



Transcatheter Pulmonary Valve Replacement

Created: October 2025
Next review: October 2026
Version 1

About this leaflet

This purpose of this leaflet is to provide information about Transcatheter Pulmonary Valve Replacement (TPVR), what you can expect from your procedure, and advice around going home and follow-up care

What is Transcatheter Pulmonary Valve Replacement?

Transcatheter Pulmonary Valve Replacement is designed to replace your pulmonary valve without the need for open heart surgery.

Why do I need a pulmonary valve replacement?

You will have already undergone a procedure to relieve a tight narrowing of the pulmonary valve and/or replace the pulmonary valve. This is because the pulmonary valve was narrowed (pulmonary stenosis), leaky (pulmonary regurgitation) or a combination of both.

A recent assessment has identified that your existing pulmonary valve has a significant level of stenosis, regurgitation or both.

This means that the right side of your heart works harder than it is meant to and has become less efficient. To relieve the extra work and protect the overall function of your heart, your specialist team has identified that you would benefit from a further pulmonary valve replacement (PVR).

What are my treatment options?

While medications can be used to treat symptoms, there are no medications that will fix a leaking or narrowed pulmonary valve. This means that the treatment options available to repair the pulmonary valve are open heart surgery or a catheter-based keyhole procedure.

How is the procedure performed?

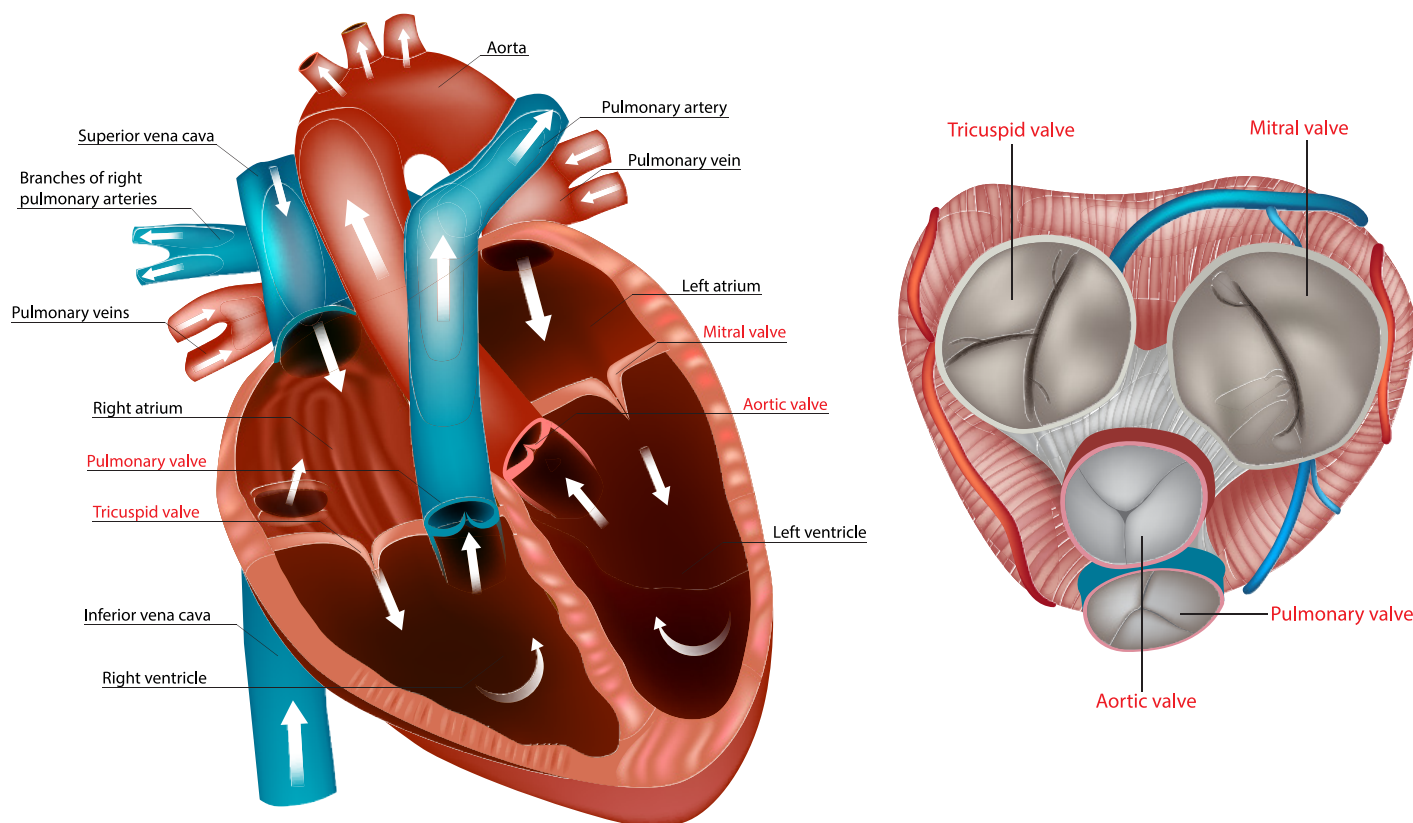
Transcatheter PVR is performed under general anaesthetic. A small incision (cut) is made at the top of the leg (groin) and a tube is inserted into the vein.

