

### Chapter 1 : Cardiovascular disease - Wikipedia

*Other Vascular Diseases Cardiovascular disease includes conditions that affect the structures or function of your heart, such as: Coronary artery disease (narrowing of the arteries).*

Overview Cholesterol , a fatlike substance, travels around in your bloodstream in high-density lipoproteins HDL and low-density lipoproteins LDL: LDL carries cholesterol to the parts of your body that need it. Narrowed or blocked arteries can prevent blood from reaching your heart, brain, or other organs. This can lead to stroke, heart attack, or even heart failure. Your liver produces all the cholesterol you need. But you can also get a lot of cholesterol from food. For decades, research has indicated that diet and cholesterol play a role in heart health. More recent research suggests that the connection may be more complex than has been thought. The association between cholesterol and heart disease The Dietary Guidelines for Americans specifically limited dietary cholesterol to no more than milligrams per day. It mentions studies and trials that have produced strong evidence that healthy eating patterns that are low in dietary cholesterol can reduce the risk of heart disease in adults. An eight-week study published in stated that elevated LDL is an established risk factor for heart disease and that dietary fatty acids play a significant role in the development of heart disease. The researchers found that making minor dietary changes in this case, replacing a few regularly eaten foods with better fat-quality alternatives reduced cholesterol and could potentially reduce future risk of heart disease. Researchers raise questions Newer research questions the role cholesterol plays in the development of heart disease. A systematic review published in found that people over 60 years old who have high LDL cholesterol live as long or longer than people with low LDL. The researchers suggest reevaluating the guidelines for heart disease prevention in older adults. The team chose studies from only one database and only those published in English. More research on cholesterol, particularly dietary cholesterol, needs to be done. Both of these changes are associated with increased risk of heart disease, according to the American Heart Association. Trans fats also offer no nutritional value. Partially hydrogenated oils PHOs are the main source of trans fat in our diets. In , the U. In the meantime, try to avoid food that lists PHOs or trans fats on the label. Saturated fats are another source of LDL cholesterol and should be consumed sparingly. Foods containing saturated fats include: Being overweight or obese raises your risk of heart disease as well as other health conditions. Grill, broil, or bake instead of frying. Trim the fat off meats and remove skin from poultry. Use a rack to drain fat off meat and poultry cooked in the oven. Avoid basting with fat drippings. Having high blood cholesterol is one risk factor for heart disease. Other risk factors include:

