fraction in assessing Coronary Artery Disease (CAD). These differences are dose-dependent, with heavier smokers having higher triglycerides and lower HDL than light smokers. Several studies have shown HDL increases after smoking cessation. Increased physical activity also increased HDL and decreased triglycerides, due in part to an increased breakdown of fat, by an enzyme known as lipoprotein lipase, and changes in body weight.

The dangers associated with smoking are well known. Adequate levels of HDL can reduce the risk of developing Coronary Artery Disease (CAD) and Cardiovascular Disease (CVD). People who smoke have low levels of HDL and higher levels of triglycerides, which can also increase the risk of CAD. When people quit smoking, their levels of HDL increase. However, when the cessation of smoking is combined with physical activity, this increase is significantly higher. Exercise is the most important factor affecting the levels of HDL. The volume of exercise appears to be more important than the intensity of exercise in raising the levels of HDL. Frequency is also important. This is why it is so important to just do something. Physical exercise can also help lower triglyceride levels. Both of these changes will greatly reduce risk of developing health problems in the future. One other concern of people who quit smoking is that they will gain weight. However, the use of physical activity can reduce or eliminate any weight gain following smoking cessation.

Smokers with Multiple Behavioral Risk Factors

Sherwood, N.E., et. al (*Preventive Medicine*, 31, 299-307, 2000)

Cigarette smoking is the leading preventable cause of chronic disease morbidity and mortality among both men and women in the United States. Not only does cigarette smoking alone lead to serious health problems, but considerable data suggest that cigarette smoking is often accompanied by other lifestyle behaviors that affect health and chronic disease risk (e.g., greater alcohol intake, poorer diets, low levels of physical activity).

One aim of this investigation was to examine cross-sectional differences between smokers who engage in additional health risk behaviors (i.e., high-fat diets and low physical activity levels) and those who do not that could affect readiness for smoking cessation treatment and treatment prognosis.

Data were derived from baseline and one year follow-up surveys for the SUCCESS project, a randomized trial of worksite smoking interventions conducted in 24 worksites in Minneapolis/St. Paul, Minnesota. Included in the analyses were 2,149 study participants who reported smoking at baseline.

Results indicated that the presence of multiple health risk behaviors was related to more serious problems with smoking.

The data suggest that assessing multiple domains of health behavior may provide important information for smoking cessation and health promotion programs. Specifically, the presence of multiple health risk behaviors appears to be related to more serious problems with smoking (i.e., smoking dependence) and these more serious problems with smoking are associated with a somewhat poorer treatment prognosis.

Editorial Policy: The MCHC welcomes articles concerning cardiovascular disease for submission to the newsletter. ALL submissions should be submitted on a computer disk (in Microsoft WORD, if possible) or typed and double-spaced, with the author's name and address. The editorial staff reserves the right to determine acceptance for publication. The information contained herein has been obtained from sources believed to be reliable and the editors have exercised care to assure its accuracy. However, the MCHC does not guarantee that the contents of this publication are correct or necessarily reflect on the views or policies of the Council, nor does the mention of trade names, commercial products, or organizations imply endorsements by the Council.

Editors: Saskia Janes Bopp and Diane M. Campbell

Layout & Design: MCD Publishing, Augusta

Submit Articles to: MCHC Newsletter, c/o Medical Care Development, 11 Parkwood Drive, Augusta, ME 04330. Phone: 207-622-7566 or e-mail: mchc@mcd.org