After some initial measurements are obtained, the new valve is introduced via a tube (catheter) and guided in to position within the heart. The new valve will replace the old valve and start to work immediately.

There are 2 different transcatheter pulmonary valves available. The choice of valve is based on the findings from an assessment of your heart.

Either procedure takes around 3-4 hours to complete. You are required to stay in hospital overnight.

You will have a chest x-ray and ultrasound scan of your heart to check the position and function of the valve, before to going home.



➤ What are the benefits of the procedure?

The main benefit of this treatment is to avoid the need for an open heart surgery. The length of hospital stay is reduced. You will also be able to return to normal activities quicker than with an open heart operation. In the long-term, this technique could improve heart function more effectively than surgery. We predict that this technique will make it possible to delay or even avoid the need for further surgery.

As with all transcatheter procedures, complications can arise during the procedure or soon after.

➤ What are the risks of the procedure?

As with all procedures there are some risks. It is important that you understand the risks so that you can make a decision whether you want to have the procedure performed.



Potential risk include:

- Failure to insert a new valve <5%
- Arrhythmias (abnormal heart rhythms) 2%
- Permanent pacemaker <1%
- Wound infection 1%
- Infection (including endocarditis after transcatheter PVR) 2-3%
- Kidney failure (requiring dialysis) <1%
- Balloon rupture < 2%
- Stent embolisation < 1%
- Major vascular complications (major bleeding or serious damage to blood vessels) 5%
- Bleeding into the sac around the heart <1%
- Heart attack including coronary compression 1%
- Stroke <1%
- Death 0.5%

Before your procedure

The Nurse Specialist will contact you and explain about the timing of the procedure. You will need to attend a dental check-up before your procedure to minimise any risk of infection.

You will also be seen by the Consultant Cardiologist and Nurse Specialist at our pre assessment clinic before your procedure takes place. The Scottish Adult Congenital Cardiac Service (SACCS) team will explain your procedure in more detail, and you will have time to ask any questions you may have.

Some blood tests, heart tracings and swabs will be taken before you come into hospital. They will also discuss any fasting requirements, as well as informing you of any medication that you must stop, prior to your procedure.

Pre admission

Before your stay, there are some guidelines you must follow:

- You must tell us if you are allergic to anything, including x-ray dye.
- Bring all your medication with you when you come in for your procedure. Continue to take your medication as normal, your Nurse will contact you to discuss whether you are required to stop any of your regular medications.
- If you have diabetes, you may need to change your insulin dosage on the day. This will be discussed with you at the pre-assessment clinic. If you are on metformin, please do not take this on the morning of the procedure.
- You will need to bring with you a dressing gown and slippers, as well as something to read, a book or something to help you pass the time. Remove any make-up and nail polish so that we can assess you accurately throughout the process.
- You should leave all jewellery and valuables at home. You will be allowed to wear your wedding ring during the procedure.

Patients will go home the day after their procedure. This can sometimes be longer, depending on your individual needs. We will discuss all your discharge arrangements before you leave.

We will ask you to attend a follow-up clinic appointment at 4 to 6 weeks after your procedure when we will discuss your long-term follow-up.

About my wound

- Do not shower or bathe for the first 24 hours after your procedure as this may increase the risk of infection and/or bleeding from the site.
- Avoid using soap or perfumed products when showering or bathing.
- Always use a clean towel to pat dry the wound site.
- If you have a dressing over your wound site, remove it in the shower or bath, 2 days after your procedure.
- You may experience some bruising and/or discomfort over the wound site. Any discomfort should reduce after the first few days.
- If your wound site does bleed, apply firm pressure to the site for 15 minutes. If it continues to bleed, contact your GP or NHS 24 as soon as possible.