**Chapter 2 : Heart disease - Diagnosis and treatment - Mayo Clinic**

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**Thrombolytic Therapy For Acute Heart Attack** An interesting study with far-reaching implications compared primary angioplasty to intravenous thrombolytic therapy for acute myocardial infarctions heart attacks. An example of a thrombolytic is streptokinase Streptase , which enhances the conversion of plasminogen to the fibrinolytic enzyme plasmin. Plasmin has a high specificity for fibrin and the particular ability to dissolve formed fibrin clots. Other drugs used to open clogged arteries during and after a heart attack are t-PA Activase and anistreplase Eminase. Angioplasty is fully described in the preceding section. Most cases of acute myocardial infarctions are caused by thrombotic occlusion of a ruptured plaque, diminishing blood circulation. Earlier research suggested there might be a time frame in human beings during which restoration of blood flow in the infarct-related artery might limit infarct size Reimer et al. Research verified the concept, showing that timely reperfusion a procedure in which blocked arteries are opened to reestablish forward flow of blood resulted in less heart muscle damage and enhanced survival Davies et al. The period from symptom onset to thrombolytic administration was related to reduced infarct size and mortality, with the greatest benefits within the first several hours following early symptoms. From these observations arose the premise that "time is muscle," establishing the need for swift treatment in progressive cardiac care FTTCCG Based on its widespread availability, intravenous thrombolytic therapy has been the standard care for patients with acute myocardial infarction. Despite its popularity, thrombolytic therapy has limitations. Consequently, primary percutaneous transluminal coronary angioplasty primary PTCA has been advocated as a better treatment for patients with acute myocardial infarction. Proponents cited higher rates of opened vessels and improved blood flow to the heart among users of PTCA. Naysayers in turn pointed out negatives associated with primary angioplasty, citing excessive delays to treatment compared with thrombolytic therapy, unproven results in large clinical trials, and a lack of widespread availability of treatment centers. Yet, 22 trials involving patients demonstrated that for every patients treated with primary angioplasty rather than thrombolytic therapy an additional 20 lives were saved, 43 reinfarctions were prevented, 10 less strokes occurred, and 13 intracranial hemorrhages were avoided meta-analysis by Ellen C. The angioplasty advantage was still observed even if the patient had to be transported by 3 hour ambulance trip to a center equipped to perform the procedure. It typically takes about 2 hours to mobilize the medical team to perform the angiography and angioplasty in the United States compared to 60 to 90 minutes in European hospitals Cannon et al. Despite the inherent delays apparent with angioplasty, the evidence that primary PTCA offers advantage compared to thrombolytic therapy appears convincing. Optimizing angioplasty with coronary stents and drug regimens has significantly improved the early safety profile and long-term results of percutaneous intervention in acute myocardial infarctions Stone et al. Survival trends were similar between patients undergoing angioplasty and those receiving thrombolytic therapy, but the lower-risk population initially enrolled in the study appeared to explain the similarity in mortality statistics. The survival benefit of primary angioplasty is mostly seen in high-risk patients, such as the elderly, and those with anterior myocardial infarction, or in shock Stone et al. The lack of a survival benefit in low-risk patients does not diminish the clinical relevance of fewer strokes, reinfarctions, a reduction in urgent revascularization procedures, and shorter hospital stays with primary PTCA, compared to fibrinolytic therapies. Some advocate facilitated primary PTCA trials, i. However, the additional costs and bleeding complications that will certainly accrue by adding thrombolytic therapy before primary angioplasty cannot be dismissed without evidence of overriding benefit. PTCA enthusiasts avow that currently the best therapy for most patients with developing acute heart attack should no longer be debated: To do less, they caution, can no longer be considered standard care Stone b. **Angioplasty Among Diabetics** Although about , angioplasties are performed annually in the United States, the procedure is not a worthy consideration for everyone. Patients with diabetes mellitus, who are in need of revascularization, have better survival odds with coronary artery bypass grafting CABG compared to angioplasty, according to study findings published in the Journal of the American College of

