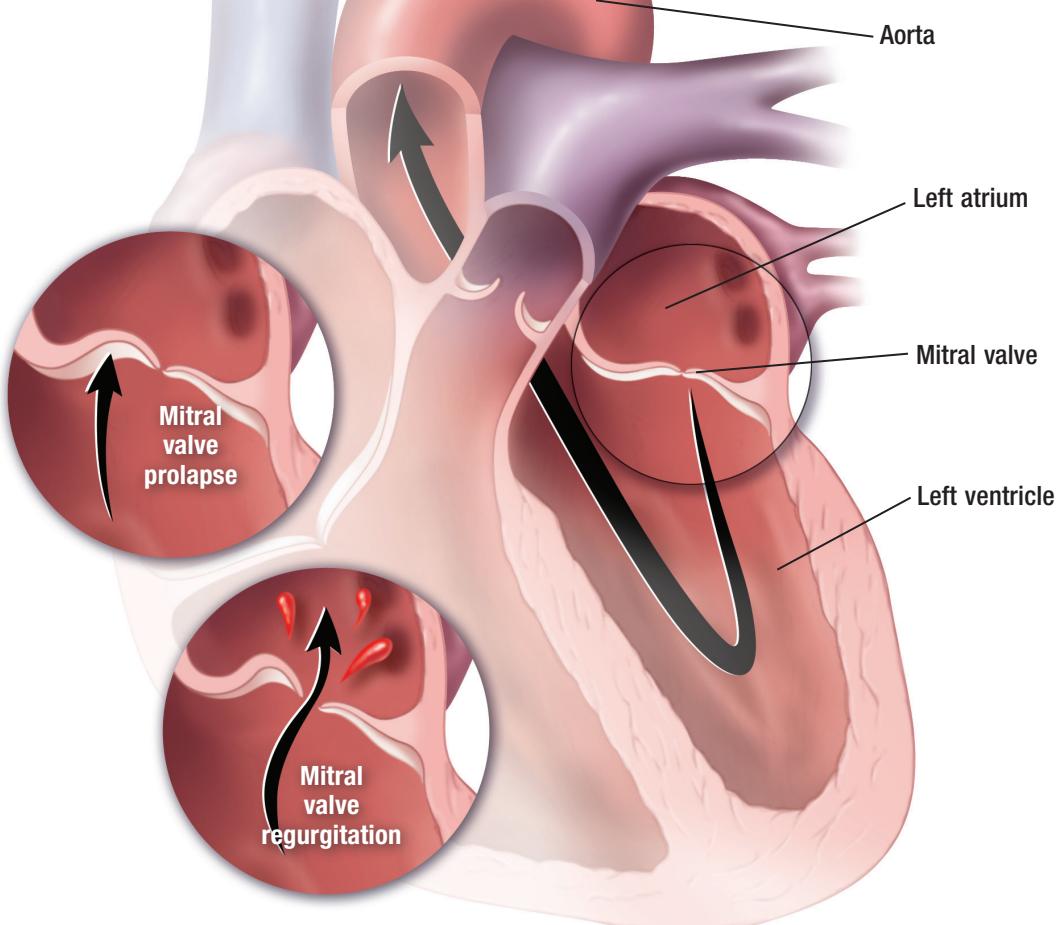


# Mitral Valve Prolapse



## Floppy Valve Syndrome

The left side of the heart is composed of an upper chamber (left atrium) and a lower chamber (left ventricle). Between the chambers is the mitral valve. When oxygenated blood enters the heart from circulation in the lungs, it follows a path that begins in the left atrium. When the left atrium fills and contracts, the mitral valve opens and blood flows into the left ventricle. Once the left ventricle fills with blood, the mitral valve closes to prevent the blood from leaking backward. The left ventricle then contracts, pushing the blood through the aorta and out to the organs through the circulatory system.

In a normal heart, the mitral valve closes tightly after each contraction to prevent the blood from flowing in the wrong direction. In mitral valve prolapse (MVP), the flaps of the valve bulge backward and the valve fails to close tightly. If the prolapse is significant, blood from the ventricle may leak back into the atrium (mitral regurgitation) with each contraction.

