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STATE
OF THE
HEART

The Practical Guide to Your Heart and Heart Surgery

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with

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Foreword by

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Heart disease in adults generally develops later in life. Although heart disease is not completely preventable, there are many things that can be done to help enjoy a healthy, longer life free from heart disease.

STAYING HEALTHY

HEART DISEASE IN ADULTS IS usually acquired, meaning that it develops or is caused later in life. It can be brought about by **rheumatic fever**, as in the case of some heart valve diseases. Many physicians believe that genetics may play a role in the susceptibility to heart disease.

Obviously, some risk factors cannot be controlled. However, when physicians talk about "preventing" heart disease, they are talking about addressing certain other risk elements that are known to contribute to the development and progression of heart disease — especially **atherosclerosis**, the condition most often underlying coronary artery disease.

Smoking

People who smoke cigarettes should stop. Smoking is bad for the lungs, other organs and the heart. The chemicals in tobacco smoke increase stress on the heart and accelerate the atherosclerotic process in the blood vessels throughout the body.

Quitting smoking is not easy, but it is very important and has wide-ranging health and lifestyle benefits. There are stop-smoking support groups, and friends and family are often willing to help. Medications can also be prescribed to help smokers quit.

High Blood Pressure (Hypertension)

High blood pressure (hypertension) is dangerous. If blood pressure is high, the heart has to work harder to pump the same amount of blood, which puts a great stress on the cardiovascular system. Patients with high blood pressure are more prone to heart attacks, heart failure, kidney failure, and strokes. Fortunately, blood pressure can be controlled with appropriate medications and lifestyle modifications, greatly reducing the risk of complications.

Some measures that help to control high blood pressure include stopping smoking, losing excess weight, avoiding excessive salt, and exercising at least three to four times a week.

High Cholesterol

Cholesterol contributes to atherosclerosis, which narrows and blocks blood vessels and can result in heart attack and strokes. Many doctors believe that the ideal cholesterol level for American adults should be less than

Rheumatic Fever:
Associated with streptococcus infections, although not actually an infection itself. It usually appears weeks after the infection and may be an allergic reaction to the infection. It can affect the heart, the heart valves, the joints, and the nervous system.

Atherosclerosis:
Lipids, cholesterol, and other fatty deposits located on the inner surface and wall of the artery. It can cause coronary blockages and heart attacks.

Cholesterol:
A fat-like substance, both produced in the body and present in certain types of foods that are made from animals.

Low-density Lipoprotein (LDL): Although it is necessary for the body to function, it is considered the bad type of cholesterol. An excess amount makes a person more prone to developing coronary artery disease and other types of atherosclerotic diseases.

200 milligrams per deciliter (mg/dl) of blood. Studies of large groups of people have shown that when a person's cholesterol level is more than 240 mg/dl, the risk of heart attack is double that of those people with a cholesterol level less than 200 mg/dl. What is an acceptable cholesterol level may actually vary from one person to another. For example, when a person has no risk factors for cardiovascular disease — is not obese, is not diabetic, is a nonsmoker, and has no family history of heart disease — the doctor may be comfortable in regularly reevaluating such a patient with a cholesterol level in the 240 mg/dl range without prescribing cholesterol-lowering medication. On the other hand, when a patient has numerous risk factors or known atherosclerotic heart disease, a doctor will work with the patient to decrease the total cholesterol level to less than 200 mg/dl.

One subtype of cholesterol, **low-density lipoprotein** (LDL), can be dangerous if its level in the blood is excessively elevated. It is desirable to keep the LDL level less than 130 mg/dl. Patients with a level of more than 160 mg/dl are at significantly greater risk of developing heart attacks and other problems related to atherosclerosis. From a practical standpoint, LDL serves as the most important cholesterol-related guide to the risk of heart disease and other atherosclerosis-related diseases.

In patients with known heart disease, such as post–coronary bypass patients, this level should be kept to less than 100 mg/dl. In patients who are not actually known to have coronary heart disease but are at high risk of developing heart disease, such as patients with high blood pressure and diabetes, a positive family history of coronary disease, a history of smoking, and obesity, this level should be less than 130 mg/dl.

Cholesterol levels are affected by diet. Diets rich in vegetables and fruits — and even including moderate amounts of alcohol — have been shown to help prevent heart disease.