Cardiology Bari Investigators Detre University of Pittsburgh: Among non-diabetics, the survival rates were Does Multivessel Stenting Improve Odds? So great are the numbers, Martin Leon, M. A stent is a rod or threadlike device inserted within a closed or partially closed artery to allow adequate blood flow through the vessel Leon According to Korean researchers, the excitement regarding stents appears to be justified. In fact, research suggests that some patients with coronary artery disease may be excellent candidates for multivessel coronary artery stenting, instead of bypass surgery. Seung-Jung Park University of Ulsan, Seoul reviewed observational data, evaluating patients with multivessel coronary artery disease and normal left ventricular function. Half of the patients underwent bypass surgery and the other half had multivessel stenting. Because restenosis closure is a major concern after angioplasty, strategies that will benefit patients prone to vascular reclosure are being developed. Vascular brachytherapy, the placement of intracoronary radioactive sources, has dramatically lowered neo new intimal growth patterns following angioplasty trauma. Teirstein, inserted a ribbon of radioactive pellets into the artery for minutes to help prevent the growth of scar tissue. The clinical efficacy observed at 6 months was maintained at the 3-year follow-up Teirstein et al. Research carried out at the Division of Cardiology Washington Hospital Center showed overwhelmingly that gamma-radiation therapy delivers impressive results. The one-time exposure to radiation does no apparent harm to heart tissue or the artery. The Journal of the American Heart Association reported that an assessment of the procedure at the 3-year interval indicated it was both safe and effective. Teirstein cautions that until much longer follow-ups demonstrate the benefits and safety of the radiation technique, it would be premature to recommend radiation therapy for the first line of treatment for patients with clogged coronary arteries Teirstein et al. In the interim, major hospitals are gearing for brachytherapy as an option for patients with chronic coronary artery disease who are subject to adhesions following cardiac procedures. Chelation therapy represents to some a safe, effective, and relatively inexpensive treatment to restore blood flow through atherosclerotic vessels. The word chelation is derived from a Greek translation meaning "claw-like," or capable of expunging accumulated atheromatous materials from the body. During chelation, ethylenediaminetetraacetic acid EDTA , a synthetic amino acid, is intravenously infused, along with other nutrients, to enact the extraction process. EDTA encircles and holds elements, passing them from the body in urine. With progressive treatments, accumulated pollutants are exhumed from body stores, along with materials that encourage free-radical damage and cellular breakdown. The heart-related conditions currently treatable with chelation therapy include arteriosclerosis and atherosclerosis, angina pectoris, hypertension, transient ischemic attacks, circulatory diseases, hemochromatosis, and Type II diabetes Walker ; Powell et al. Historically, chelation had an inception quite different from that of an antiarteriosclerotic. A decade later, Dr. Norman Clarke director of research at Providence Hospital in Detroit observed that patients treated for lead poisoning with chelation therapy had a simultaneous cessation of angina attacks. This chance beginning introduced EDTA to a few cardiovascular physicians who were searching for alternatives, apart from heart surgery, to remove plaque from diseased arteries. Chelation therapy has had many deterrents along its controversial pathway. Even today, the American Heart Association, after reviewing the literature in regard to chelation and arteriosclerotic heart disease, has announced that the scientific evidence does not demonstrate any benefit from the therapy. The American Medical Association compared its effectiveness to that of a sugar pill. JAMA recently reported that based on exercise time to ischemia and exercise capacity, there is no evidence to support a chelation benefit in patients with ischemic heart disease, stable angina, or a positive treadmill test for ischemia Knudtson et al. Chelation supporters quickly rose to the accusation, among them Dr. Elmer Cranton, author of Bypassing Bypass. Cranton referred to the JAMA report as "sham science," citing statistical errors and patient disparities as compromising factors. One-third of the patients did not have angina, according to Cranton, and almost twice as many patients in the placebo group received antianginal drugs--and angina was supposedly one of the endpoints. Cranton avows that the study was inadequate to show any response, beneficial or otherwise. Researchers agreed in part , citing the need for larger trials with a broad range of patients. Terry Chappell former president of ACAM enrolled 32 physicians who were using the standard ACAM chelation protocol treatments of EDTA, oral nutritional supplements, and lifestyle changes--in a study to assess the cardiovascular value of treatment. All of the patients participating in the

