

## Valvular Heart Surgery

The heart has four valves: tricuspid, pulmonic, mitral and aortic. While all are key to normal heart function, the mitral and aortic valves are of primary importance in that they are the valves that let blood flow in and out of the left ventricle (the heart's main pumping chamber). Therefore, these two valves have the greatest influence on mortality if they are not functioning properly. Generally, the first indication of a heart valve disorder is a heart murmur. This is an abnormal sound produced by the flow of blood through a malfunctioning heart valve. Typically, heart valve disorders that cause murmur(s) are diagnosed as one (or more) of the following:

- **Mitral Stenosis** is a narrowing of the valve opening, most often due to rheumatic fever.
- **Mitral Insufficiency** (i.e. mitral regurgitation) is the failure of the valve to close properly, thus allowing blood to flow abnormally back into the left atrium.
- **Mitral Valve Prolapse** (MVP) is a condition in which floppy valve leaflets (i.e. cusps) fail to close properly.
- **Aortic Stenosis** is a narrowing of the valve opening. The cause can be congenital or acquired. A bicuspid aortic valve (i.e. only two valve cusps instead of three) is an example of a congenital condition.
- **Aortic Insufficiency** (i.e. aortic regurgitation) is the failure of the valve to close properly, thus allowing blood to flow abnormally back into the left ventricle.

Significant valve disease usually requires surgical intervention. It is possible to repair some valves while others need replacement with a prosthetic valve. Prosthetic valves of artificial material, such as metal or carbon, are very durable and can last decades. However, artificial valves require on-going anti-coagulation therapy (i.e. blood thinners) to prevent thromboembolic complications (i.e. blood clots). Replacement valves can be made of organic tissues as well (i.e. pig valve, cadaver valve, bovine pericardium). They don't last as long as artificial valves (8-15 years), but anti-coagulant therapy is not necessary. Anti-coagulation itself adds a level of risk. Surgical repair (rather than replacement) for stenotic valves involves commissurotomy (opening or tight valve, i.e., with a balloon) or valvuloplasty (tightening a loose valve with suture stitches). Many times, mitral stenosis can be relieved by a balloon procedure via catheter. Repair is commonly done for the regurgitant mitral valve, thus avoiding mitral valve replacement. Repaired valves have a better prognosis than replaced valves. Mortality risk is increased when valve disease is accompanied by such problems as arrhythmias, heart enlargement, and/or compromised heart function.

**If your client has had valve surgery, please answer the following questions and enclose the most recent echocardiogram.**

**1. When was the surgery completed?**

(Date) \_\_\_\_\_

**2. Please note type of valve surgery:**

Valve replacement \_\_\_\_\_ Valvuloplasty \_\_\_\_\_  
Commissurotomy \_\_\_\_\_ Other \_\_\_\_\_

**3. Please check the type(s) of Valve Disorder:**

Aortic stenosis \_\_\_\_\_ Mitral stenosis \_\_\_\_\_  
Aortic insufficiency \_\_\_\_\_ Mitral insufficiency \_\_\_\_\_  
Mitral valve prolapse \_\_\_\_\_

**4. Please note type of valve used if replaced:**

prosthetic (mechanical) \_\_\_\_\_  
tissue (porcine, bovine, cadaver) \_\_\_\_\_

**5. Have any of the following occurred?**

Chest pain	Yes	_____	No	_____
Heart enlargement	Yes	_____	No	_____
Palpitations	Yes	_____	No	_____
Dizziness/fainting	Yes	_____	No	_____
Trouble breathing	Yes	_____	No	_____

**6. Is there a history of any other heart disease in addition to the valve disorder (coronary artery disease, etc.)?**

Yes, please give details

---

**7. Is your client on any medications?**

Yes, please give details

---

**8. Has your client smoked cigarettes or any other tobacco products in the last 5 years?**

Yes, please give details

---

**9. Does your client have any other major health problems (ex: cancer, etc.)?**

Yes, please give details

---