

# Right Heart Catheter

Adult and Child/Young Person  
 Informed consent: patient information

(Affix identification label here)

URN:

Family name:

Given name(s):

Address:

Date of birth:

Sex:  M  F  I

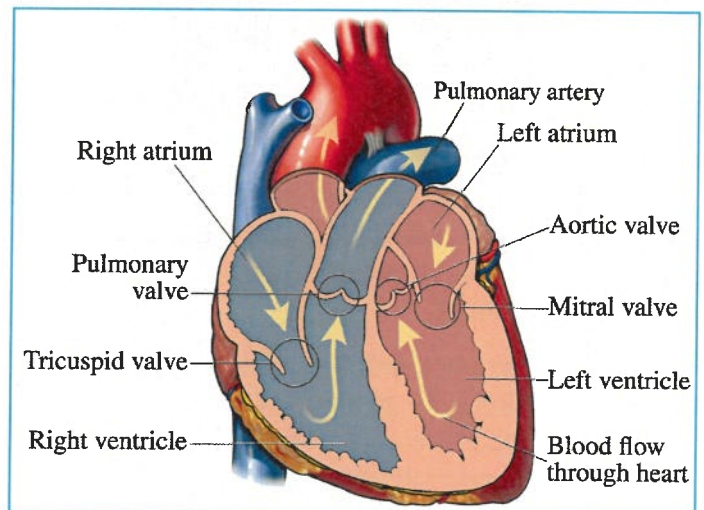
**This patient information sheet has been given to you to read carefully and allow time to ask your doctor any questions about this procedure. Your doctor will include the consent form and a copy of this patient information sheet in your medical record.**

*This patient information sheet uses the words 'I/you/your/me/my' to mean the patient or another person who is providing consent on behalf of the patient.*



## 1. What is a right heart catheter and how will it help me?

A right heart catheter procedure is used to measure the pressures within your heart and pulmonary artery (the main artery that supplies blood to the lungs). This procedure can also assist doctors to determine the cardiac output (the amount of blood the heart pumps every minute). The right heart catheter procedure involves passing a small tube (catheter) via a vein in your neck, groin or arm to the heart. In the heart, the catheter is placed inside the right side of the heart to measure the pressure of blood flow. This procedure is used to measure how well your heart is working.



*Image: Anatomy of a normal heart.*  
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A right heart catheter may be requested to help diagnose:

- Heart failure (also known as congestive heart failure). Weakened heart muscle is unable to pump blood efficiently around the body, causing extra fluid to build-up in the vessels and lungs.
- Congenital heart disease (a general term used for problems with the heart's structure, present from birth).
- Heart valve disease. Damage to the heart valves reduces the heart's function.
- Cardiomyopathy. Thickened or weakened heart muscle reduces the heart's function.
- Pulmonary hypertension. Increased pressure in the blood vessels in your lungs and the right side of your heart.

Blood samples may be taken via the catheter (during the procedure) to assess the amount of oxygen or other levels in the blood. All the information and measurements collected are used to help diagnose your heart conditions and determine the best treatment options for you.

DO NOT WRITE IN THIS BINDING MARGIN



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## Preparing for the procedure

The Cardiology department will give you instructions on how to prepare for the procedure. It is important to follow the instructions that are given to you. Your procedure might be delayed if you don't follow all the preparation steps.

Cardiology staff will notify you beforehand if you are required to stop taking any blood-thinning medication.

This procedure will require the use of a local anaesthetic and possibly a mild sedation. If you are having sedation and are being discharged on the same day, you cannot drive and you must have someone available to escort you home.

Do not drink alcohol, smoke, vape or take recreational drugs for at least 24 hours before the procedure as these may alter the effects of the sedation anaesthetic.

Please tell the doctor if you:

- are breastfeeding or pregnant, or suspect that you may be pregnant
- have a drug or medication dependence.

## On the day of your procedure

- Nothing to eat or drink ('nil by mouth'): you will be told when to have your last meal and drink. Do NOT eat (including lollies), drink or chew gum after this time otherwise your procedure may be delayed or cancelled. This is to make sure your stomach is empty so that if you vomit, there will be nothing to go into your lungs.
- If you take medicines, most should be continued before a procedure and taken at the usual time, even on the day of the procedure, with a sip of water. There are some important exceptions:

- your doctor will provide specific instructions about your medicines
- take to the hospital all your prescribed medicines, those medicines you buy over the counter, herbal remedies and supplements. This may include and is not limited to blood-thinning medicines, the contraceptive pill, antidepressants and/or medicines for treating diabetes (e.g. insulin).
- If you feel unwell, telephone the Cardiology department for advice.
- Tell your doctor if you have:
  - health problems (e.g. diabetes, high blood pressure, infectious diseases, serious illnesses), including if undergoing regular treatment
  - had previous problems and/or known family problems with anaesthesia
  - false teeth, caps, loose teeth or other dental problems
  - allergies/intolerances of any type and their side effects.
- You will be required to change into a hospital gown and remove some of your jewellery. Your belongings will be kept in a safe location during the procedure.