study were appropriately diagnosed with vascular disease before the therapy began. Objective testing was done before and after each treatment. The results showed that chelation therapy in union with supplements and lifestyle intervention was yielding positive results. Walker, a staunch advocate of chelation therapy, believes that the danger of death from bypass surgery is about times greater than from chelation therapy. Walker The success of chelation therapy appears directly related to the refusion of minerals withdrawn during the extraction process. A physician trained in autonomic balancing, a process described earlier in the material, appears essential to the success or failure of the process. Edward Olszewer and associates published two reports a retrospective analysis of patients with vascular and other chronic degenerative diseases and a single-blind, crossover study of a small group of patients with peripheral vascular disease suggesting a beneficial effect from chelation. In the latter study, all 10 subjects receiving chelation benefited Olszewer et al. The National Center for Complementary and Alternative Medicine and the National Heart, Lung, and Blood Institute have launched the first large-scale clinical trial to determine the safety and efficacy of EDTA chelation therapy in individuals with confirmed coronary artery disease. Plans for the 5-year study, involving over patients at more than research sites across the country, are currently being finalized. Coronary Gene Therapy Coronary gene therapy is another alternative to either angioplasty or coronary artery bypass surgery for high risk patients. Gene therapy increases the options of individuals who have failed drug treatment and appear to be poor candidates for aggressive surgical procedures. A battery of tests confirms the acceptability of a patient wishing to be enrolled in the gene program. During coronary gene therapy, x-ray imaging allows the gene for the human vascular endothelial growth factor VEGF2 to be delivered to the heart via a catheter inserted through a puncture in the inguinal groin region. A needle is advanced out of the catheter and used to inject DNA into the inner wall of the heart, a sequence that produces the vascular endothelial growth factor and stimulates the growth of new blood vessels. Although the process is constantly being advanced and refined, many patients have successfully undergone the treatment since Two concerns researchers had concerning gene therapy were that blood vessel growth factors might nourish the blood supply of undetected cancers and cause damaging overgrowth of vessels in tissues such as the retina of the eye. Timothy Henry Hennepin County Medical Center, Minneapolis reported that among patients enrolled in a VEGF trial, four patients in the placebo group developed cancer compared with one patient in the low dose VEGF group and none in the high dose group. Currently, there appears to be no retinal damage in diabetic patients who have undergone the procedure. These results are preliminary and inconclusive, but early assessments deem VEGF therapy a burgeoning alternative to either bypass surgery or angioplasty for coronary and vascular disease. For more information concerning coronary gene therapy, contact St.

### Chapter 3 : CDC - DHDSP - Heart Disease Facts and Statistics

*Although heart catheterization is the gold standard to define the anatomy of the heart and to confirm heart disease diagnosis (either with partial or complete blockage or no blockage), this is an invasive test and not necessarily indicated for many patients.*

Over three quarters of CVD deaths take place in low- and middle-income countries. Most cardiovascular diseases can be prevented by addressing behavioural risk factors such as tobacco use, unhealthy diet and obesity, physical inactivity and harmful use of alcohol using population-wide strategies. People with cardiovascular disease or who are at high cardiovascular risk due to the presence of one or more risk factors such as hypertension, diabetes, hyperlipidaemia or already established disease need early detection and management using counselling and medicines, as appropriate. What are cardiovascular diseases? Cardiovascular diseases CVDs are a group of disorders of the heart and blood vessels and they include: Heart attacks and strokes are usually acute events and are mainly caused by a blockage that prevents blood from flowing to the heart or brain. The most common reason for this is a build-up of fatty deposits on the inner walls of the blood vessels that supply the heart or brain. Strokes can also be caused by bleeding from a blood vessel in the brain or from blood clots. The cause of heart attacks and strokes are usually the presence of a combination of risk factors, such as tobacco use, unhealthy diet and obesity, physical inactivity and harmful use of alcohol, hypertension, diabetes and hyperlipidaemia. What are the risk factors for cardiovascular disease? The most important behavioural risk factors of heart disease and stroke are unhealthy diet, physical inactivity, tobacco use and harmful use of alcohol. The effects of behavioural risk factors may show up in individuals as raised blood pressure, raised blood glucose, raised blood lipids, and overweight and obesity. Cessation of tobacco use, reduction of salt in the diet, consuming fruits and vegetables, regular physical activity and avoiding harmful use of alcohol have been shown to reduce the risk of cardiovascular disease. In addition, drug treatment of diabetes, hypertension and high blood lipids may be necessary to reduce cardiovascular risk and prevent heart attacks and strokes. Health policies that create conducive environments for making healthy choices affordable and available are essential for motivating people to adopt and sustain healthy behaviour. There are also a number of underlying determinants of CVDs or "the causes of the causes". These are a reflection of the major forces driving social, economic and cultural change – globalization, urbanization and population ageing. Other determinants of CVDs include poverty, stress and hereditary factors. What are common symptoms of cardiovascular diseases? Symptoms of heart attacks and strokes Often, there are no symptoms of the underlying disease of the blood vessels. A heart attack or stroke may be the first warning of underlying disease. Symptoms of a heart attack include: In addition the person may experience difficulty in breathing or shortness of breath; feeling sick or vomiting; feeling light-headed or faint; breaking into a cold sweat; and becoming pale. Women are more likely to have shortness of breath, nausea, vomiting, and back or jaw pain. The most common symptom of a stroke is sudden weakness of the face, arm, or leg, most often on one side of the body. Other symptoms include sudden onset of: People experiencing these symptoms should seek medical care immediately. What is rheumatic heart disease? Rheumatic heart disease is caused by damage to the heart valves and heart muscle from the inflammation and scarring caused by rheumatic fever. Rheumatic fever is caused by an abnormal response of the body to infection with streptococcal bacteria, which usually begins as a sore throat or tonsillitis in children. Rheumatic fever mostly affects children in developing countries, especially where poverty is widespread. Symptoms of rheumatic heart disease Symptoms of rheumatic heart disease include: Symptoms of rheumatic fever include: Why are cardiovascular diseases a development issue in low- and middle-income countries? People in low- and middle-income countries often do not have the benefit of integrated primary health care programmes for early detection and treatment of people with risk factors compared to people in high-income countries. People in low- and middle-income countries who suffer from CVDs and other noncommunicable diseases have less access to effective and equitable health care services which respond to their needs. As a result, many people in low- and middle-income countries are detected late in the course of the disease and die younger from CVDs