Lowering of the cholesterol level should first be attempted by diet and exercise. If these interventions alone are not successful in obtaining satisfactory levels, a number of very effective medicines can be used. Most of them belong to a class of drugs called the **statins**. These drugs can usually be used safely but require monitoring by a physician with periodic blood tests because certain side effects and complications sometimes occur when these drugs are taken.

It is important to know that not all cholesterol subtypes are harmful. **High-density lipoprotein**, or HDL, is considered the good or protective type of cholesterol. It is desirable to have an HDL level of thirty-five mg/dl or higher, and ideally of more than forty-five. If the HDL level is less than thirty-five, one is at higher risk for heart attacks and strokes.

After your physician checks your serum cholesterol level and cholesterol subtypes (LDL, HDL), he or she will recommend which foods to avoid and medicines to take, if necessary.

Vitamin E and the Heart

Vitamin E is an antioxidant found in vegetable oil, wheat germ, leafy vegetables, egg yolks, margarine, and legumes (beans).

A number of recent studies have attempted to determine whether taking vitamin E supplements lowers the risk of atherosclerotic heart disease and heart attacks by inhibiting low-density lipoprotein (LDL, the bad type of cholesterol). In the early 1990s, three studies found no correlation between the naturally occurring level of vitamin E in the blood and heart attacks or cardiovascular deaths. In a randomized, double-blind study, a relatively low dose of vitamin E was tested for lung cancer prevention effects. No effect on cardiovascular mortality was found.

Subsequently, the British conducted a study known as the Cambridge Heart Anti-Oxidant Study (CHAOS). One thousand thirty-five patients were assigned to receive vitamin E in relatively large doses (400 to 800 IU), and 960 patients received an identical placebo. All of the patients in the study had coronary atherosclerosis proven by **coronary angiogram**. The patients were studied for about eighteen months.

There were fourteen nonfatal heart attacks in the group receiving vitamin E and forty-one in the placebo group. However, there were actually more cardiovascular deaths in the vitamin E group (twenty-seven versus twenty-three). The authors published their paper in the prestigious British medical journal *Lancet* in 1996 and concluded that vitamin E supplements substantially reduced the rate of nonfatal heart attacks.

More recently, the August 7, 1999, issue of *Lancet* contained an article by a group of Italian doctors who reported their findings about vitamin E in a group of 11,324 patients. All of their patients had suffered heart attacks and were randomized to receive vitamin E and/or another drug or no drug treatment. The patients were studied for about three and a half years. When the doctors compared the group that had been treated with vitamin E against those patients who had been given no treatment, they could find no cardiovascular benefit in the vitamin E–supplemented group.

In another recent *Lancet* article, Drs. Andy Ness and George Davey-Smith reviewed updated CHAOS data as well as information from a number of other published trials with vitamin E supplements and concluded, "On the basis of all available data, we believe that vitamin E supplements cannot be recommended for patients with coronary heart disease."

In that same issue, Dr. Malcolm J. Mitchinson, on behalf of the CHAOS investigators, replied to Ness and Davey-Smith with the comment, "Their facts seem substantially correct." He went on to state, "No

Statins:
A group of lipid-lowering drugs.

High-Density Lipoprotein:
This is known as the good type of cholesterol. A higher HDL level is good and indicates one is less likely to suffer a heart attack.

Coronary Angiogram:
An x-ray movie of a coronary artery.

Light exercise like bike riding is recommended for both heart patients and people with no heart disease. It is recommended that people exercise at least three times a week for twenty minutes per session.

one would dissent from the express conclusion that CHAOS alone cannot justify a policy of prophylactic supplementation by vitamin E."

Nonetheless, Mitchinson remains optimistic about vitamin E and its potential cardiac health benefits, and he thinks that cardiovascular benefits will eventually be shown with longer follow-up of the CHAOS patients.

The bottom line is that vitamin E is an extremely important vitamin, and we can't live without it. At this point, however, studies of the use of vitamin E supplements to prevent or lessen the effects of cardiovascular disease have not decisively shown a benefit.

However, more studies are underway, and people who are considering taking vitamin E should check with their healthcare professionals, who are continually updated on this research through medical journals and national meetings.

