SLEEP IN THE CARDIAC DISORDERS pdf

1: More Than 10 Hours of Sleep Increases Heart Disease Risk

This article includes discussion of sleep and cardiac disorders, sleep disorders associated with congestive failure, sleep disorders associated with periodic respiration with apnea, sleep disorders associated with angina, sleep disorders associated with arrhythmias, and sleep disorders associated with heart failure.

Obstructive sleep apnea Obstructive sleep apnea Obstructive sleep apnea occurs when the muscles that support the soft tissues in your throat, such as your tongue and soft palate, temporarily relax. When these muscles relax, your airway is narrowed or closed, and breathing is momentarily cut off. This occurs when the muscles in the back of your throat relax. These muscles support the soft palate, the triangular piece of tissue hanging from the soft palate uvula , the tonsils, the side walls of the throat and the tongue. When the muscles relax, your airway narrows or closes as you breathe in. Your brain senses your inability to breathe and briefly rouses you from sleep so that you can reopen your airway. You might snort, choke or gasp. This pattern can repeat itself five to 30 times or more each hour, all night, impairing your ability to reach the deep, restful phases of sleep. Central sleep apnea This less common form of sleep apnea occurs when your brain fails to transmit signals to your breathing muscles. This means that you make no effort to breathe for a short period. You might awaken with shortness of breath or have a difficult time getting to sleep or staying asleep. Risk factors Sleep apnea can affect anyone, even children. But certain factors increase your risk. Obstructive sleep apnea Factors that increase the risk of this form of sleep apnea include: Obesity greatly increases the risk of sleep apnea. Fat deposits around your upper airway can obstruct your breathing. People with thicker necks might have narrower airways. You might have inherited a narrow throat. Tonsils or adenoids also can enlarge and block the airway, particularly in children. Men are two to three times more likely to have sleep apnea than are women. Sleep apnea occurs significantly more often in older adults. Having family members with sleep apnea might increase your risk. Use of alcohol, sedatives or tranquilizers. These substances relax the muscles in your throat, which can worsen obstructive sleep apnea. Smoking can increase the amount of inflammation and fluid retention in the upper airway. Central sleep apnea Risk factors for this form of sleep apnea include: Middle-aged and older people have a higher risk of central sleep apnea. Central sleep apnea is more common in men than it is in women. Having congestive heart failure increases the risk. Using narcotic pain medications. Opioid medications, especially long-acting ones such as methadone, increase the risk of central sleep apnea. Having had a stroke increases your risk of central sleep apnea or treatment-emergent central sleep apnea. Complications Sleep apnea is a serious medical condition. The repeated awakenings associated with sleep apnea make normal, restorative sleep impossible, making severe daytime drowsiness, fatigue and irritability likely. You might have difficulty concentrating and find yourself falling asleep at work, while watching TV or even when driving. People with sleep apnea have an increased risk of motor vehicle and workplace accidents. You might also feel quick-tempered, moody or depressed. Children and adolescents with sleep apnea might perform poorly in school or have behavior problems. High blood pressure or heart problems. Sudden drops in blood oxygen levels that occur during sleep apnea increase blood pressure and strain the cardiovascular system. Having obstructive sleep apnea increases your risk of high blood pressure hypertension. Obstructive sleep apnea might also increase your risk of recurrent heart attack, stroke and abnormal heartbeats, such as atrial fibrillation. If you have heart disease, multiple episodes of low blood oxygen hypoxia or hypoxemia can lead to sudden death from an irregular heartbeat. Having sleep apnea increases your risk of developing insulin resistance and type 2 diabetes. This disorder, which includes high blood pressure, abnormal cholesterol levels, high blood sugar and an increased waist circumference, is linked to a higher risk of heart disease. Complications with medications and surgery. Obstructive sleep apnea is also a concern with certain medications and general anesthesia. People with sleep apnea are more likely to have abnormal results on liver function tests, and their livers are more likely to show signs of scarring nonalcoholic fatty liver disease. Loud snoring can keep anyone who sleeps near you from getting good rest.

