



University Hospitals Bristol **NHS**

NHS Foundation Trust

Patient information service
Bristol Heart Institute

Tissue or mechanical valve?



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Introduction

There are four valves in your heart. If one of them is not functioning normally, you may be advised to have surgery to replace one or more of them with a tissue or mechanical valve. This can reduce – or greatly improve – your symptoms, and could significantly enhance your quality of life. If your cardiologist finds that your heart muscle has been affected by the faulty valve, they may recommend that you have surgery even if you do not have any symptoms. This can prevent other serious heart problems happening in the future. This leaflet presents the similarities and differences between tissue and mechanical valves to help you decide which is best for you.

Similarities

Both options involve a minimum five day stay in hospital.

You will have a scar on your chest from the incision. It can take two to three months to recover at home.

You are at risk of endocarditis (a rare infection of the lining of the heart) after the surgery. To reduce the chance of having this infection, it is important to have regular dental check-ups and maintain good dental hygiene, as teeth and gums are an easy route for bacteria to enter the blood stream. It is also important to avoid tattoos and piercings.

What are the differences?



Mechanical valve



Tissue valve

Mechanical valve	Tissue valve
<p>How long does it last?</p> <p>Typically it will last for 20 to 30 years. Technically it could last a lifetime; however, on rare occasions it may need to be replaced.</p> <p>The durability of a mechanical valve makes it less likely that you will need another replacement valve in your lifetime.</p>	<p>How long does it last?</p> <p>This varies between people and depends on your age. In young people, a tissue valve may only last between five and eight years. In older people it can last up to 15 years; this is variable.</p> <p>It may be possible in the future for your valve to be replaced by a keyhole technique.</p> <p>Tissue valves can become hardened (or calcified) over time.</p>
<p>Medication</p> <p>You take blood thinning medication (warfarin) for life.</p> <p>This medicine raises your risk of bleeding.</p> <p>If you require any other operations or have dental extractions, you may have to stop your warfarin or take a substitute medication. This will need to be discussed with your doctor.</p>	<p>Medication</p> <p>You may need to take blood thinning medication for a few months after the procedure, but you won't have to take this for life.</p>

Mechanical valve	Tissue valve
<p>Medication (continued)</p> <p>Avoid over-the-counter medication when using warfarin.</p> <p>Regular blood tests are necessary when on warfarin to check the blood is not too thin.</p> <p>Certain foods and natural health products can affect warfarin levels. Changing your diet suddenly can also affect your levels. Drink alcohol in moderation.</p>	
<p>Activities</p> <p>You'll need to avoid activities that have a high risk of injury, such as skiing or contact sports, as there is a greater risk of internal bleeding or bruising.</p>	<p>Activities</p> <p>When your sternum heals you will be able to return to your normal activities (including contact sports). Sternum healing can take up to three months.</p>
<p>Pregnancy</p> <p>There are significant risks when taking warfarin during pregnancy.</p> <p>Risks of pregnancy must be discussed with your cardiologist.</p>	<p>Pregnancy</p> <p>You may be able to become pregnant with a tissue valve – this should be discussed with your cardiologist before considering pregnancy.</p>

Mechanical valve	Tissue valve
<p>Risk of blood clots</p> <p>These valves have a high risk of causing blood clots. Blood clots can cause the valve to stop working or result in a stroke if you do not take your blood thinning medication. If your blood is too thin, you are at risk of excessive bleeding.</p>	<p>Risk of blood clots</p> <p>You are less likely to develop blood clots.</p>
<p>Infection risk</p> <p>You are at risk of infection of the mechanical valve.</p> <p>NICE guidelines (2008) do not suggest antibiotic cover for any dental work, but your doctor may recommend it.</p>	<p>Infection risk</p> <p>You are at risk of infection of the tissue valve.</p> <p>NICE guidelines (2008) do not suggest antibiotic cover for any dental work, but your doctor may recommend it.</p>
<p>Sound</p> <p>A 'clicking sound' of the valve can be heard due to the opening and closing of the metal. You will get used to this sound.</p>	<p>Sound</p> <p>The tissue valve is silent.</p>

Any comments/questions you may want to discuss with your cardiologist:

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References

www.cigna.com/healthwellness/hw/medical-topics/heart-valve-problems-uf4587

www.cxvascular.com/cn-archives/cardiovascular-news-issue-13/heart-valve-replacement-tissue-or-mechanical-valves

National Institute of Clinical Excellence (NICE) 2008 Antibiotic Prophylaxis Guidelines: <http://www.nice.org.uk/nicemedia/pdf/cg64niceguidance.pdf>

www.heartcarecentre.co.nz/core/contact

Useful websites

The Somerville Foundation: www.thesf.org.uk

The British Heart Foundation: www.bhf.org.uk/heart-health/conditions/congenital-heart-disease.aspx

Inspiring stories by patients who have had valve surgery

www.thesf.org.uk/community/inspirational-stories/

www.nhs.uk/Conditions/Aorticvalvreplacement/Pages/Realstoriespage.aspx

Clinical nurse specialist contact details

The clinical nurse specialists support inpatients and outpatients. You can contact them on the numbers and email addresses below.

Sheena Vernon

Adult congenital heart specialist nurse

Email: Sheena.Vernon@UH Bristol.nhs.uk

Telephone: 0117 342 6599

Wendy Visser

Adult congenital heart specialist nurse

Email: Wendy.Visser@UH Bristol.nhs.uk

Telephone: 0117 342 6600

Caryl Evans

Adult congenital heart specialist nurse

Email: Caryl.Evans@UH Bristol.nhs.uk

Telephone: 0117 342 6657

Please note that if for any reason you would value a second opinion concerning your diagnosis or treatment, you are entirely within your rights to request this.

The first step would usually be to discuss this with the doctor or other lead clinician who is responsible for your care.

Smoking is the primary cause of preventable illness and premature death. For support in stopping smoking contact **Smokefree Bristol** on **0117 922 2255**.

As well as providing clinical care, our Trust has an important role in research. This allows us to discover new and improved ways of treating patients.

While under our care, you may be invited to take part in research. To find out more please visit:
www.uhbristol.nhs.uk/research-innovation
or call the research and innovation team on
0117 342 0233.

For access to other patient leaflets and information please go to the following address:

www.uhbristol.nhs.uk/patients-and-visitors/information-for-patients/

Hospital switchboard: 0117 923 0000



Minicom: 0117 934 9869



www.uhbristol.nhs.uk



For an interpreter or signer please contact the telephone number on your appointment letter.



For this leaflet in large print, audio or PDF format, please email patientleaflets@uhbristol.nhs.uk.

