

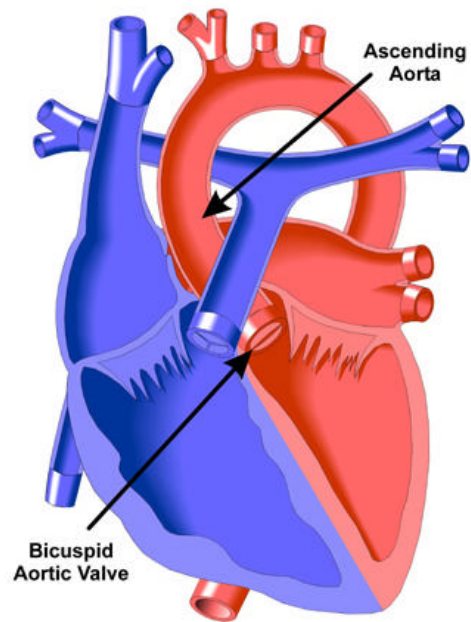
Bicuspid Aortic Valve

The aortic valve conducts oxygen-rich blood from the left ventricle into the aorta, which carries it to the body tissues. Normally, this valve has three leaflets. Occasionally, people are born with an aortic valve that has only two leaflets. This is known as a bicuspid aortic valve. A bicuspid aortic valve may occur in isolation in an otherwise normal heart, or it may occur with other heart defects.

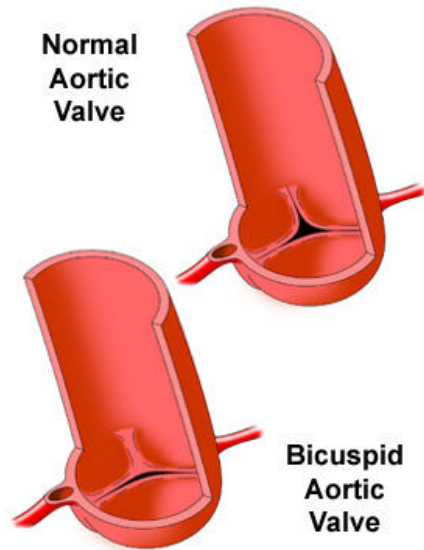
Isolated bicuspid aortic valve is the most common of all congenital cardiac anomalies and usually has no effects on heart function. If a bicuspid aortic valve does not open normally, aortic valve stenosis can result. The aortic valve is generally bicuspid in cases of Aortic Stenosis, which accounts for 3-6% of all cases of congenital heart disease.

Through bicuspid aortic valves usually cause no adverse symptoms, difficulties may arise as the patient grows older. For example, the valve opening may become narrowed (stenotic) because of calcification of the valve leaflets. Also, the valve might not open or close completely, resulting in leakage at the valve opening (regurgitation).

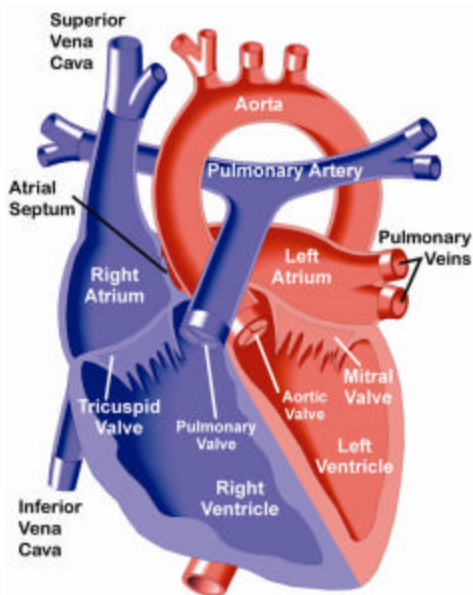
Occasionally, patients with a bicuspid aortic valve will experience a progressive enlargement (dilatation) of the aorta. This can result in the formation of an ascending aorta aneurysm and, rarely, dissection (splitting open) of the aorta. Dissection is an up and down tear in the aortic wall with blood filling the inner and outer layers of the aorta.



Normal Aortic Valve



Bicuspid Aortic Valve



Top: Bicuspid Aortic Valve with Dilations of the Ascending Aorta and Aortic Aneurysm

Left: Normal Heart