

1: Systolic heart murmur - Wikipedia

The authorized source of trusted medical research and education for the Chinese-language medical community. The New England Journal of Medicine The most trusted, influential source of new medical.

Heart Murmurs in Children What is a heart murmur? What causes a heart murmur? Murmurs are analyzed for pitch, loudness, location, and duration. They also are graded according to their intensity on a scale of 1 to 6, with 1 being very faint and 6 being very loud. Types of murmurs include the following: A heart murmur that occurs during a heart muscle contraction or when blood is pushed out to the body. A heart murmur that occurs during heart muscle relaxation between beats or when heart chambers are re-filling before the next contraction. A heart murmur that occurs throughout the cardiac cycle, during contraction and relaxation Heart murmurs can change and be heard or not heard at different times. Murmurs may be inconsistent and difficult to hear in an infant who is agitated or crying. Thus, sometimes murmurs may be missed or not detected. Do all murmurs signify heart disease? Sometimes, a murmur may be heard in a normal child as the strong, healthy heart pumps blood into the vessels. This is known as an "innocent murmur. What tests may be used to evaluate a heart murmur? This helps evaluate the size of the heart. An ultrasound generates pictures using sound waves. Many heart murmurs are normal, extra sounds in children with strong, healthy hearts. These children require no treatment. Some of these heart murmurs may resolve over time. Even if there is a hole or structural defect found in the heart, it may close as your child grows. However, some defects will require surgery to correct.

2: Heart murmurs - Symptoms and causes - Mayo Clinic

Note: Citations are based on reference standards. However, formatting rules can vary widely between applications and fields of interest or study. The specific requirements or preferences of your reviewing publisher, classroom teacher, institution or organization should be applied.

Systolic murmurs have only a few possible causes: Systolic murmurs can also be functional benign. A grade 1 murmur is barely audible, a grade 2 murmur is louder and a grade 3 murmur is loud but not accompanied by a thrill. A grade 4 murmur is loud and associated with a palpable thrill. A grade 5 murmur is associated with a thrill, and the murmur can be heard with the stethoscope partially off the chest. Finally, the grade 6 murmur is audible without a stethoscope. All murmurs louder than grade 3 are pathologic. They can also be timed as holosystolic. These sounds are caused by the flow of venous blood from the head and neck into the thorax. They are heard continuously when the child is sitting. Venous hums are common and are not pathologic. Patients with venous hums do not require pediatric cardiology referral. All other diastolic murmurs are pathologic and therefore warrant referral. However, similar systolic ejection murmurs may be heard in patients with atrial septal defect, mild semilunar valve stenosis, subaortic obstruction, coarctation of the aorta or some very large ventricular septal defects. Graphic representation of common pediatric murmurs. This murmur is usually vibratory or musical. A murmur caused by aortic stenosis is often best heard at the upper sternal border, usually on the right side. A murmur resulting from pulmonary stenosis is heard best at the upper left sternal border. A murmur caused by a ventricular septal defect or tricuspid valve insufficiency is heard at the lower left sternal border. A murmur resulting from mitral valve regurgitation is best heard at the apex.

3: Murmur - Cancer Therapy Advisor

Filmed from a copy of the original publication held by the National Library of Canada.

Anemia low blood counts. What are the different types of murmurs? Murmurs are analyzed for pitch, loudness, location and duration. They also are graded according to their intensity on a scale of 1 to 6, with 1 being very faint and 6 being very loud. Types of murmurs include the following: A heart murmur that occurs during a heart muscle contraction or when blood is pushed out from the heart to the body. A heart murmur that occurs during heart muscle relaxation between beats or when heart chambers are re-filling before the next contraction. A heart murmur that occurs throughout the cardiac cycle, during contraction and relaxation. Heart murmurs can change and be heard or not heard at different times. With some large heart defects, newborn babies may have a very faint or no murmur at all because of nearly equal pressures on both sides of the heart. In addition, murmurs may be inconsistent and difficult to hear in an infant who is agitated or crying. Thus, sometimes murmurs may be missed or not detected. Do all murmurs signify heart disease? No, not all heart murmurs mean heart disease. Sometimes, a murmur may be heard in a normal child as the strong, healthy heart pumps blood into the vessels. Murmurs can also be heard in a child with no heart disease but who has a fever or who is anemic; these murmurs often go away when the underlying problem is treated. What tests may be used to evaluate a heart murmur? An ultrasound procedure that evaluates the structure and function of the heart. An ultrasound generates pictures using sound waves. Learn more about echocardiogram. A fairly quick and simple test using stickers placed on the chest that can detect and record the electrical activity of the heart. Learn more about electrocardiogram. What is the treatment for a heart murmur? Many heart murmurs are normal, extra sounds in children with strong, healthy hearts. These children require no treatment. Some of these heart murmurs may resolve over time. Even if there is a hole or structural defect found in the heart, it may close as your child grows. However, some defects will require surgery to correct. Others are caused by conditions not related to the heart, such as having a fever or anemia. In these cases, the heart murmur will lessen or resolve as the underlying condition is treated.

