



By  
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During the past 25 years of practice in the field of cardiology, I have come across people with chest pain, ranging in age from 12 to over 100. The etiology and the management varies immensely based on age, sex, underlying physical or emotional factors, and family history, among many other factors.

**School Children:** We get calls to see school children, as young as 12 year olds, who experience chest pain, especially with exertion. Most of us have heard about young athletes dying on the basketball courts. Most of the time the chest pain may not be related to any real heart disease. The child may be out of shape or may be exerting beyond the capacity, that can cause chest pain in most people. It is not uncommon for children after a bout of cold, congestion and persistent cough to experience chest pain from sore rib- muscles. Most of the time the chest pain is benign and self limiting. If the pain persists, consult with your physician. If your physician detects any abnormalities in the rhythm, heart sounds, or murmurs, then consult with a pediatric cardiologist and a 2D

echocardiogram can be helpful in excluding any significant heart disease.

**Young Adults:** Young adults between the ages of twenty and thirty-five also present with chest pains due to a variety of causes. Let us take a look at some common problems that we have seen in our daily practice.

**Pleurisy:** Occasionally, people can develop pleurisy or inflammation of the lining that covers the lungs that can cause pain which is exacerbated by deep breathing. It occurs in association with a viral syndrome and last for a few days. It responds very well to anti-inflammatory agents such as Motrin or Indocin.

**Pericarditis:** A similar inflammatory process can involve the pericardium that covers the heart muscle, resulting in pericarditis which can cause chest pain. The pericarditis pain intensifies with deep breathing and is associated with changes characteristic EKG changes.

**Hypertrophic Cardiomyopathy:** This is a rare condition where there is increased thickness of the left ventricular wall and the septum that separates the right and the left ventricles. It causes chest pain on exertion, shortness of breath, irregular heart rhythms, and in rare cases sudden death. An EKG may show increased voltage due the thick heart muscle. The 2D echocardiogram study can enable us to diagnose the presence of hypertrophic cardiomyopathy. Students engaging in vigorous

activities such as basketball, football, or other athletics, would definitely benefit from a 2D echocardiogram, especially if the person has experienced chest pain.

**Mitral Valve Prolapsed:** This is a benign condition where there is prolapse of the mitral valve into the left atrium during the left ventricular contraction. It is seen in as many as 5% to 10% of the young adults, especially females.

It causes chest pains, shortness of breath, weakness, dizziness, palpitations, and tiredness among others. It can easily be diagnosed with a 2D echocardiogram. The symptoms may come and go.

The symptoms usually respond to a small dose of Beta Blockers. Sometimes the symptoms may recur when people stop the medicine. About 2% to 3% of the people may develop valve leak. Occasionally some people with severe mitral valve leak may need mitral valve repair or replacement.

As this valve is prone for possible infection, we routinely advise people with mitral valve leak to get antibiotic prophylaxis before dental work or surgery. An exercise test will also help us in excluding coronary artery disease and in determining your exercise capacity, if there is a valve leak. Yearly echocardiograms are recommended to evaluate the valve function and to determine if the leak is getting worse.

## Chest Pain in Young Adults and School Children

**Syndrome X:** Some young ladies in their thirties and forties may experience chest pain. Their complete cardiovascular examination including nuclear stress test and cardiac catheterization may fail to reveal significant coronary artery disease. These people do have increased risk of cardiovascular event in the future and they must be treated aggressively as though they had heart problem and encourage them to lose weight. They should also be treated with medicines for blood pressure, cholesterol, and encouraged to exercise.

**Conditions Mimicking Chest Pain From Heart Disease:** A number of conditions also can cause chest pain that can mimic heart diseases. However, it is impossible, based on the history alone, to differentiate chest pain arising from other causes from those arising from a real heart problem. Careful examination, EKG, 2D echocardiogram and a stress test can help us differentiate the conditions.

**Acid Reflux:** It is a common problem that can lead to heart burn which can mimic heart pains. Most people would seek comfort thinking that the pain is due to acid reflux and get used to routine antacid use. If you are having any discomfort in your chest, it is advisable to get a complete cardiovascular evaluation including a stress test. Long term use of antacids is not a solution even it you are having an acid reflux. Consult with a

gastroenterologist if you have symptoms for more than 6 to 8 weeks despite being treated with antacids.

**Gall Stone Symptoms:** Gall bladder symptoms can mimic coronary artery disease symptoms. We have seen people being admitted to the hospital with what appeared to be a gall bladder attack in a young person in the thirties to realize that it was actually a heart attack. Getting an electrocardiogram in all patients would help to rule out any significant acute cardiac events.

**Anxiety:** Anxiety can just about mimic any heart disease symptoms or for that matter can mimic any type of symptoms. We have seen people experience chest pains, when one the family members is diagnosed to have heart disease or suffer from a heart attack. It is normal to feel chest pain during period of anxiety and the anxiety itself makes the symptoms worse. The more you worry about it, the more intense the symptoms become. After thorough cardiovascular evaluation, if there is no evidence for a serious heart disease, your physician may prescribe a short course of tranquilizers to help you get over the acute anxiety situation.

visit [www.sugarlandheartcenter.com](http://www.sugarlandheartcenter.com) for a more comprehensive information on heart diseases.”

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