MVP is often first noticed during a physical examination, when a murmur or clicking sound is heard through a stethoscope as the heart beats. Many people with MVP have no symptoms and do not require treatment. Some patients, however, experience chest pain, shortness of breath, dizziness, skipped heartbeats, or awareness of their heartbeat. These symptoms are more likely to occur with mitral regurgitation. Beta-blockers may be used to relieve or prevent these symptoms. With significant mitral regurgitation, however, heart function may worsen, blood backflow can cause fluid to accumulate in the lungs, the left ventricle may enlarge because of increased workload, and serious arrhythmias can occur. In the case of significant mitral regurgitation, surgical repair or replacement of the mitral valve is indicated.

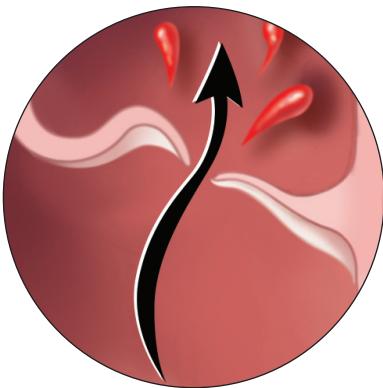
MEDICAL ILLUSTRATION: KRISTEN WIENANDT MARZEJON 2012

Copyright Jobson Medical Information LLC, 2013

**continued** ▶

## Most Patients Have No Symptoms and Need No Treatment

Mitral valve prolapse (MVP) is a disorder in which the heart's mitral valve does not close properly when the left ventricle contracts. Newer, more sophisticated tests that can more accurately diagnose the condition have shown that MVP is less common than was once thought. Sometimes, MVP is a congenital heart condition; it also can result when the valve has been damaged by rheumatic heart disease or an infection of the heart linings and valves (endocarditis). The mitral valve can prolapse (bulge backward) simply from age-related deterioration. MVP is more common in people older than 50 years or in those with Marfan syndrome (a connective-tissue disorder), Graves' disease (a thyroid disorder), or scoliosis.



*In MVP, when the left ventricle contracts, the mitral valve's flaps can bulge into the left atrium, preventing the valve from sealing tightly and allowing blood to leak backward.*

### Symptoms and Diagnosis

Symptoms occur in some patients with MVP, usually those with significant prolapse involving backflow of blood. The most common symptoms of MVP are palpitations or heartbeat awareness, shortness of breath, fatigue, chest pain, and feelings of panic or anxiety.

The echocardiogram (ECHO), which is performed to diagnose MVP, uses sound waves to visualize how well the heart is functioning. An even more specific ECHO, known as transesophageal ECHO, may be performed to more clearly visualize the mitral valve. ECHO can reveal the heart's size and shape and the amount of blood that leaks backward into the left atrium when the ventricle contracts. Other tests used to diagnose MVP include the electrocardiogram, which measures heart rhythm, and the chest x-ray, which determines whether the left ventricle is enlarged or whether there is fluid buildup in the lungs.

### Treatment

Most people with MVP suffer no symptoms and need no treatment. Those with symptoms are evaluated to determine the best treatment plan, depending upon the severity and type of symptoms. Palpitations and chest pain often are relieved by beta-blocking drugs. Aspirin or blood thinners may be used to prevent clots with certain arrhythmias, and antiarrhythmic drugs are used to control abnormal heart rhythms. Vasodilators are useful for lessening the workload on the heart, and diuretics help remove fluid from the lungs.

In some cases, a damaged mitral valve may require repair or replacement. Mitral valve repair is an option if the damage is due simply to aging. A valve that is too damaged to be repaired may have to be replaced. Some replacement valves are made of cow's or pig's tissue (biologic valves); others are manufactured from synthetic materials. There are advantages to each type. Biologic valves wear out with time, and synthetic valves require lifelong use of blood thinners to prevent blood clots from forming.

### Infective Endocarditis

A serious complication of MVP is *infective endocarditis*, in which bacteria lodge in the defective mitral valve and heart lining, causing infection and damage. In the past, it was recommended that patients with MVP take prophylactic antibiotics prior to dental, diagnostic, or surgical procedures that might enable bacteria to enter the bloodstream. Although this recommendation recently was lifted for many patients with MVP, some patients—especially those who have had a damaged mitral valve repaired or replaced—still may be required to take these antibiotics prior to such procedures.

Patients with MVP should be evaluated regularly by their doctor to monitor their condition. Patients should contact their health care professional if symptoms worsen.