SLEEP IN THE CARDIAC DISORDERS pdf

2: The Cardiac Disease and Sleep Apnea Connection

The relationship between sleep and heart failure is a two-way street. Having heart failure means you're likely to have other health issues, including sleep problems. Likewise, sleep problems.

Please enter a valid email address Submit We respect your privacy. Sleep is important to the health and well being of an individual in general; this is a well-established fact. One of those benefits is improved cardiac health. The connection between cardiac disease and sleep apnea a condition that interrupts sleep by causing pauses in breathing has been known for a while. The exact reasons for this connection have not been clear until now, as a recently-concluded study has lifted some of the fog over the issues. For patients with coronary heart disease or heart failure, an early indicator is high hs-TnT levels a protein found in the heart muscle and which is released when damage occurs. Early myocardial heart injury and obstructive sleep apnea were considered during a study. For 12 years, over 1, patients were monitored to observe the results of their sleep apnea. At the outset, all participants were free of both heart failure and coronary heart disease. Individuals were organized into groups according to the severity of their sleep apnea. The results show a remarkable relationship between the severity of the sleep apnea and the early detection of myocardial injury. Higher levels of the hs-TnT protein were consistently seen in patients with severe obstructive sleep apnea. This shows there is a link between sleep apnea and damage to the heart itself: The more severe the apnea, the greater the risk of a cardiac event. While researchers admit that the study has its limitationsâ€”especially due to the fact that only a small percentage of participants showed severe obstructive sleep apneaâ€”the findings have proven beneficial. The revelation of these injuries of varying severity to the heart in patients with sleep apnea could help physicians catch a problem before it worsens. More research is needed in order to fill out the information surrounding these new findings. However, experts are glad to know that there are telling signs that could alert physicians to serious conditions. Patients who suffer from severe sleep apnea can have their hs-TnT levels checked regularly to keep an eye on injury to the heart muscle. Physicians can also adjust treatments to include preventative measures to reduce risk of a serious event. In the meantime, this helps reaffirm the necessity to take sleep apnea seriously ; when a person is losing sleep, the effects are greater than just being tired throughout the day. Good heart health requires proper sleep. The views and opinions expressed in this article are those of the author and not Everyday Health. See More Any opinions, advice, statements, services, advertisements, offers or other information or content expressed or made available through the Sites by third parties, including information providers, are those of the respective authors or distributors and not Everyday Health. Neither Everyday Health, its Licensors nor any third-party content providers guarantee the accuracy, completeness or usefulness of any content. You may be exposed through the Sites or Services to content that violates our policies, is sexually explicit or is otherwise offensive. You access the Sites and Services at your own risk. We take no responsibility for your exposure to third party content on the Sites or the Services. Everyday Health and its Licensors do not assume, and expressly disclaim, any obligation to obtain and include any information other than that provided to it by its third party sources. It should be understood that we do not advocate the use of any product or procedure described in the Sites or through the Services, nor are we responsible for misuse of a product or procedure due to typographical error. See Less The Latest in Sleep.

SLEEP IN THE CARDIAC DISORDERS pdf

3: Six to eight hours of sleep best for the heart, says study | Science | The Guardian

Sleep and sleep disorders both play a role in cardiovascular disease (CVD). The exact role that they play is still not quite clear. One thing that is certain is that there is a higher risk of sudden cardiac death in the first few hours after you wake up.