and other noncommunicable diseases, often in their most productive years. The poorest people in low- and middle-income countries are affected most. At the household level, sufficient evidence is emerging to prove that CVDs and other noncommunicable diseases contribute to poverty due to catastrophic health spending and high out-of-pocket expenditure. At macro-economic level, CVDs place a heavy burden on the economies of low- and middle-income countries. How can the burden of cardiovascular diseases be reduced? They include two types of interventions: Examples of population-wide interventions that can be implemented to reduce CVDs include: At the individual level, for prevention of first heart attacks and strokes, individual health-care interventions need to be targeted to those at high total cardiovascular risk or those with single risk factor levels above traditional thresholds, such as hypertension and hypercholesterolemia. The former approach is more cost-effective than the latter and has the potential to substantially reduce cardiovascular events. This approach is feasible in primary care in low-resource settings, including by non-physician health workers. For secondary prevention of cardiovascular disease in those with established disease, including diabetes, treatment with the following medications are necessary: Currently there are major gaps in the implementation of these interventions particularly at the primary health care level. In addition costly surgical operations are sometimes required to treat CVDs. Such devices include pacemakers, prosthetic valves, and patches for closing holes in the heart. Two of the global targets directly focus on preventing and controlling CVDs. Raised blood pressure is the leading risk factor for cardiovascular disease. The number of adults with raised blood pressure increased from million in to 1. Reducing the incidence of hypertension by implementing population-wide policies to reduce behavioural risk factors, including harmful use of alcohol, physical inactivity, overweight, obesity and high salt intake, is essential to attaining this target. A total-risk approach needs to be adopted for early detection and cost-effective management of hypertension in order to prevent heart attacks, strokes and other complications. Prevention of heart attacks and strokes through a total cardiovascular risk approach is more cost-effective than treatment decisions based on individual risk factor thresholds only and should be part of the basic benefits package for pursuing universal health coverage. Achieving this target will require strengthening key health system components, including health-care financing to ensure access to basic health technologies and essential NCD medicines. In , countries will begin to set national targets and measure progress on the baselines reported in the "Global status report on noncommunicable diseases ". The UN General Assembly will convene a third high-level meeting on NCDs in to take stock of national progress in attaining the voluntary global targets by

