Heart Valve Surgery

There are four valves in the normal heart. These valves control the flow of blood through the chambers of the heart. Valves open wide enough for blood to flow through, then close tightly so the blood does not leak backward. When one or more of these valves is damaged, the flow of blood changes. Damaged valves may be due to a birth defect, infections or rheumatic heart disease that scar the valves. Valve damage can occur with aging.

Valve disease most often results from a narrowing of the valve opening or leaking of a valve. A narrow valve, sometimes called stenetic value, restricts blood flow through the heart. A leaking valve results in less blood being pumped through the heart as blood leaks backward. The defects cause strain on the heart as it works harder. The heart muscle becomes stretched. Irregular beats, shortness of breath, swelling, and the formation of blood clots, can result.
In the early stages of valve disease, medications, diet, and exercise can control symptoms. When symptoms worsen, surgery is often necessary to repair or replace the diseased valve.

The purpose of heart valve surgery is to improve the blood flow through the heart. This should decrease or stop the symptoms you have been having.

In valve replacement surgery, your surgeon removes the diseased valve and replaces it with a new valve. Valves are made from plastic, metal, or tissue. Depending on the type of valve used, you may hear a click with each beat of your heart.

- Mechanical Valve (Synthetic Materials): It is reliable and lasts a long time. Blood tends to stick to it and forms clots so they require people to take blood thinners.
- Tissue (Biological) Valve: Made from animal or human tissue. Often does not require a blood thinner, but are not as long-lasting as a mechanical valve.

Another type of valve surgery is valvuloplasty. Instead of replacing a defective heart valve, the valve is simply repaired. A torn valve or one with a very wide opening may be fixed by sewing the edges together.
Valve commissurotomy is sometimes done when the valve opening is too narrow. Blood flow through the valve is increased by widening the opening. This is done by stretching or clipping the valve edges.

With certain types of valves, you will need to take a medicine to prevent blood clots from forming on the new valve. While you are in the hospital, the drug Heparin will be given intravenously (IV). Before the Heparin is stopped, an oral medicine called Coumadin will be started. These medicines are adjusted according to blood tests. Blood tests are done to show the time it takes for your blood to clot. If you are on these medicines, your nurse will discuss them with you and will give you a handout and ask you to watch a videotape. Be sure to ask questions about any concerns you have.

Talk to your doctor or others on your health care team if you have questions. You may request more written information from the Library for Health Information at (614) 293-3707 or email: health-info@osu.edu.