Stroke Congenital heart defects People with obstructive sleep apnea OSA have been shown to have higher rates of coronary heart disease and strokes. People who have had a heart attack are more likely to have OSA than those without heart disease. It can be even harder for someone to fully recover from a heart attack if their OSA is not treated. OSA is a sleep disorder that occurs when the tissue in the back of the throat blocks the airway. This is very common, because the muscles inside the throat relax as you sleep. You stop breathing, keeping the oxygen you need from getting to the lungs. When you stop breathing, your body wakes up. You can stop breathing hundreds of times in one night. Sleep and High Blood Pressure hypertension Several studies have shown that people with obstructive sleep apnea OSA are at a much greater risk of having high blood pressure. OSA causes your oxygen level to drop. Your heart beats faster due to the lack of oxygen. This causes your blood pressure to rise. Over time, this can lead to an ongoing increase in blood pressure. It is important to treat high blood pressure since it is a proven cause of other forms of cardiovascular disease. This includes heart attack, heart failure and stroke. But treating high blood pressure may not be enough. When high blood pressure does not respond well to treatment, it is often due to the presence of untreated sleep apnea. Once the OSA is treated, then the high blood pressure tends to improve as well. It is vital for your doctor to determine if a sleep disorder such as OSA is a factor in your high blood pressure. There are two main reasons why this may occur: The events that occur during OSA can put great stress on the heart and worsen existing disease. CAD limits the flow of blood due to narrow arteries. This prevents the right amount of oxygen from reaching the heart. Sleep apnea also causes the blood oxygen level to drop during pauses in breathing. This leads to a rise in the heart rate and blood pressure. An extra strain is put on the heart. The amount of oxygen sent to the heart decreases at the time when the heart needs more oxygen. But if the sleep apnea is treated, death due to CAD is reduced. Sleep disorders can be both a cause and an effect of CHF. The low oxygen levels and high blood pressure related to obstructive sleep apnea OSA can cause the kind of damage that leads to CHF. The heart muscle is unable to handle the stress caused by the OSA. People who have CHF from another cause will see it get worse if they then develop sleep apnea. If sleep apnea is treated, however, patients with CHF will see their heart function improve. CSA occurs when the brain fails to tell the lungs to breathe. As this signal is lost, the lungs do not take in the oxygen that your body needs. This happens most often as people are falling asleep. CSA also causes people to wake up many times in the night. When they wake up, their heart rate and blood pressure both rise. The low levels of oxygen that result from CSA are very harmful. The result is that CSA may worsen heart failure. In return, the heart failure may promote CSA. This causes a horrible cycle of declining heart function. Properly treating the heart failure is the best way to prevent CSA. If CSA still develops, there are treatments that can be used to keep it from occurring. Sleep and Stroke A stroke damages the brain when the blood supply to the brain is cut off. This occurs when an artery that brings blood to the brain either clots or bursts. Brain cells can die if the flow of blood to the brain stops for longer than a few seconds. This can cause permanent brain damage. The part of the body controlled by that section of the brain will not be able to function normally. Strokes are the cause of one out of every 15 deaths in the U. High blood pressure is the most common cause of a stroke. Obstructive sleep apnea OSA may indirectly lead to a stroke by causing a rise in blood pressure. Sleep apnea can also directly cause a stroke by reducing the blood flow to the brain. This occurs when the level of oxygen drops during pauses in breathing. It is also common for OSA to begin to occur after someone has had a stroke. This may hinder a person as he tries to recover from the stroke. People with congestive heart failure CHF often have a hard time falling asleep or staying asleep. This is due to the shortness of breath that is caused by CHF. This shortness of breath is often made worse when you lie down. The blood in your legs flows back into the heart. This can bring the heart more blood than it is able to pump. People who have these symptoms may feel like they have insomnia. Doctors call these

symptoms: Orthopnea shortness of breath when lying down Paroxysmal nocturnal dyspnea waking up from sleep feeling short of breath Heart disease also causes people to worry about their health. They are often afraid that they might have a heart attack or stroke. This anxiety can make it very hard to sleep at night. Over time, this sleep problem can develop into chronic insomnia. Sleep and a Healthy Heart There are many things you can do to keep your heart healthy. You should be sure to do the following: Eat a balanced diet.

SLEEP IN THE CARDIAC DISORDERS pdf

4: Sleep problems, heart disease often in bed together - Harvard Health

The National Heart, Lung, and Blood Institute (NHLBI) convened a workshop on September , in Bethesda, Maryland titled: Defining Molecular Pathways and Mechanisms that Predict Cardiovascular Disease (CVD) Risk Associated with Sleep Disordered Breathing (SDB).