### Chapter 4 : Cardiovascular Diseases - Mayo Clinic

*Cardiovascular disease (CVD) is a class of diseases that involve the heart or blood vessels. Cardiovascular disease includes coronary artery diseases (CAD) such as angina and myocardial infarction (commonly known as a heart attack).*

No matter what type of heart disease you have, your doctor will likely perform a physical exam and ask about your personal and family medical history before doing any tests. Besides blood tests and a chest X-ray, tests to diagnose heart disease can include: A Holter monitor is a portable device you wear to record a continuous ECG, usually for 24 to 72 hours. This type of test involves raising your heart rate with exercise or medicine while performing heart tests and imaging to check how your heart responds. In this test, a short tube sheath is inserted into a vein or artery in your leg groin or arm. A hollow, flexible and longer tube guide catheter is then inserted into the sheath. Aided by X-ray images on a monitor, your doctor threads the guide catheter through that artery until it reaches your heart. The pressures in your heart chambers can be measured, and dye can be injected. The dye can be seen on an X-ray, which helps your doctor see the blood flow through your heart, blood vessels and valves to check for abnormalities. Cardiac computerized tomography CT scan. This test is often used to check for heart problems. In a cardiac CT scan, you lie on a table inside a doughnut-shaped machine. An X-ray tube inside the machine rotates around your body and collects images of your heart and chest. Cardiac magnetic resonance imaging MRI. For this test, you lie on a table inside a long tube-like machine that produces a magnetic field. The magnetic field produces pictures to help your doctor evaluate your heart. Treatment Heart disease treatments vary by condition. In general, treatment for heart disease usually includes: These include eating a low-fat and low-sodium diet, getting at least 30 minutes of moderate exercise on most days of the week, quitting smoking, and limiting alcohol intake. The type of medication will depend on the type of heart disease. Medical procedures or surgery. The type of procedure will depend on the type of heart disease and the extent of the damage to your heart. Request an Appointment at Mayo Clinic Clinical trials Explore Mayo Clinic studies testing new treatments, interventions and tests as a means to prevent, detect, treat or manage this disease. Lifestyle and home remedies Heart disease can be improved or even prevented by making certain lifestyle changes. The following changes can help anyone who wants to improve heart health: Smoking is a major risk factor for heart disease, especially atherosclerosis. Quitting is the best way to reduce your risk of heart disease and its complications. Control your blood pressure. Ask your doctor for a blood pressure measurement at least every two years. He or she may recommend more frequent measurements if your blood pressure is higher than normal or you have a history of heart disease. Optimal blood pressure is less than systolic and 80 diastolic, as measured in millimeters of mercury mm Hg. You may need to start testing earlier if high cholesterol is in your family. Keep diabetes under control. If you have diabetes, tight blood sugar control can help reduce the risk of heart disease. Exercise helps you achieve and maintain a healthy weight and control diabetes, elevated cholesterol and high blood pressure all risk factors for heart disease. If you have a heart arrhythmia or heart defect, there may be some restrictions on the activities you can do, so talk to your doctor. A heart-healthy diet based on fruits, vegetables and whole grains and low in saturated fat, cholesterol, sodium and added sugar can help you control your weight, blood pressure and cholesterol. Maintain a healthy weight. Being overweight increases your risk of heart disease. A BMI of less than 25 and a waist circumference of 35 inches Reduce stress as much as possible. Practice techniques for managing stress, such as muscle relaxation and deep breathing. Being depressed can increase your risk of heart disease significantly. Talk to your doctor if you feel hopeless or uninterested in your life. Stay away from people with infectious diseases such as colds, get vaccinated against the flu, regularly wash your hands, and brush and floss your teeth regularly to keep yourself well. Also, get regular medical checkups. Early detection and treatment can set the stage for a lifetime of better heart health. Coping and support You may feel frustrated, upset or overwhelmed upon learning you or your loved one has heart disease. Fortunately, there are ways to help cope with heart disease or improve your condition. Cardiac rehabilitation involves levels of monitored exercise, nutritional counseling, emotional support, and support and education about lifestyle changes to reduce your risk of heart problems. Turning to friends and family for support is essential,

but if you need more help, talk to your doctor about joining a support group. You may find that talking about your concerns with others with similar difficulties can help. Preparing for your appointment

Some types of heart disease will be discovered without an appointment – for example, if a child is born with a serious heart defect, it will be detected soon after birth. In other cases, your heart disease may be diagnosed in an emergency situation, such as a heart attack. If you think you have heart disease or are worried about your heart disease risk because of your family history, see your family doctor. You may be referred to a heart specialist cardiologist.