4: Hypoxia and Systolic Murmur

Systolic murmurs are the most common types of murmurs in children and based on their timing within systole, they are classified into: a) Systolic ejection murmurs (SEM, crescendo-decrescendo) result from turbulent blood flow due to obstruction (actual or relative) across the semilunar valves, outflow tracts or arteries.

In mild aortic stenosis, the crescendo-decrescendo is early peaking whereas in severe aortic stenosis, the crescendo is late-peaking, and the S2 heart sound may be obliterated. Stenosis of Bicuspid aortic valve is similar to the aortic valve stenosis heart murmur, but a systolic ejection click may be heard after S1 in calcified bicuspid aortic valves. Symptoms tend to present between 40 and 70 years of age. Mitral regurgitation typically is a holosystolic pansystolic murmur heard best at the apex, and may radiate to the axilla or precordium. A systolic click may be heard if there is associated mitral valve prolapse. Valsalva maneuver in mitral regurgitation associated with mitral valve prolapse will decrease left ventricular preload and move the murmur onset closer to S1, and isometric handgrip, which increases left ventricular afterload, will increase murmur intensity. In acute severe mitral regurgitation, a holosystolic pansystolic murmur may not be heard. Pulmonary valve stenosis typically is a crescendo-decrescendo murmur heard best at the left upper sternal border, associated with a systolic ejection click that increases with inspiration due to increased venous return to the right side of the heart and sometimes radiates to the left clavicle. Tricuspid valve regurgitation presents as a holosystolic pansystolic murmur at the left lower sternal border with radiation to the left upper sternal border. Prominent v and c waves may be seen in the JVP jugular venous pressure. The murmur will increase with inspiration. Hypertrophic obstructive cardiomyopathy or hypertrophic subaortic stenosis will be a systolic crescendo-decrescendo murmur best heard at the left lower sternal border. Valsalva maneuver will increase the intensity of the murmur, as will changing positions from squatting to standing. Atrial septal defect will present with a systolic crescendo-decrescendo murmur best heard at the left upper sternal border due to increased volume going through the pulmonary valve, and is associated with a fixed, split S2 and a right ventricular heave. Ventricular septal defect VSD will present as a holosystolic pansystolic murmur at the left lower sternal border, associated with a palpable thrill, and increases with isometric handgrip. A right to left shunt Eisenmenger syndrome may develop with uncorrected VSDs due to worsening pulmonary hypertension, which will increase the murmur intensity and be associated with cyanosis. Flow murmur may be heard at the right upper sternal border in certain conditions, such as anemia, hyperthyroidism, fever, and pregnancy. Diastolic heart murmur Aortic valve regurgitation will present as a diastolic decrescendo murmur heard at the left lower sternal border or right lower sternal border when associated with a dilated aorta. Mitral stenosis typically presents as a diastolic low-pitched decrescendo murmur best heard at the cardiac apex in the left lateral decubitus position. It may be associated with an opening snap. Increasing severity will shorten the time between S2 A2 and the opening snap. In severe MS the opening snap will occur earlier after A2 Tricuspid valve stenosis presents as a diastolic decrescendo murmur at the left lower sternal border, and signs of right heart failure may be seen on exam. Pulmonary valve regurgitation presents as a diastolic decrescendo murmur at the left lower sternal border. A palpable S2 in the second left intercostal space correlates with pulmonary hypertension due to mitral stenosis. Severe coarctation of the aorta can present with a continuous murmur: Acute severe aortic regurgitation is associated with a three phase murmur, specifically a midsystolic murmur followed by S2, followed by a parasternal early diastolic and mid-diastolic murmur Austin Flint murmur. Although the exact cause of an Austin Flint murmur is unknown, it is hypothesized that the mechanism of murmur is from the severe aortic regurgitation jet vibrating the anterior mitral valve leaflet, colliding with the mitral inflow during diastole, with increased mitral inflow velocity from the narrowed mitral valve orifice leading to the jet impinging on the myocardial wall. Types and disease associations[edit] Continuous machinery murmur, at the left upper sternal border Classic for a patent ductus arteriosus, and in serious cases associated with poor feeding, failure to thrive and respiratory distress. Other examination findings may include widened pulse pressures and bounding pulses. Other findings of this murmur is radio-femoral delay, and different blood pressures in the upper and lower extremities. Harsh