Originally released November 4, ; last updated June 12, ; expires June 12, Introduction This article includes discussion of sleep and cardiac disorders, sleep disorders associated with congestive failure, sleep disorders associated with periodic respiration with apnea , sleep disorders associated with angina, sleep disorders associated with arrhythmias, and sleep disorders associated with heart failure. The foregoing terms may include synonyms, similar disorders, variations in usage, and abbreviations. Overview In normal subjects, sleep is characterized by physiological changes in cardiovascular parameters blood pressure, heart rate , but sleep and, in particular, sleep disorders are also related to cardiovascular diseases. Patients with cardiovascular diseases may complain of several sleep disturbances, such as sleep fragmentation, insomnia , and breathing disorders, during sleep. On the other hand, patients with sleep disorders seem to be more frequently affected by cardiovascular disorders, so it is often difficult to determine which is the cause and the effect. Quality and duration of nocturnal sleep have been reported as factors affecting the health status of a population, particularly the cardiovascular risk profile. Specifically, sleep features and sleep disorders seem to play an important role in determining blood pressure levels, both in the office and over 24 hours, and in modulating the day-night blood pressure profile, which can have an impact on the prognosis of hypertensive patients. However, the most important sleep-related clinical condition affecting cardiovascular control seems to be represented by sleep-related breathing disorders. In this article, the author summarizes the evidence concerning the link between sleep disorders and cardiovascular diseases, and the effects of specific treatment. Historical note and terminology The link between sleep and cardiovascular system is a well-known phenomenon. Sleep, in fact, is normally characterized by major changes in the physiologic mechanisms responsible for cardiovascular CV regulation. Moreover, increasing evidence shows that there is also an important relationship between sleep, sleep disorders, and cardiovascular diseases Levy et al Periodic breathing was the first breathing pattern during sleep described in patients with cardiovascular diseases. Periodic breathing is an abnormal ventilatory pattern in which apneas and hypopneas alternate with periods of hyperventilation. Periodic breathing was first observed by Hippocrates approximately to BCE. Cheyne Cheyne and Stokes Stokes published descriptions of repeated respiratory cycles beginning with central apnea followed by several breaths before the next apnea. Central apneas occur when arterial pCO2 paCO2 falls below the threshold required to stimulate breathing, whereas hyperpnea occurs with reduced arterial pO2 paO2 , pulmonary congestion, or increased chemosensitivity. Changes in paO2 represent the most important modulator of peripheral chemoreceptor activity, whereas paCO2 is the major stimulus for central chemoreceptors Lahiri and Forster However, it has been proposed that the central and peripheral components of the chemoreflex are not functionally separate, but rather dependent on 1 another, and that this interaction may affect the appearance and frequency of periodic breathing Smith et al Pryor first demonstrated that most patients with Cheyne-Stokes respiration had cardiac enlargement and prolonged circulation time Pryor Prolonged transit time had been demonstrated as producing periodic breathing in normal volunteers in breathing experiments Douglas and Haldane ; this was also shown in experimental animals by delaying flow from the lungs to the brain Guyton et al They also recognized that hypoxia from a decreased vital capacity from pulmonary edema or severe congestion could cause periodic breathing. At sea level, periodic breathing has been reported to occur in patients with stroke , metabolic disorders, and heart failure Yumino and Bradley In particular, periodic breathing during sleep in heart failure patients is associated with poor prognosis Corra et al Periodic breathing has also been described during exposure to hypobaric hypoxia at high altitude in the original work by Angelo Mosso at the end of the XIX century Mosso , and this breathing pattern during sleep affects males more than females Lombardi et al probably because of their increased hypoxic chemosensitivity Caravita et al Under conditions of hypobaric hypoxia, paO2 and paCO2 values are reduced close to the

thresholds that induce hyperpnea and apnea, respectively, so the onset of a cyclic alternation between ventilatory stimulation and inhibition is facilitated at high altitude, thus leading to periodic breathing Whitelaw

SLEEP IN THE CARDIAC DISORDERS pdf

5: Sleep Disorders and Heart Disease | National Heart, Lung, and Blood Institute (NHLBI)

Inadequate sleep is not just an annoying fact of life. Studies have shown it may raise your risk of cardiovascular disease. In fact, the effect of poor sleep on cardiovascular disease is a two-way street: Inadequate sleep appears to contribute to cardiovascular disease. And cardiovascular disease.