What you can do

Be aware of pre-appointment restrictions. You may need to fast before a cholesterol test, for example. Write down key personal information – including a family history of heart disease, stroke, high blood pressure or diabetes – and major stresses or recent life changes. Take someone along, if possible. Be prepared to discuss your diet and your smoking and exercise habits. Write down questions to ask your doctor. For heart disease, some basic questions to ask your doctor include: What is likely causing my symptoms or condition? What are other possible causes for my symptoms or condition? What tests will I need? What foods should I eat or avoid? How often should I be screened for heart disease? For example, how often do I need a cholesterol test? I have other health conditions. How do I manage them together? Are there restrictions that I need to follow? Should I see a specialist? Are there brochures or other materials that I can have? What websites do you recommend? What to expect from your doctor

Your doctor is likely to ask you questions, such as: When did your symptoms begin? Have your symptoms been continuous or occasional? How severe are your symptoms? What, if anything, seems to improve your symptoms? What, if anything, appears to worsen your symptoms? Do you have a family history of heart disease, diabetes, high blood pressure or other serious illness? These are primary lines of defense against heart disease and its complications.

### Chapter 5 : CDC - Heart Disease Home - DHDSP

*19 Cardiovascular Disease the deposit of lipid-rich calcifications (scabs), begins to occlude the artery, making it more vulnerable to subsequent plaque injuries.*

Missouri What are the risk factors? These are some of the more common ones: High blood pressure , or hypertension, has long been recognized as a major risk factor for cardiovascular disease. People with high cholesterol are twice as likely to develop heart disease as people with normal cholesterol levels are. Adults with a depressive disorder or symptoms of depression have a 64 percent greater risk of developing coronary artery disease. Certain behaviors also put you at risk for heart disease. Smoking is a major cause of cardiovascular disease and causes approximately 1 out of every 4 deaths from it. Eating a poor diet. A Cleveland Clinic study showed only one-third of Americans knew that someone with heart disease needs to exercise the same amount as someone without heart disease. Researchers have found that heavy alcohol use is associated with an increased risk of heart attack and congestive heart failure. Follow these six simple tips to keep your ticker ticking: Drink no more than one to two alcoholic drinks per day for men, and one drink per day for women. One drink is defined as 12 ounces of beer a bottle , 4 ounces of wine a proper glass , and 1. Exercise at moderate intensity. That means 30 minutes a day, 5 days a week. Try meditating, spending time with people you love, getting enough sleep, and seek counseling if you need it. Work with a doctor to manage your blood pressure, cholesterol, diabetes, and weight. How much does it cost? According to the Centers for Disease Control and Prevention CDC , the number of visits to the emergency room in where the principal hospital discharge diagnosis was heart disease was , Share on Pinterest All those doctor visits and hospital stays add up â€” not to mention the cost of treatment. By , more than million U.