holosystolic pansystolic murmur at the left lower sternal border Classic for a ventricular septal defect. It is in these children that the delayed-onset cyanotic heart disease occurs known as Eisenmenger syndrome , which is a reversal of the left-to-right heart shunt as the right ventricle hypertrophies, causing a right-to-left shunt and resulting cyanosis. Widely split fixed S2 and systolic ejection murmur at the left upper sternal border Classically due to a patent foramen ovale or atrial septal defect , which is lack of closure of the foramen ovale. This produces a left-to-right shunt initially, thus does not produce cyanosis, but causes pulmonary hypertension. Coing dove murmur[edit] The coing dove murmur is a cardiac murmur with a musical quality high pitched - hence the name and is associated with aortic valve regurgitation or mitral regurgitation before rupture of chordae. It is a diastolic murmur which can be heard over the mid-precordium.

5: 3 common innocent murmurs in children - Pediatric Heart Specialists

Late Systolic Murmurs The murmur of mitral or tricuspid valve prolapse is the only significant late systolic murmur. Tricuspid valve prolapse is relatively rare and usually not clinically significant.

A person with an innocent murmur has a normal heart. This type of heart murmur is common in newborns and children. An abnormal heart murmur is more serious. In children, abnormal murmurs are usually caused by congenital heart disease. In adults, abnormal murmurs are most often due to acquired heart valve problems.

Innocent heart murmurs An innocent murmur can occur when blood flows more rapidly than normal through the heart. Conditions that may cause rapid blood flow through your heart, resulting in an innocent heart murmur, include: Physical activity or exercise Pregnancy Fever Not having enough healthy red blood cells to carry adequate oxygen to your body tissues anemia An excessive amount of thyroid hormone in your body hyperthyroidism Phases of rapid growth, such as adolescence Innocent heart murmurs may disappear over time, or they may last your entire life without ever causing further health problems. Abnormal heart murmurs

The most common cause of abnormal murmurs in children is when babies are born with structural problems of the heart congenital heart defects. Common congenital defects that cause heart murmurs include: Holes in the heart or cardiac shunts. Known as septal defects, holes in the heart may or may not be serious, depending on the size of the hole and its location. Other causes of abnormal heart murmurs include infections and conditions that damage the structures of the heart and are more common in older children or adults. This hardening or thickening of valves, as in mitral stenosis or aortic valve stenosis, can occur as you age. Valves may become narrowed stenotic , making it harder for blood to flow through your heart, resulting in murmurs. This infection of the inner lining of your heart and valves typically occurs when bacteria or other germs from another part of your body, such as your mouth, spread through your bloodstream and lodge in your heart. Left untreated, endocarditis can damage or destroy your heart valves. This condition usually occurs in people who already have heart valve abnormalities. It can permanently affect the heart valves and interfere with normal blood flow through your heart.

Risk factors There are risk factors that increase your chances of developing a heart murmur, including: Family history of a heart defect. If blood relatives have had a heart defect, that increases the likelihood you or your child may also have a heart defect and heart murmur. Certain medical conditions, including uncontrolled high blood pressure hypertension , hyperthyroidism, an infection of the lining of the heart endocarditis , high blood pressure in the lungs pulmonary hypertension , carcinoid syndrome, hypereosinophilic syndrome, systemic lupus erythematosus, rheumatoid arthritis, a weakened heart muscle or a history of rheumatic fever, can increase your risk of a heart murmur later in life. Taking certain medications or illegal drugs during pregnancy. Use of certain medications, alcohol or drugs can harm a developing baby, leading to heart defects. For children, many murmurs go away on their own as children grow. For adults, murmurs may disappear as the underlying condition causing them improves. See the stories of satisfied Mayo Clinic patients.

6: Heart murmur - Wikipedia

Systolic murmurs are divided into ejection murmurs (due to blood flow through a narrowed vessel or irregular valve) and regurgitant murmurs. ? diastolic murmur - a heart murmur that occurs during heart muscle relaxation between beats.