This is an open access article distributed under the terms of the Creative Commons Attribution License http: This article has been cited by other articles in PMC. Abstract Sleep loss is a common condition in developed countries, with evidence showing that people in Western countries are sleeping on average only 6. Although the effects of sleep deprivation on our organs have been obscure, recent epidemiological studies have revealed relationships between sleep deprivation and hypertension HT , coronary heart disease CHD , and diabetes mellitus DM. This review article summarizes the literature on these relationships. Because sleep deprivation increases sympathetic nervous system activity, this increased activity serves as a common pathophysiology for HT and DM. Adequate sleep duration may be important for preventing cardiovascular diseases in modern society. Sleep duration, hypertension, coronary heart disease, diabetes mellitus. Likewise in the United States, a recent National Sleep Foundation poll [2], found that many Americans have long-term sleep deprivation. Sleep loss is a common condition in modern society, with evidence showing that people are sleeping on average only 6. Although the effects of sleep deprivation on the organs have been obscure, recent studies revealed relationships between sleep deprivation and hypertension HT , coronary heart disease CHD , and diabetes mellitus DM. This article reviews the literature on these relationships. Pickering have reviewed mainly the relationship between sleep duration and hypertension elsewhere, and observed an independent association of sleep duration to incidence of hypertension. This review will focus on the role of sleep duration, in particular short sleep duration, as a risk factor for development of hypertension, coronary heart disease, and diabetus mellitus. To set the stage, we summarized current insights in the epidemiology for these relationships, and updated the possible pathophysiology in the association of sleep duration with HT, CHD, and DM [6]. From the standpoint of sleep quality, sleep apnea syndrome should be taken into account. However, some excellent review articles have already summarized the effects of sleep apnea syndrome on HT [7], CHD [8], and DM [9]. The analysis indicated that mortality rates from ischemic heart disease, cancer, stroke, and all causes combined were lowest for individuals sleeping 7 or 8 hr per night. Men sleeping 6 hr or less, or 9 hr or more, had 1. The comparable relative risk for women was 1. In prospective epidemiologic data from the American Cancer Society [11], men who reported that they usually sleep less than 4 hr were 2. The ratio for women was 1. Men and women who reported sleeping 10 hr or more had about 1. The relationship between sleep duration and mortality was U-shaped.

SLEEP IN THE CARDIAC DISORDERS pdf

6: Sleep and Cardiovascular Disease

Sleep disordered breathing (SDB), expressed most frequently as obstructive sleep apnea (OSA), is a common syndrome, and becomes progressively more prevalent with increasing age [1]. For the past several decades, a number of cross-sectional studies performed primarily in relatively small clinical.