## Sedation

Sedation is the use of medicines that help make you feel relaxed and drowsy for your procedure. You may remember some or little about what has happened. You may still be aware of your surroundings and should be able to follow simple instructions, such as holding your breath, when instructed by the doctor.

If you are booked for an anaesthetic or sedation, please read the information sheet *About Your Anaesthetic (for adults)* or *About Your Child's Anaesthetic (for child/young person)*. If you do not have one of these information sheets, please ask for one.



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## For a substitute decision-maker/parent/legal guardian/other person of a child/young person/adult without capacity to consent to having a right heart catheter

To prepare the patient for this procedure and to ease their concerns, tell them what they can expect to happen during the procedure. This information sheet will assist you with this.

If the patient is having a general anaesthetic, you may be able to see them off to sleep. Once they are asleep, you will be asked to leave the procedure room and wait in the waiting area.

Other children are not allowed into the procedure room, and they must be supervised at all times by another parent/adult.

## During the procedure

Before the procedure begins, an intravenous (I.V.) cannula (a small plastic tube) will be inserted into a vein, usually in your hand or arm. This is for medication or fluids required during the procedure, including sedation.

Routine observations will be measured before and during the procedure, these may include cardiac rhythm, blood pressure, heart rate, respiratory (breathing) rate and oxygen levels. You will also be connected to an Electrocardiogram (ECG) to monitor the electrical activity of your heart.

The skin over your lower arm and/or groin will be cleaned and a sterile drape will be applied to cover your body. The doctor will use local anaesthetic to numb your skin and then make a small cut where the needle enters.

The cardiologist (doctor) will insert a needle through the cut and into your vein.

You must remain as still as possible. At times, you may be asked to hold your breath.

The catheter will be inserted into the vein and the needle removed. When the catheter is in the heart, pressures will be recorded from within the right-hand side heart chambers (right atrium and right ventricle), and the pulmonary artery. The pulmonary artery is the main artery that carries blood to the lungs. Blood samples may also be taken.

At the end of the procedure, the catheter will be removed and pressure will be applied over the puncture site. A dressing will be applied to the site.

Blood samples will be sent to pathology for assessment.

After the procedure is complete, you will be transferred from the procedure room to a recovery area.

Your observations will be taken, and your puncture site will be monitored regularly for swelling, oozing of blood and bruising. Inform the staff if you are experiencing any chest pain or trouble breathing.

You may be required to rest in bed for up to 2 hours. Moving too soon after this procedure may cause bleeding at the puncture site.

If the I.V. cannula is no longer required, it will be removed.

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## 2. What are the risks?

In recommending the procedure, the doctor believes that the benefits to you from having the procedure exceed the risks involved. There are risks and possible complications associated with the procedure which can occur with all patients – these are set out below.

Your doctor will discuss any additional risks, specific to your individual condition and circumstances, with you. These should be written on the consent form before you sign it.

### Common risks and complications

- mild pain or discomfort may occur around the puncture site
- minor bleeding and bruising at the puncture site
- bleeding or bruising is more common if you have been taking blood-thinning medicines, such as warfarin, aspirin, clopidogrel (Plavix, Iscover), prasugrel, dipyridamole (Persantin), ticagrelor (Brilinta), apixaban (Eliquis), dabigatran (Pradaxa), rivaroxaban (Xarelto) or complementary/alternative medicines, such as fish oil and turmeric
- abnormal heartbeat, lasting several seconds, which settles by itself.

### Uncommon risks and complications

- unable to get the catheter into the chosen vein. The doctor may try a different approach (e.g. neck, an arm or a leg vein)
- abnormal heart rhythm that continues for a long time. This may need a controlled electric shock to correct
- the artery is accidentally punctured. This will require firm pressure to the area to stop bleeding. On rare occasions, this may require surgical repair
- the procedure may not be possible due to medical and/or technical reasons.

### Rare risks and complications

- allergic reaction to injected medication, requiring further treatment
- infection. This may need antibiotics
- blood clot in a vein. This may cause pain and swelling and, in rare cases, the clot may break off and go to the lungs and need treatment
- embolism. A blood clot may form and break off from the catheter. This is treated with blood thinning medication
- pneumothorax (air in the lung cavity). A chest tube may be inserted to drain the air
- damage to the vein causing bleeding. This may need surgical repair
- air embolism. Oxygen may be given
- a hole is accidentally made in the heart or the heart valve. This will need surgical repair
- unable to position the catheter into the lung vessels or around the heart. The procedure would be cancelled if this occurred. This is more common if there are congenital malformations of the heart
- damage to the lung blood vessel causing bleeding. This may need surgical repair
- a stroke. This may cause long-term disability
- death because of this procedure is extremely rare.