Exercise

Exercise is important. This does not mean you have to run the New York Marathon, but you should try to exercise for at least twenty minutes, three to five times a week. Examples include swimming, walking, bicycling, running, and canoeing. Vigorous exercise is not recommended for some older heart patients.

Stress

Stress and mental attitude can contribute to heart attacks and possibly strokes. Stress can cause elevation of blood pressure. It is caused by many things, including work, school, and relationships.

Lowering stress levels can be very difficult. Learning to relax isn't easy for many people. Sometimes it is a matter of taking the time to do it. There are certain types of exercises, such as tai chi, that contribute

to both physical and mental health. If you find you can't do it alone, don't hesitate to seek professional counseling.

Diabetes

Diabetes is a risk factor for heart disease, but it can be controlled through medication. If diabetes is well controlled, the acceleration of atherosclerosis is not as rapid as it is in patients whose diabetes is poorly controlled. Diabetic patients should have regular checkups for signs of heart disease.

Nutrition for a Healthy Heart

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Nutrition is often overlooked when discussion turns to the prevention or treatment of health problems today. Obesity, for instance, has become an underappreciated epidemic in the United States, especially among children and young adults. The incidence of diabetes has also increased threefold. According to *Scientific American* (August 1996), the U.S. nutritional industry has become a $33 billion business, and healthcare costs related to obesity exceed $45.8 billion annually. In addition, another $23 billion per year is lost in wages and other forms of compensation because people are absent from work for obesity-related problems. Simply stated, fat has become a $100 billion a year problem for Americans.

Most people diet for one of two reasons: either to improve their appearance or to improve their cardiovascular systems. Although proper nutrition cannot reverse atherosclerosis, it can slow its progression. Therefore, good nutrition is an important factor in the prevention and treatment of many heart-related complications like heart attacks and strokes. That brings up an interesting question — how successful have the traditional "healthy heart" diets been, and are they based on acceptable medical fact or just created for consumer appeal?

Most of these diets have concentrated on removing fat, especially saturated fat, from the diet. The American Heart Association recommends a diet with less than 30 percent total fat and less than 10 percent saturated fat. Some experts have even advocated removing all fat from your diet. However, some fats are necessary for the proper functioning of your body. These include polyunsaturated fats, such as linoleic acid and alpha-linoleic acid, and the monounsaturated fats. Many studies have shown that diets too low in fat are actually harmful. They lower total cholesterol levels but often cause a substantial increase in LDL cholesterol, the bad cholesterol.

Keeping this in mind, the guidelines set by the American Heart Association regarding fat consumption are reasonable and healthy. No one should avoid eating lean and trimmed meats, even red meats, to lower fat intake. However, meats should be baked, broiled, or grilled — not deep fried in oil. When cooking with an oil, always choose one that is high in polyunsaturated and monounsaturated fats and low in saturated fats, such as canola oil or olive oil. All fat need not be eliminated, but fat should be consumed carefully and with moderation.

Unfortunately, the low-fat revolution is having a reverse effect as Americans actually get fatter and cholesterol levels still remain too high in many individuals. Obviously, a low-fat diet is a start, but it is not the complete answer. There must be another culprit.

Most body fat comes from sugar, not fat. The body does not store sugar in

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Insulin:
A hormone produced in the pancreas that promotes the use of glucose by the cells and protein formation. Glucose is a simple sugar derived from digested starches, more complex sugars, and other foods. Insulin is also responsible for the formation and storage of fats (lipids).

any appreciable amount, only a few hundred grams as glycogen in the liver and muscles. Most consumed carbohydrates (sugars) are converted under the influence of **insulin** into fat and are stored throughout the body, often in aesthetically undesirable places. In fact, sugar is directly responsible for most cholesterol. Only 40 percent of ingested cholesterol is absorbed from the gastrointestinal tract. Most cholesterol is actually manufactured by the liver under the influence of insulin. The higher the insulin level, the more cholesterol is manufactured. What makes insulin levels rise? Sugar!

Many healthy-heart diets and foods have a reduced fat content but, in most instances, have replaced fat with sugar and, even worse, refined sugar. As fat intake has decreased, refined sugar and processed grain intake has skyrocketed. The average American consumes more than 150 pounds of "added" refined sugar every year.