Sleep problems, heart disease often in bed together Disturbed sleep can trouble the heart and a troubled heart can disturb sleep Published: May, Sleep seems to be such a serene way to replenish energy and restore the mind. There are periods of calm, to be sure, but they are rudely interrupted by abrupt spikes in blood pressure and heart rate. Blood flow through the heart and brain varies widely during sleep, as do electrical activity in the heart, the elasticity of blood vessels, and the tendency of blood to clot. Researchers are just beginning to reveal the two-way street between sleep and heart disease: Poor sleep can interfere with the heart, and heart disease can disturb sleep. Healing sleep A century ago, the average American slept hours a night, with sleep cycles linked to sundown and sunup. Electric lights extended our "day," while work, television, the Internet, and other distractions have chipped away at sleep. Today, we average just under 7 hours a night; about one-third of us make do with 6 hours or fewer. Light helps set this clock. Too little of it can throw off the clock and disturb the intricately timed release of hormones and other chemical signals, as well as cause fatigue and daytime drowsiness. Uncoordinated hormonal signals, in turn, can affect many systems in the body. Poor sleep has been linked with high blood pressure, atherosclerosis cholesterol-clogged arteries , heart failure, heart attack and stroke, diabetes, and obesity. Inflammation may be a thread that ties these together. It is a key player in heart disease, diabetes, and other chronic conditions. The other direction Sometimes heart disease is a cause of poor sleep. People with heart failure, for example, sometimes wake up at night with trouble breathing, which stems from fluid buildup in the lungs. Some people have nocturnal angina chest pain , which can interrupt sleep. Bouts of atrial fibrillation or palpitations the sensation of a racing or pounding heart can also disturb sleep. For some people, it involves adopting better sleep habits. For others, it means coping with the dangerous sleep-time breathing pattern known as sleep apnea. Get in the habit. Some people sleep effortlessly. Others need to train their internal clock. Use your bed only for sleeping or sex. Read, watch television, or work somewhere else. Go easy on alcohol and caffeine; nix nicotine. Alcohol can make you drowsy, but it disturbs sleep. Caffeine lingers in the body for hours, so go decaf after noon. Nicotine withdrawal, which begins to kick in a few hours after the last cigarette, can wake a smoker from a deep sleep. A brisk walk or other exercise in the late afternoon seems to help with sleep. Simple snoring is aggravating to others. Snoring due to sleep apnea is potentially hazardous. People with sleep apnea take shallow breaths or briefly stop breathing hundreds of times a night. The brain, sensing low oxygen and high carbon dioxide, sends an emergency "Breathe now! That signal involves the same nerve pathways and hormones that get fired up when you are frightened or under stress the sympathetic nervous system. Their effects extend far beyond breathing: They can boost blood pressure, provoke disturbed heart rhythms, and reduce blood flow to the brain. The most common treatment for sleep apnea is a breathing mask that delivers pressurized air from a small pump. Mouth guards that force the jaw forward are also sometimes used to keep the airway open during sleep. He or she may have some helpful ideas. One of them may be to refer you to a sleep specialist or sleep clinic, especially if you have sleep apnea.

7: Sleep apnea - Symptoms and causes - Mayo Clinic

" Sleep Duration as a Risk Factor for Cardiovascular Disease - a Review of the Recent Literature," a study, is a similar review of scientific research on sleep deprivation as it relates to heart disease.

Heart disease and sleep Last Updated on April 27, People are sleeping less than they ever have. In the Western world, the average person gets only 6. Heart disease is the leading cause of death in the United States. Meanwhile, poor sleep is one of the largest contributors to heart disease, obesity, cancers, and more. The relationship between heart disease and sleep is bidirectional. Chronically poor sleep increases your risk for heart disease, and worsens symptoms for those who already have it. Unfortunately, having a heart condition makes it more difficult to get good sleep, creating a no-win situation. Keep reading to learn more about the connection between sleep and heart health, as well as tips for sleeping better with heart disease. What is heart disease? Heart disease, also known as cardiovascular disease, describes a group of health conditions affecting the heart. About one-quarter of deaths each year are attributed to heart disease. It is the leading cause of death in the US. Common types of heart disease include: Coronary artery disease, where damage has occurred to major blood vessels in the heart. High blood pressure, referring to the pressure of blood against the artery walls of the heart. Cardiac arrest or heart attack, where the heart suddenly stops working and the person loses consciousness or the ability to breathe. Congestive heart failure, which is a chronic inability of the heart to pump blood the way it should. Arrhythmia, describing an improper beating of the heart, whether irregularly, too fast, or too slow. Peripheral artery disease, where narrowed blood vessels impede blood flow to the limbs and peripheral areas of the body. Stroke, where a lack of blood supply causes brain damage. Congenital heart disease, which is caused by a pre-existing heart abnormality from birth. The list of risk factors for heart disease is a long one. One major risk factor for heart disease is poor sleep, whether that sleep is too short, too long, or simply unrestful. Poor sleep as a risk factor for heart disease Poor sleep is a risk factor for heart disease all on its own, independent from other health issues like obesity , alcoholism , and smoking although it should be noted that each of these is a cause poor sleep as well. Even for otherwise healthy individuals, disturbed sleep can increase your risk of mortality from cardiovascular issues. Time and again, research indicates that quality sleep is just as critical for your long-term health as diet and exercise. The overwhelming amount of research establishing the connection between poor sleep and heart disease has led the American Heart Association to issue warnings about it. Poor sleep can describe a variety of issues, including trouble falling asleep or trouble staying asleep, dependence on sleeping pills , daytime fatigue , and sleep-disordered breathing like snoring. The researchers even charted the connection between the particular sleep issues and increased stroke or IHD risk: Earlier, in , a team of researchers conducted a comprehensive review that summarized the findings from 15 prior studies focusing on heart disease and sleep. In total, these studies covered nearly , individuals and found that both short and long sleep were risk factors for heart disease: Unhealthy sleep has wide ranging consequences, many of which develop into individual risk factors for heart disease, such as sleep deprivation, high blood pressure, invariable heart rate, obesity, and calcium deposits. Sleep deprivation Sleep deprivation has long been linked with poor health outcomes. In , a CDC survey of over 54, adults age 45 and up discovered that nearly one-third were sleeping fewer than 6 hours a night. These short sleepers were significantly more likely to have obesity, CHD, stroke, and diabetes than optimal sleepers who slept between 7 to 9 hours. Insomnia often stems from anxiety. Due to their anxiety, people with insomnia tend to be in a constant state of hyperarousal that prevents them from easily falling asleep. This overarousal affects their nervous system and increases their blood pressure. Even sleep deprivation on a short-term basis is dangerous, as demonstrated by one study of hour shift workers. Many people adhere to this kind of shift work , including firemen, EMTs, and medical residents. Responders like these are in otherwise good health, considering the kind of work they have to perform. However, after one hour shift, the participants had increased blood pressure, increased heart rate, and increased levels of various stress-related hormones like cortisol. Follow up studies of other kinds of shift workers show similar results. Their odds of developing hypertension are between 1. Further, the correlation only strengthened with time: Blood pressure and heart rate