### If a general anaesthetic or sedation is given, extra risks include:

- faintness or dizziness, especially when you start to move
- fall in blood pressure
- nausea and vomiting
- weakness
- heart and lung problems, such as a heart attack or pneumonia
- stroke resulting in brain damage.

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## Risks of radiation

The risks of radiation exposure from this procedure need to be compared to the risks of your condition not being treated. Exposure to radiation may cause a slight increase in the risk of cancer to you over your lifetime. However, the potential risk is small compared to the expected benefit of this procedure<sup>1</sup>.

## What are the risks of not having a right heart catheter?

There may be adverse consequences for your health if you choose not to have the proposed procedure. You and your doctor should discuss these.

If you choose not to have the procedure, you will not be required to sign a consent form.

If you have signed a consent form, you have the right to change your mind at any time prior to the procedure.



## 3. Are there alternatives?

Making the decision to have a procedure requires you to understand the options available. Your doctor will discuss any alternative procedure options and their risks or benefits with you, before signing the consent form.



## 4. What should I expect after the procedure?

Your doctor will briefly explain the results of your procedure and treatment options for you. A report will also be sent to your referring doctor.

You will be able to resume a normal diet after the procedure recovery, unless otherwise advised by the healthcare team.

Your doctor will discuss with you the need to restrict your activities at home after discharge. Most people can return to normal activity the next day.

Go to your nearest Emergency department or GP (your local doctor) if you become unwell or have:

- pain unrelieved by simple pain relievers or those prescribed for you
- bleeding, swelling, redness or inflammation at the puncture site
- a fever
- other warning signs the doctor may have asked you to be aware of.

If you had sedation or an anaesthetic, this will affect your judgement for about 24 hours. For your own safety:

- Do NOT drive any type of car, bike or other vehicle.
- Do NOT operate machinery including cooking equipment.
- Do NOT make important decisions or sign a legal document.
- Do NOT drink alcohol, smoke, vape or take recreational drugs. They may react with the anaesthetic medications.



## 5. Who will be performing the procedure?

Doctors, cardiac scientists, radiographers, cardiac sonographers, pharmacists, nurses, patient support officers and administration staff make up the cardiology team. All or some of these professionals may be involved in your journey.

A doctor other than the consultant/specialist may assist with/conduct your procedure. This could include a registered doctor who is undergoing further training. All trainees are supervised according to relevant professional guidelines.

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If you have any concerns about which doctor will be performing your procedure, please discuss this with the doctor.

## Clinical students

For the purpose of undertaking professional training in this teaching hospital, subject to your consent, a clinical student(s) may observe medical examination(s) or procedure(s). A clinical student may also, subject to your consent, assist with/conduct a clinically necessary examination or procedure on you while you are under the influence of anaesthetic.

You are under no obligation to agree to an examination(s) or a procedure(s) being observed or undertaken by a clinical student(s) for training purposes. If you choose not to consent, it will not adversely affect your access, outcome or rights to medical treatment in any way.

For more information on student care, please visit [www.health.qld.gov.au/consent/students](http://www.health.qld.gov.au/consent/students)



## 6. Where can I find support or more information?

Hospital care: before, during and after is available on the Queensland Health website [www.qld.gov.au/health/services/hospital-care/before-after](http://www.qld.gov.au/health/services/hospital-care/before-after) where you can read about your healthcare rights.

Queensland Health respects the privacy of patients and their families. To learn more about health records and personal information visit our website [www.health.qld.gov.au/system-governance/records-privacy/health-personal](http://www.health.qld.gov.au/system-governance/records-privacy/health-personal)

You can also see a list of blood-thinning medications at [www.health.qld.gov.au/consent/bloodthinner](http://www.health.qld.gov.au/consent/bloodthinner)

Further information about informed consent can be found on the Informed Consent website [www.health.qld.gov.au/consent](http://www.health.qld.gov.au/consent). Additional statewide consent forms and patient information sheets are also available here.

Staff are available to support patients' cultural and spiritual needs. If you would like cultural or spiritual support, please discuss this with your doctor.

Queensland Health recognises that First Nations Peoples' culture must be considered in the patient's clinical care to ensure their holistic health and individual needs are met.



## 7. Questions

Please ask the doctor if you do not understand any aspect of this patient information sheet or if you have any questions about your proposed procedure.

If you have further questions prior to your appointment, please contact the Cardiology department via the main switchboard of the facility where your procedure is booked.



## 8. Contact us

**In an emergency, call Triple Zero (000).**

If it is not an emergency, but you have concerns, contact 13 HEALTH (13 43 25 84), 24 hours a day, 7 days a week.

### References:

1. Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). Ionising radiation in our everyday environment, 2021. Available from [www.arpansa.gov.au](http://www.arpansa.gov.au)