A healthy diet must address everything — fats (triglycerides); carbohydrates (sugars); protein (amino acids); and fiber. Many people are aware of the harmful effects of too much fat and have taken appropriate steps. Now, people must look carefully at carbohydrate consumption. Attention to correct carbohydrates will involve not only sugar, but also fiber, which has been shown to have a beneficial effect on the cardiovascular system. Only through careful assessment of all foods eaten can anyone make a nutritional difference in their appearance and health. Attention to fat is not enough.

The Insulin Connection

Until recently, carbohydrates were ignored as a health issue. They are at least as important, and probably more so, than fats in determining weight and cardiovascular fitness. The key to carbohydrates' influence is insulin. Insulin is a hormone secreted by the pancreas in response to a carbohydrate-heavy meal. It is impossible to live without it, but it is possible to live much better without too much insulin. Insulin has many actions, but some of the most important affect body fat, cholesterol levels, and cardiovascular health. Insulin

- ♥ facilitates the transport of sugar across cell membranes
- ♥ promotes conversion of glucose to glycogen and free fatty acids in the liver
- ♥ promotes storage of free fatty acids as triglycerides (fat) and fat cells
- ♥ blocks hormone-sensitive lipase (fat-burning enzyme), and
- ♥ stimulates the production of cholesterol in the liver

The bottom line is that insulin, certainly in excessive amounts, causes the body to produce and store fat as well as produce inordinate amounts of cholesterol.

Insulin is now recognized as an important factor in the development of cardiovascular disease. It is known to act directly on the walls of arteries to produce "atheroma" — atherosclerotic plaques — that can narrow the blood vessels, limit blood flow and oxygen delivery, and result in strokes and heart attacks. Insulin can also cause left ventricular hypertrophy (enlargement of the heart).

Making Better Choices

Because insulin secretion is a direct result of eating carbohydrates, should everyone stop or slash their carbohydrate intake? Of course not!

The body is primarily fueled by carbohydrates — diets too restrictive in all carbohydrates are unhealthy. However, people should learn to make better carbohydrate choices. This involves avoiding carbohydrates that are highly insulin producing or high-glycemic.

Good carbohydrate choices include high-fiber vegetables, most fruits, and whole grains.

Certain carbohydrates, such as white potatoes, white rice, white bread, corn, and beets, should be avoided or used sparingly. Foods containing more than five grams of added sugar are generally unhealthy. Check the labels of foods for unnecessarily added refined sugar; these foods — even though they may be low in fat — will result in a high insulin response, causing the body to convert and store this sugar as fat.

Eating for a healthy heart and vascular system, as well as maintaining a good appearance and your waistline, involves many facets of nutrition. Just focusing on fat is not enough. People should choose lean and trimmed meats, with an emphasis on reducing saturated fats, and high fiber vegetables and whole grains, avoiding refined and processed products. Also remember to drink plenty of water, about six to eight glasses, throughout the day. However, limit fluids with meals because they dilute digestive juices, making digestion incomplete. Use moderation in portion sizes; too much of a good thing can be bad.

A good nutritional lifestyle will be physically rewarding as well as healthy. Understanding the foods we eat and making good nutritional choices is good pre-

People can learn to make better carbohydrate choices, such as eating high-fiber vegetables, most fruits, and whole grains. Foods that are heavy in refined or simple sugars should be avoided.
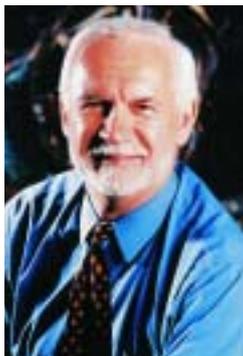
R. Curtis Ellison, M.D.

ventative medicine. At least in nutrition, the old adage certainly applies: "An ounce of prevention is worth a pound of cure."

Wine, Alcohol, and the Heart

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Physicians have generally been reluctant to say anything about the health benefits of alcohol. After all, doctors treat patients suffering the effects of alcohol misuse — from drunk driving to spousal abuse to cirrhosis of the liver. They are naturally worried that the public will interpret the message "a little alcohol is good for your health" as an excuse to drink more heavily. Yet there is now a huge amount of scientific data showing that the moderate consumption of alcohol is a powerful preventative factor in heart disease. Likewise, increasing evidence suggests that balanced information on the effects of alcohol consumption may not always lead to increased abuse.

What is the basis for the claim that moderate alcohol consumption may have health benefits?