Medication

The nursing and medical staff will give you advice on the medication we ask you to take prior to being discharged from the ward. A letter will be sent to your GP to advise them of any changes to your medication.

Eating and drinking

Following your discharge from hospital, you may resume your normal diet.

Exercise

Avoid excessive movement or heavy lifting for a week post procedure as this may cause the wound to bleed. You can start gentle exercise, such as walking, the day after your procedure and gradually build this up over the next 2 weeks. Please avoid weight training or strenuous cardiovascular exercise for 4 weeks after your procedure.

Work

For office-based jobs, we would advise that you do not return to work for a week after your procedure. For more physical/manual jobs, we advise that you do not return to work for 2 weeks after your procedure.

Driving

The Driver and Vehicle Licensing Agency (DVLA) advises that you should not drive for 4 weeks after transcatheter valve replacement. You do not need to inform the DVLA about your procedure, but we do advise you tell your insurance company to avoid problems with any claims you may make in the future. If you hold a commercial license, you will need to inform the DVLA who will advise you further.

Flying

If you are planning a holiday, it is advised you wait at least 6 weeks before travelling, when you will have had your follow up review. Please ensure you have valid travel insurance in place.

Dentist

If you require any invasive dental procedures, we advise that you receive antibiotic cover. We will give you a specific card to explain this and would be happy to discuss it further with you and your dentist.

Contact

Please contact your SACCS Nurse Specialist or GP if:

- You develop any unusual pain, swelling, heat, redness or pus at the access site. You experience a fever or sharp rise in your temperature.
- You are unable to stand or bear your own weight.

If you have any concerns at the weekend or out of hours, you can contact the Cardiology ward on 0141 951 5250 or the Coronary Care Unit on 0141 951 5202. You can contact our SACCS Nurse Specialist team for any non-urgent enquiries on 07795 953070.

Notes

All of our publications are available in different languages, larger print, braille (English only), audio tape or another format of your choice.

我們所有的印刷品均有不同語言版本、大字體版本、盲文（僅有英文）、錄音帶版本或你想要的另外形式供選擇。

كافة مطبوعاتنا متاحة بلغات مختلفة و بالأحرف الطباعة الكبيرة و بطريقة بريل الخاصة بالمكفوفين (باللغة الإنكليزية فقط) و على شريط كاسيت سمعي أو بصيغة بديلة حسب خيارك.

Tha gach sgrìobhainn againn rim faotainn ann an diofar chànanan, clò nas motha, Braille (Beurla a-mhàin), teip clàistinn no riochd eile a tha sibh airson a thaghadh.

हमारे सब प्रकाशन अनेक भाषाओं, बड़े अक्षरों की छपाई, ब्रेल (केवल अंग्रेज़ी), सुनने वाली कसेट या आपकी पसंदनुसार किसी अन्य फॉरमेट (आरप) में भी उपलब्ध हैं।

我們所有的印刷品均有不同語言版本、大字體版本、盲文（僅有英文）、錄音帶版本或你想要的另外形式供選擇。

ਸਾਡੇ ਸਾਰੇ ਪਰਚੇ ਅਤੇ ਕਿਤਾਬਚੇ ਵਗ਼ੈਰਾ ਵੱਖ ਵੱਖ ਭਾਸ਼ਾਵਾਂ ਵਿਚ, ਵੱਡੇ ਅੱਖਰਾਂ ਅਤੇ ਬ੍ਰੇਲ (ਸਿਰਫ਼ ਅੰਗਰੇਜ਼ੀ) ਵਿਚ, ਆਡੀਓ ਟੇਪ 'ਤੇ ਜਾਂ ਤੁਹਾਡੀ ਮਰਜ਼ੀ ਅਨੁਸਾਰ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ ਵੀ ਮਿਲ ਸਕਦੇ ਹਨ।

ہماری تمام مطبوعات مختلف زبانوں، بڑے حروف کی چھپائی، بریل (صرف انگریزی)، سنے والی کست یا آپ کی پسند کے مطابق کسی دیگر صورت (فارمیٹ) میں بھی دستیاب ہیں۔



: **0141 951 5513**