### Chapter 6 : Cardiovascular diseases (CVDs)

*on February 19, in cardiac research, Heart Health and Cardiology Research, Heart Month, postdocs, research with No Comments Maryline Abrial, PhD, is a postdoctoral research fellow in the Burns Lab at the Cardiovascular Research Center at Massachusetts General Hospital.*

Rheumatic heart disease is heart muscles and valves damage due to rheumatic fever caused by *Streptococcus pyogenes* a group A streptococcal infection. Risk factors There are many risk factors for heart diseases: One of them relates to serum cholesterol level. In men, this increase levels off around age 45 to 50 years. In women, the increase continues sharply until age 60 to 65 years. Estrogen may have protective effects on glucose metabolism and hemostatic system, and may have direct effect in improving endothelial cell function. These effects may, at least in part, explain its cardiovascular benefits. The World Health Organization attributes approximately 1. There is a direct relationship between high levels of alcohol consumption and risk of cardiovascular disease. However, delays in recognition and diagnosis of celiac disease can cause irreversible heart damage. Psychosocial factors, environmental exposures, health behaviours, and health-care access and quality contribute to socio-economic differentials in cardiovascular disease. They include family history, coronary artery calcification score, high sensitivity C-reactive protein hs-CRP , ankle-brachial pressure index , lipoprotein subclasses and particle concentration, lipoprotein a , apolipoproteins A-I and B, fibrinogen , white blood cell count, homocysteine , N-terminal pro B-type natriuretic peptide NT-proBNP , and markers of kidney function. There is evidence that workplace exposure to lead, carbon disulphide, phenoxyacids containing TCDD, as well as working in an environment where aluminium is being electrolytically produced, is associated with stroke. Several large-scale research projects looking at human genetic data have found a robust link between the presence of these mutations, a condition known as clonal hematopoiesis , and cardiovascular disease-related incidents and mortality. The Pathobiological Determinants of Atherosclerosis in Youth PDAY study demonstrated that intimal lesions appear in all the aortas and more than half of the right coronary arteries of youths aged 7-9 years. In order to stem the tide, education and awareness that cardiovascular disease poses the greatest threat, and measures to prevent or reverse this disease must be taken. Obesity and diabetes mellitus are often linked to cardiovascular disease, [64] as are a history of chronic kidney disease and hypercholesterolaemia. Framingham or Reynolds risk scores. The number and variety of risk scores available for use has multiplied, but their efficacy according to a review was unclear due to lack of external validation or impact analysis. Tobacco cessation and avoidance of second-hand smoke. Excessive alcohol intake increases the risk of cardiovascular disease [94] [92] and consumption of alcohol is associated with increased risk of a cardiovascular event in the day following consumption. A Cochrane Review found some evidence that interventions aiming to reduce more than one cardiovascular risk factor may have beneficial effects on blood pressure, body mass index and waist circumference; however, evidence was limited and the authors were unable to draw firm conclusions on the effects on cardiovascular events and mortality. It is unclear whether or not dental care in those with periodontitis affects their risk of cardiovascular disease. Saturated fat and cardiovascular disease and Salt and cardiovascular disease A diet high in fruits and vegetables decreases the risk of cardiovascular disease and death. A Cochrane review found some evidence that yoga has beneficial effects on blood pressure and cholesterol, but studies included in this review were of low quality. Epidemiology Cardiovascular diseases deaths per million persons in

### Chapter 7 : ~Cardiovascular Disease Comprehensive 19 - Invasive vs Noninvasive Testing

*Dr. Bernard J. Gersh discusses his article, Cardiac Cell Repair Therapy: A Clinical Perspective, appearing in the October issue of Mayo Clinic Proceedings. Noninvasive measurement of central vascular pressures with arterial tonometry Jan Stepanek, M.D., M.P.H., consultant at Mayo Clinic.*

### Chapter 8 : 19 years old, heart disease? - Heart Disease - MedHelp

*Heart disease and stroke are preventable, yet they remain leading causes of death, disability, and health care spending in the United States. Alarmingly, in , more than , of these life-changing cardiovascular events happened to adults ages*

### Chapter 9 : Coronary Artery Disease (CAD) - Symptoms, Causes | Everyday Health

*The tests you'll need to diagnose your heart disease depend on what condition your doctor thinks you might have. No matter what type of heart disease you have, your doctor will likely perform a physical exam and ask about your personal and family medical history before doing any tests. Besides blood.*