Bluish skin, especially of the lips and fingertips Cough Swelling edema of the lower legs, ankles, feet, belly abdomen , liver, or neck veins The symptoms of heart murmur can be like other health conditions. How are heart murmurs diagnosed in a child? He or she will give your child a physical exam. If the provider hears an abnormal sound, he or she may refer you to a pediatric cardiologist. This is a doctor with special training to treat children with heart problems. An X-ray creates images of the heart and lungs. This test that measures the electrical activity of the heart. An exam that uses sound waves ultrasound to look at the structure and function of the heart. This is the most important test to find heart murmurs. How are heart murmurs treated in a child? It will also depend on how severe the condition is. Many heart murmurs are normal, extra sounds in children with strong, healthy hearts. Some of these heart murmurs may go away on their own. If the murmur is from a congenital heart defect, treatment may include medicine, procedures, or surgery. If the murmur is from another condition, the heart murmur will usually lessen or go away once the condition is treated. What are the complications of heart murmurs in a child? A heart murmur has no complications. But your child may have complications related to the condition causing the heart murmur. A child with a congenital heart defect may have poor growth and development, heart failure, or other serious problems. Trouble feeding or eating.

7: Heart Murmurs in Children

Heart murmurs may be heard in a normal healthy heart of a child, or they may be caused by a number of factors or diseases, including: Defective heart valves Holes in the walls inside the heart (atrial septal defect or ventricular septal defect).

Failure to grow normally infants and children Weight gain adults and children Elevated neck veins There are no risk factors for developing innocent heart murmur. Family history of a heart defect increases the likelihood of developing congenital heart disease. Having illnesses during pregnancy uncontrolled diabetes, rubella and other infections increases the likelihood for developing congenital heart diseases. Medications and illicit drugs: Taking Class C or D medication during pregnancy or using alcohol or illicit drugs may contribute in developing congenital heart diseases for the fetus. Physical Examination maneuvers that are likely to be useful in diagnosing the cause of this problem. On inspiration, the intrathoracic pressure decreases, pulmonary capacitance increases and ejection time increases. As a result, right heart blood flow is augmented and left heart blood flow is diminished. Accordingly, right-sided murmurs are louder with inspiration while left-sided murmurs are louder with expiration. Exception are patients with pulmonary hypertension and severe right sided heart failure who may not demonstrate inspiratory increase in right sided murmurs due to little or no increase in venous return to the right heart with inspiration. When patients move from a recumbent to a sitting or a standing position, systemic venous return is abruptly reduced, left ventricular filling and stroke volume are decreased and this results in an immediate increase in heart rate and systemic vascular resistance. Thus, as the patient goes from a recumbent to a sitting or standing position, intensity of all murmurs originating from the right as well as the left heart decreases, except for those systolic murmurs of hypertrophic cardiomyopathy HCM and mitral valve prolapse MVP. When patients move from standing to a squatting position, there is an initial large increase in venous return first to the right and then to the left side of the heart. Thus, systolic murmur of HCM frequently disappears with squatting and becomes quite loud with resumption of the upright position. Right-sided heart murmurs, murmurs of mitral regurgitation, aortic stenosis and regurgitation increase with squatting. Valsalva maneuver helpful to differentiate right-sided from left-sided systolic murmurs. During strain phase of the Valsalva maneuver, systolic venous return is decreased; as a result, cardiac output and systemic arterial pressure are decreased and heart rate is reflexively, increased. Most murmurs are decreased during the strain phase of the Valsalva except murmurs of hypertrophic cardiomyopathy HCM and mitral valve prolapse MVP. Isometric handgrip for seconds increases cardiac contractility, cardiac output and arterial pressure, without significant change in size of the ventricular chamber. These murmurs are increased with isometric handgrip: Right-sided murmurs and murmurs of aortic stenosis and hypertrophic cardiomyopathy generally are unchanged or decreased during isometric handgrip. Laboratory, radiographic and other tests that are likely to be useful in diagnosing the cause of this problem. Ancillary tests are useful in evaluation of murmurs, but should be ordered with an understanding that each test has limitations. An echocardiogram is helpful but should not be used as a screening tool. Chest roentgenogram CXR can confirm cardiac enlargement atrial or right or left ventricular, demonstrate prominent pulmonary vasculature or increased pulmonary vascularity. Valvar regurgitation usually increases the overall cardiac size. Valvar stenosis may cause little if any cardiac enlargement. Calcification of aortic or mitral valve or annulus can also be seen on the CXR. Electrocardiogram ECG can reveal cardiac hypertrophy, atrial or ventricular enlargement, axis deviation, bundle branch blocks or arrhythmias. Wolf-Parkinson-White syndrome is seen in patients with Ebstein anomaly. Intra-atrial reentrant tachycardia is found in patients with tetralogy of Fallot. Atrial fibrillation occurs in patients with mitral stenosis and aortic stenosis and tetralogy of Fallot; Ventricular tachycardia is present in patients with Tetralogy of Fallot and aortic stenosis. Sinus bradycardia can be seen in patients with sinus venosus ASD. Transthoracic echocardiography TTE reveals valve function, assesses leaflets and subvalvular apparatus, determines valve area and mean transvalvar gradient, estimates pulmonary artery PA pressures and evaluates cardiac wall motion and overall cardiac size and function. Echo can also reveal etiology of valvar disease like mitral stenosis or bicuspid aortic stenosis. Transesophageal

