



# Having an echocardiogram to screen for a bicuspid aortic valve

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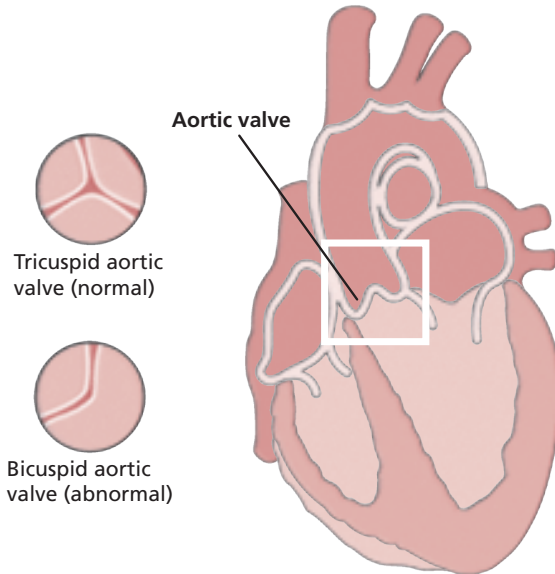
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## What is a bicuspid aortic valve?

The aortic valve sits between the main chamber of the heart (the left ventricle) and the aorta. Its function is to ensure that blood flows correctly forward from the left ventricle into the aorta.

Normally it has three thin leaflets which open as the heart contracts and then close to prevent back-flow of blood towards the ventricle.



Some people may be born with an aortic valve made up of only 2 leaflets. The valve is then called bicuspid. This may cause problems with the functioning of the valve in that it may be more prone to gradually becoming narrowed or leaky. Sometimes a bicuspid valve may be associated with widening of the portion of the aorta that is connected to it. Widening of the aorta may occur in some relatives even if they have an aortic valve with 3 leaflets. If this widening is significant it is known as an aortic aneurysm.

## Is a bicuspid valve a common problem?

Studies have suggested that this is not an uncommon valve problem and may occur in up to 1 in 200 people.

Recently there has been evidence that this condition may be genetic and thus have a tendency to run in a family. There is a 10% chance of you having a bicuspid aortic valve if a first degree relative, such as one of your parents or brothers/sisters, is affected.

## How is it diagnosed?

The screening test for a bicuspid valve consists of having an echocardiogram. This is an ultrasound scan of your heart – very similar to the scans that pregnant women have to check on their baby. It is a safe and painless procedure, which usually takes up to half an hour. The scan allows us to directly visualise the chambers of the heart and the valves. There is no special preparation needed, does not involve radiation and you may go straight home afterwards.

In addition, an MRI scan is performed to closely visualise the aorta, it is a painless procedure that uses magnetic impulses to produce a 3-dimensional image, While this may be noisy, it does not use radiation, is completely safe and usually takes up to half an hour.

## What happens if I am found to have a bicuspid aortic valve?

If you are found to have an aortic valve with 2 leaflets, which is otherwise functioning normally, all that would be required is for you to be kept under review. The follow up would usually consist of having a repeat echocardiogram every 2-5 years. This is to keep an eye on the valve and detect any early signs of it developing problems with its function.

Having a bicuspid aortic valve, which is otherwise functioning satisfactory, should not interfere with your capacity to work, take part in recreational sports or enjoy any other activities.

If you are found to have a bicuspid valve which is either; narrowed, leaky or associated with an enlarged aorta, then you would need more frequent follow up and monitoring.

Occasionally a bicuspid valve may become significantly narrowed or leaky to the extent that this is interfering with the normal circulation of blood from the heart. If that occurs, symptoms of shortness of breath, chest pain and dizziness may develop. At that stage treatment may be required and could consist of an operation to replace the malfunctioning valve.

Finding out about the presence of a bicuspid aortic valve, even in a person who is completely well and has no symptoms, is important in making sure the function of the valve is checked at regular intervals and any possible complications are detected at an early stage.

## Should I attend for a screening echocardiogram?

We hope that you have found the above information helpful. If you have got any questions prior to deciding whether you wish to have an echocardiogram, please do not hesitate to contact us.

\*In accordance with current ACC/AHA guidelines (2008) for management of patients with congenital aortic valve disease



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