Epidemiologists have known for many years that people who consume small to moderate amounts of alcohol have less

Table 3.1: Premature mortality rates from coronary artery disease (per 100,000 persons aged 35-64)

Location	Men	Women
Tokyo, Japan	37	9
Catalonia, Spain	67	10
Toulouse, France	79	11
Area Latina, Italy	102	19
Stanford, California	189	47
Halifax, Nova Scotia	219	53
Belfast, North Ireland	356	88
Glasgow, Scotland	391	133
North Karelia, Finland	493	63

coronary artery disease (CAD) than people who abstain completely. This message was quite a shock to the American public, however, when reporter Morley Safer came on television in November 1991 and talked about the "French Paradox," the name given to the peculiar phenomenon of low rates of CAD in France despite their high-fat diet and cardiovascular risk factors. He attributed it to their regular consumption of red wine.

Is the French Paradox Real?

For years, we've been seeing large differences in the reported rates of death from CAD among different countries. The rates of premature deaths (before age sixty-five years) among men and women studied at different sites in a study sponsored by the World Health Organization are shown in Table 3-1.

One big surprise is that the French have so few deaths from CAD. This occurs despite the fact that the French consume more fat, and even more saturated or animal fat, than Americans. Furthermore, the French have higher rates than Americans of other risk factors, including elevated blood cholesterol, high blood pressure, and smoking. There are areas in other European countries with rates that are similar to those of the French. The so-called French Paradox (and not the "Spanish Paradox" or "Italian Paradox") lies in the fact that the French consume high levels of animal fat, similar to the intake in Northern Europe, yet have CAD rates similar to those in the Mediterranean countries, where the saturated fat consumption is lower.

There are competing theories to explain this, including a higher intake of fruits and vegetables and a lower percentage of fat intake from red meat, as meat in France is very low in fat and smaller portions are generally served than in the U.S. The theory that has received the most scientific support, however, is that the French

consume large amounts of alcohol, on a regular basis, and particularly in the form of wine.

There have been many studies from countries throughout the world connecting the consumption of alcohol to the risk of heart disease. The results have been remarkably consistent: individuals who consume alcohol moderately have fewer heart attacks. In most studies, moderate drinkers experience death rates from CAD that are 20 percent to 50 percent lower than those of people of the same age who are similar in other characteristics except that they do not consume any alcohol. We also see reduced risk of the most common stroke, the **ischemic** or **thrombotic** type, which (like CAD) is related to atherosclerosis.

How Does Alcohol Reduce the Risk of Heart Disease?

We have identified many of the biologic and physiologic effects of wine and alcohol that relate to protection against CAD. Alcohol affects blood lipids; it increases HDL-cholesterol, the "good cholesterol" that lowers the risk of heart disease. Alcohol also tends to slightly decrease LDL-cholesterol, the "bad cholesterol" that increases atherosclerosis. Thus, individuals who have consumed moderate amounts of alcohol for most of their adult years tend to have less atherosclerosis.

Alcohol also positively affects blood coagulation inside the arteries, which contributes to the second factor in heart

Ischemia:
A lack of oxygenated blood flow to a tissue or organ.

Thrombus:
Refers to a blood clot, usually in an artery or the heart.

New studies are beginning to show that moderate to light alcohol consumption (one drink a day, six days a week) may have a protective effect on the heart. This explains why some wine-consuming European countries experience relatively lower rates of coronary artery disease despite high-fat diets.

ATHEROSCLEROSIS: THE GREAT RIDDLE

THE PROGRESS IN HEART SURgery and treatment of general heart disease has been remarkable over the last fifty years. Many conditions that doctors in the 1950s considered fatal are now routinely treatable with a variety of options including drugs (for hypertension, for example), surgery, and less invasive techniques. At the same time these surgical techniques have become accepted, our knowledge of cardiac disease prevention has made incredible leaps forward.

What does the future hold for cardiac therapy? Dr. Michael DeBakey, one of the world's most prominent cardiovascular surgeons, says that atherosclerosis will be the next major medical hurdle. Although the risk factors that contribute to blocked arteries are well known, in about a third of the cases of atherosclerosis, the patients are nonsmokers who eat well and exercise regularly.