echocardiography TEE is helpful in assessing presence or absence of clot and severity of valvar lesion mitral stenosis, mitral regurgitation, aortic stenosis, aortic regurgitation. TEE also better visualizes valves and clarifies underlying pathology. TEE has better sensitivity and specificity for detecting aortic dissection and valvar vegetations endocarditis or root abscess. In patients with prosthetic valves, TEE provides better visualization prosthetic i. Exercise echocardiography can be helpful in clarifying functional capacity in some lesions mitral stenosis, aortic stenosis. It can also be helpful in patients with aortic stenosis who are asymptomatic or in whom symptoms are unclear. Cardiac catheterization records intracardiac pressures and flow and is almost always combined with cineangiography. Given risks associated with cardiac catheterization, this invasive procedure is almost always reserved for patients who are candidates for valve surgery. In addition, cardiac catheterization is also helpful in determining severity of valvar lesions when clinical and echo assessments are discordant. If patient with moderate aortic stenosis and chest pain angina , and those undergoing valve replacements, cardiac catheterization is performed to evaluate for coronary artery disease CAD. Right heart catheterization is helpful in evaluating pulmonary hypertension in patients with chronic severe MR. Nuclear studies might be helpful in assessing ejection fraction EF in patients with severe MR when TTE is technically difficult and unable to provide adequate assessment of EF. Most murmurs are innocent harmless and do not need treatment. The biggest challenge for a clinician is to distinguish innocent physiologic, flow, innocent versus pathologic i. Since innocent flow murmurs are very common in normal population, physicians have great responsibility to determine whether a murmur is pathologic or not. There are few criteria that absolutely identify murmur as pathologic: All diastolic murmurs are pathologic All holosystolic and late systolic murmurs are pathologic All continuous murmurs are pathologic Very loud murmurs are usually pathologic Innocent, functional or flow murmurs are the most common murmurs heard in clinical practice. Those murmurs may result from turbulence created by anxiety, anemia, fever, tachycardia, pregnancy, thyrotoxicosis or exertion. They are best heard along the left sternal border at the 2nd to 4th intercostal space. They do not radiate into the neck but can be heard through the precordium. Systolic ejection murmurs are innocent or pathological. Innocent, functional or flow murmurs are the most common murmurs heard in clinical practice. They do not radiate into the neck but can be heard throughout the precordium. Functional systolic murmurs include pulmonic flow murmurs in patients with either normal or increased pulmonary artery or aortic flow. Functional systolic murmur may also result from hyperdynamic blood flow over a normal pulmonic or aortic valve. Those murmurs may result from turbulence created by anxiety, anemia, fever, tachycardia, pregnancy, thyrotoxicosis, arteriovenous fistula, beri-beri or exertion. Pathological or significant systolic ejection murmurs include aortic stenosis, and pulmonic stenosis. Systolic regurgitant murmurs are murmurs of mitral regurgitation, tricuspid valve regurgitation and ventricular septal defect.

8: Heart Murmurs in Children - Health Encyclopedia - University of Rochester Medical Center

The murmur of hypertrophic cardiomyopathy may be any of these systolic murmurs. Early diastolic murmurs result from semilunar valve regurgitation (pulmonic or aortic regurgitation).