Speaking of hypertension, multiple studies show sleep deprivation increases your blood pressure. Each of these is also linked with heart disease and other chronic health issues like diabetes. Your risk for both high blood pressure and developing heart disease increases with age. Unfortunately, it also becomes more difficult to sleep well as you age, and the worse your sleep, the worse your blood pressure. People who are sleep-deprived also tend to have both higher heart rates and less variable heart rates than healthy sleepers, and either is bad for your heart. The chart below shows the difference between healthy and unhealthy fluctuation. The bottom lines DBP show blood pressure on a day following insufficient sleep while the top lines SBP are after a night of good sleep. The healthier sleepers have more variability in their heart rate than their sleep-deprived peers. Obesity Obesity is another risk factor for heart disease. Unfortunately, sleep deprivation is also linked with higher obesity rates. With normal amounts of sleep, your hypothalamus produces the leptin hormone, increasing production throughout the night. Leptin regulates your appetite. Ghrelin, on the other hand, is a hormone that increases your appetite, in particular for fatty and other unhealthy foods. With less sleep, ghrelin production kicks into high gear, increasing your risk for weight gain and the subsequent strain on your heart. Metabolic syndrome describes people who have high BMI, high cholesterol, and other risk factors for both heart disease and diabetes. One large study of nearly 17, middle-aged people with metabolic syndrome showed that those who slept fewer than 6 hours per night more than doubled their risk of dying from heart disease or stroke within the next 17 years. Calcium buildup Both too-long and too-short sleep increase calcium deposits, which are a risk factor for coronary artery disease. An earlier study also linked short sleep with increased calcium deposits and higher blood pressure. Long sleepers fared even worse in the study. Sleep problems in heart disease As you can see, there are many ways poor sleep increases your risk for heart disease. Unfortunately, once you do develop heart disease, the sleep problems continue. Insomnia People with heart disease often experience disturbed sleep, resulting in insomnia difficulty falling or staying asleep. For example, heart failure is linked with sleep apnea, which also interrupts breathing while you sleep more on this in the next section. Heart palpitations can also disrupt sleep. People with heart failure may have bladder issues that require them to wake up during the night to use the restroom. During the day, the fluid settles in their legs, but at night it creeps up into their lungs, causing chest pain nocturnal angina that makes it challenging to fall asleep. Even just lying in bed is uncomfortable. Once they do fall asleep, the fluid slowly builds up in their lungs again, making breathing more difficult until eventually their brain wakes them back up. Sleep apnea About half of people with heart failure have some form of sleep-disordered breathing like sleep apnea. Sleep apnea is a sleep disorder where the individual has trouble breathing during sleep. Your body responds to these apneic episodes by activating your fight or flight response and increasing adrenaline. With increased adrenaline comes increased blood pressure and increased blood clots â€” the kind that lead to stroke. One study of 1, people found that those with moderate or severe sleep apnea were 3 to 4 times more likely to have a stroke. Sleep apnea is a risk factor for heart disease because of its affect on your blood pressure and nervous system. Your sympathetic nervous system SNS controls your heart rate and blood vessel constriction. Healthy, people without apnea experience a reduction in SNS activity while they sleep, but those with sleep apnea have no relief. As a result, their blood pressure and heart rate continue to rise, constricting their blood vessels. If a person has normal heart pressure at the time they are diagnosed with sleep apnea, they are much likelier to develop high blood pressure within the next 4 years. Middle-aged men who have sleep apnea have a higher risk of developing coronary heart disease. There are two types of sleep apnea: OSA is much more prevalent than CSA, although both are equally detrimental to your sleep quality and your overall health â€” heart and otherwise. OSA can develop whenever there is a blockage or narrowing of the airway, as often happens with obesity. When you are overweight, there is extra fatty tissue in your neck and throat that blocks your airways. OSA is itself a major risk factor for stroke. OSA is correlated with higher rates of coronary heart disease, heart failure, stroke and atrial fibrillation, while CSA is associated with heart failure and atrial fibrillation. Unlike OSA, which stems from a physical blockage of the airways, CSA is caused by a communication issue with the brainstem, which controls your breathing. Fortunately, treating either typically improves blood pressure and other symptoms of heart failure. However, the better you sleep, the better it is for your heart. Follow these tips to sleep better with heart disease. Follow a regular sleep schedule. Overtime, your body will naturally tire or