"There may even be a viral cause," DeBakey said in a recent interview. "It's the most frustrating problem I've had to deal with, finding the cause of atherosclerosis. Until we know the specific cause of atherosclerosis, we're not going to be able to prevent it. Therefore, until we can do that, we're going to have to deal with the disease. We are educating the public in these risk factors, and there's no doubt they are responding, but the fact remains that the disease is just as prevalent, although we have reduced the mortality of the disease. We will continue to use the methods we have of treating blocked arteries and aneurysms, which are all caused by atherosclerosis."

attacks: the formation of blood clots. We now know that alcohol, and especially red wine, decreases the stickiness of the platelets, which form clumps that lead to blood clots.

The Pattern of Drinking, Not the Amount, Is More Important

Unlike alcohol's effect on atherosclerosis, which develops over many years, the effect of alcohol on thrombosis only lasts for a day or so. For example, after consumption of alcohol, the platelets are less sticky for only a day or two before going back to their usual state or maybe even becoming abnormally sticky.

These results suggest that people who consume alcohol should do so in small amounts on a regular basis, perhaps daily. Unfortunately, most Americans do not have good drinking patterns. They tend to drink nothing all week and then drink heavily — binge drink — on the weekends. This is a very unhealthy way to consume alcohol and is markedly different from the pattern in Europe, where many people have wine with meals every day. Their platelets and other clotting factors are never able to show the rebound effect and become too sticky. The message should be clear: if you drink, consume small amounts regularly. And remember, you cannot "save up" your drinks for the weekend!

Scientific data now suggest that alcohol is best consumed with meals. For any given amount of alcohol, the blood alcohol level rises only about one-half as high when the alcohol is consumed with food as when it is consumed on an empty stomach. Not only does the blood alcohol level remain lower, but combining the fat in a meal with small amounts of alcohol may also have other beneficial effects on the development of atherosclerosis. In a recent study in Italy, the overall mortality for people who consumed wine with their meals was much less than that for those who consumed their wine at other times.

Of all alcoholic beverages, wine is the one that is generally consumed with meals, and some of the benefits attributed to wine (rather than beer or spirits) may actually be related to the pattern of drinking. If one were to select the safest and potentially most beneficial pattern of drinking, it would be regular wine consumption with meals — on most days, but only one or two drinks each day.

Is Wine the Preferable Beverage for Health?

Many studies cannot show any important differences in heart disease rates on the basis of the type of alcohol usually consumed. On the other hand, we are accumulating new data that suggest that many of the biologically active substances in wine, particularly red wine — substances such as tannins, phenols, resveratrol, and quercetin — are powerful antioxidants, tend to reduce blood clotting, and have other effects that should reduce heart disease risk.

A number of studies have shown that wine drinkers do better than beer and spirits drinkers in terms of disease outcomes. For example, in a large study from the Kaiser Permanente Medical Center in California, researchers found less heart disease among wine drinkers, and not just red wine drinkers, than among drinkers of other beverages. Similar results have been reported from studies in Copenhagen and Scotland. However, at least in some countries, wine drinkers may be different in many ways from beer or spirits drinkers. For example, in the United States, wine drinkers tend to be better educated, have higher incomes, smoke less, and exercise more than beer drinkers. It is difficult to be sure that wine drinkers are healthier because they drink wine or because people who have healthier lifestyles tend to drink wine.

Although all alcohol shows protective benefits, it is perhaps best to drink red wine, which has other health benefits, with meals to aid in absorption and reduce the effect of the alcohol.

I interpret the scientific data as showing that wine probably has additional benefits not found in other beverages. On the other hand, all types of alcohol provide protection against CAD. Patients who don't like wine but are having a cocktail before dinner most nights (and are not having a problem with excessive or inappropriate drinking) can continue to enjoy it.

Can't We Just Eat a Healthy Diet to Prevent Heart Disease?

Some physicians argue that we do not have to use alcohol to prevent CAD because we know other ways (changes in lifestyle habits) that will prevent heart disease: lose weight and change your diet. But they do not often appreciate how difficult it is for someone to lose 10 to 20 pounds (and keep it off) or how difficult it is for people to permanently adopt a very low-fat and low-cholesterol diet.

Further, our data suggest that the moderate use of alcohol reduces the risk of CAD to a greater extent than would be expected if a healthy lifestyle were adopted sufficient to lower total cholesterol by thirty mg/dl (from 240 to 210 mg/dl) or decrease blood pressure by twenty mmHg (from 140 to 120 mmHg).