A heart murmur just means a sound. Some heart murmurs are sounds produced by actual defects or abnormalities with the heart. For example, a ventricular septal defect a hole in the wall separating the lower 2 chambers of the heart makes a very specific noise as blood travels through the hole. Abnormalities with heart valves like aortic valve stenosis can also produce heart murmurs. As blood flows past the defective valve the turbulent flow can produce a distinctive sound. On the other hand, many heart murmurs are what we call innocent heart murmurs. With an innocent heart murmur, the heart is perfectly normal. The murmur in this case is simply the normal sound that blood is making as it flows through the heart. There are a number of different innocent heart murmurs. Many textbooks describe it as a vibratory type noise. Certainly it is a very unique noise. I really think that this murmur can be present at pretty much any age. Classically it is most common in school aged children. Some experts feel that it might be more prominent in the flat position as opposed to sitting or standing, but I have not always found this to be the case. The chordae tendineae anchor the papillary muscles to the mitral valve leaflets. Occasionally there may be a stray chord that extends from a papillary muscle directly to the ventricular septum. Having said this, many children have slight variations in the sound or quality of the murmur which may suggest more worrisome causes. Subaortic stenosis can be caused by an isolated subaortic membrane, or can found in association with heart problems like hypertrophic cardiomyopathy. Determining the next most common innocent heart murmur is a little difficult. It all depends on what age you are talking about. Pulmonary flow murmur A pulmonary flow murmur is just like it sounds. In a pulmonary flow murmur, all you are hearing is normal blood flow across a normal pulmonary valve. Blood is a liquid, and it flows through the heart fairly rapidly in some cases. Sometimes this normal flow can produce extra sounds or noises. The pulmonary valve happens to be one of the most anterior structures in the chest. In other words, it is fairly close to the chest wall. Therefore it makes sense that you might be able to hear normal flow across this valve compared to the other valves in the heart, which are farther back in the chest. Pulmonary flow murmurs can be heard at any age. They tend to be especially common in older children and teenagers. As you might expect, they are more common in kids who have thin chest walls, where the heart may be physically closer to the stethoscope and therefore easier to hear. Sometimes a pulmonary flow murmur can be confused with potential true heart disease. For example, an atrial septal defect might make a similar noise. Rarely mild pulmonary valve stenosis might also be confused with a pulmonary flow murmur. Cervical venous hum A cervical venous hum is an extremely common type of innocent heart murmur. It is caused by the sound of blood flow returning normally through the veins above the heart. Specifically, the jugular veins drain blood from the head and neck and connect to larger veins which return to the heart. Sometimes a slight angle is produced in these connections which can create slightly turbulent blood flow. Usually this is the source of a cervical venous hum. Cervical venous hums are most commonly found in young school aged children. Exerting light pressure over the veins of the neck or having a child turn his head to one side can compress the veins somewhat and often makes the murmur disappear. Innocent cervical venous hums may not be detected in many children simply because they are not always listened for. Cervical venous hums are different from pathologic murmurs in that they disappear in different positions and with different maneuvers. Penn Laird II, M.

9: Evaluation and Management of Heart Murmurs in Children - - American Family Physician

Heart murmurs in children are very common. A heart murmur just means a sound. Some heart murmurs are sounds produced by actual defects or abnormalities with the heart.

Institutional adjustment and adjusting to institutions Science of flexibility alter Preface. Acknowledgements. Introduction. The Iberian Americans Symbolistes Et Decadents The Two-party system in English political history The Twiddle twins amusement park mystery Role #1 : giving a blessing More! Level 3 Teachers Book Just a Gaze: Female Clientele of Diet Clinics in Cairo An Elephant is Tall and Wide Report on fifth economic census 2005, Manipur The flavor of Wisconsin The designs of Kathie Winkle for James Broadhurst Sons Ltd 1958-1978 Gender Reversals and Gender Cultures Esmeraldo de situ orbis Revolution and the rebirth of inequality Drinking wine the New York way Inflation in action Csx the missing manual 2nd edition Lace-making, New and Old Critical review of the techniques for testing insecticides Utah State land exchange legislation Victory at any cost National ownership and international trusteeship: the case of Timor-Leste Emilia Pires and Michael Franci Directory of Physicians in the US 2007 (AMA CD-ROM for 5 to 9 Users) The need to thrive Porsche, a tradition of greatness The notorious life of Gyp 2 Enter the Peacock Blue 22 Distribution of income between persons Loan agreement contract Traffic management and control systems Differential geometry with applications to mechanics and physics Life and Letters of Samuel W WI Back In Your Arms Design patterns explained 2nd edition Nature as architect. Embroidery Design A German diet, or, The ballance of Europe