wake up at those times. Make sure your schedule allows for you to get at least 7 hours of sleep. Pair your new sleep schedule with a calming bedtime routine. Your bedtime routine can include activities like aromatherapy , taking a warm bath, brushing your teeth, turning off your phone and TV, or reading a boring book.

8: Sleep Health | Healthy People

Insomnia is defined as a problem with initiating sleep, maintaining sleep, waking up too early, or experiencing poor quality (nonrestorative) sleep, which interferes with daytime functioning. Symptoms include fatigue, impaired concentration, decreased initiative, daytime sleepiness, poor performance.

9: Sleep Duration as a Risk Factor for Cardiovascular Disease- a Review of the Recent Literature

Blood flow through the heart and brain varies widely during sleep, as do electrical activity in the heart, the elasticity of blood vessels, and the tendency of blood to clot. And all of this activity is just part of a normal night's sleep.

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Dinosaur goes to Israel More adventures on Willow Farm. Scientific management, job redesign, and work performance The stake is not our best today-may I interest you in something else? Cake decorating business plan sample Ustawa z dnia 4 lutego 1994 roku o prawie autorskim i prawach pokrewnych = Park structures and facilities. Each song twice over Extending reading power through writing Differences between animal and plant cells The Critical Response to Gertrude Stein Algorithms and Architectures for Real-Time Control 1997 (IFAC Proceedings Volumes) Ece basic interview questions and answers Who Is Francis Rain? The War Of The Ages And Other Essays Environmental health indicators Writing the needs assessment report Statistical summaries of selected Iowa streamflow data through September 1996 Micropropulsion for small spacecraft Des Bosses to Leibniz, 20 July 1715 To be a Black woman: portraits in fact and fiction How to analyze a bank statement Unlock your childs potential Elements of advanced mathematics This jesus must die sheet music Safety in conditioning Performance writ large : desultory remarks on furnishing the abode of the retired scholar Nicholas Cook Northrops T-38 Talon The prose writings. The birth of Kansas Handling investment losses Itil service strategy 2011 edition The lathe of heaven book The Last Energy War King in the forest Documents of the National Security Council. 505 0 Glorybound The Bible 5-G Challenge Spring Quarter Directors Notebook The 2007 Report on Weight Gainer and Muscle Builder Supplements Negotiating the global and the local : situating transnational democracy and human rights Carol C. Gould