Alcohol and Breast Cancer

Although many studies have shown that breast cancer rates are higher among heavier drinkers, a number of research reports suggest that only a small increase in risk begins to appear among women who normally consume just one or two drinks per day. This is not found consistently in all studies. At our institute at Boston University, we have completed a study of wine, beer, and spirits as they relate to breast cancer by using data from the Framingham Study that has been

A Few Words About the Dangers of Alcohol

EACH YEAR IN THE UNITED States and around the world, the consumption of alcohol is associated with numerous motor vehicle accidents. In addition, alcohol can be addictive and is the root of many social problems. Alcohol, in excess, is also associated with various health problems, including liver damage and damage to the fetus of women who consumed alcohol during pregnancy. In addition, consumption of large quantities of alcohol over prolonged periods of time can actually cause serious damage to the heart muscle itself.

Recently, however, there has been mounting evidence to indicate that alcohol, and particularly wine, when consumed in moderation, may be beneficial to your heart, particularly in controlling the progression of coronary artery disease.

studying more than five thousand women for twenty-five to forty-five years. We found that the large group of women who never consumed alcohol throughout their lives had the same risk of breast cancer as those who consumed any type of alcohol.

I am not suggesting that all nondrinking women should rush out and start consuming alcohol. Because other studies have shown an increase in risk of breast cancer from even moderate drinking, younger women and women who may be at increased risk for breast cancer should discuss their decision regarding drinking with their own doctors before making changes in their lifestyle. We must keep in mind, however, that a postmenopausal woman in the United States is much more likely to die from heart disease or stroke — diseases for which she would be at a lower risk if she consumed a little alcohol — than she is to die of breast cancer.

Will Drinking Make One Live Longer?

It depends on how much alcohol is consumed. We know that heavy alcohol consumption or inappropriate alcohol use is very harmful to the individual doing the drinking, those around him or her, and society. But are moderate and responsible drinkers likely to live longer than they would if they did not drink alcoholic beverages? The bottom line for epidemiologists is total mortality. We know that, in most prospective studies, the consumption of one or two drinks a day lowers the death rate. We recently had a report from a very large survey (almost fifty thousand people) done by the American Cancer Society on the risk of dying according to alcohol consumption. Total mortality decreased by 21 percent for men and women who reported that they averaged one or two drinks per day compared with that of nondrinkers.

What Is the Message?

We know that in the United States and in most other industrialized societies, hospitalization and death rates are somewhat lower for people who drink moderately than for individuals with similar characteristics who do not drink. Thus, from the public health point of view, we should not promote messages or laws directed at preventing alcohol abuse that have little effect on abusers but lead mod-

erate and responsible drinkers to stop drinking. Our health messages should provide scientifically sound and balanced information to permit people to make informed decisions.

In summary, the scientific data are quite clear: light to moderate alcohol consumption is associated with lower risk of heart disease and stroke. We should try to make sure that the medical community, the public, and our policy-makers are kept up-to-date on the scientific findings. And those findings tend to support what St. Thomas Aquinas said more than seven hundred years ago: "If a man abstains from wine to such an extent that he does serious harm to his nature, he will not be free from blame!"

ANTIBIOTIC PROTECTION FOR DENTAL SURGERY

SOME TYPES OF HEART CONDI- tions put people at a higher risk to develop infectious endocarditis, or an infection of the heart that can damage heart valves. To protect these patients, cardiologists often recommend antibiotic protection before undergoing surgery, including dental surgery. Your dentist or dental surgeon, in addition to any other doctors, should be made aware if you have one of these conditions before you undergo surgery.

The heart conditions that make a patient susceptible to infectious endocarditis include

- ♥ People with artificial valves, whether they are artificial or biological
- ♥ People with most types of congenital heart defects
- ♥ Patients with mitral valve prolapse with mitral valve regurgitation and/or thickened leaflets
- ♥ Patients with acquired valvular disease, such as from rheumatic heart disease
- ♥ Patients with abnormally thickened heart muscle

Patients who have had coronary artery bypass grafting, however, do not generally need antibiotic protection during dental procedures. As always, though, if you have a heart problem, check with your cardiologist and it is recommended to remind your dentist and other doctors about your condition.