

## What are the potential risks/complications of the procedure?

- Allergic reactions to medications/contrasts
- Arrhythmias (irregular heart beat)
- Atrial septal defect requiring treatment
- Bleeding and vascular injury
- Risks arising from transesophageal echocardiography
- Clip erosion, migration or malposition
- Clip detachment, partial/full
- Clip thrombosis (clot formation over the clip)
- Conversion to open heart surgery
- Pericardial effusion (fluid accumulation in the heart sac)
- Pericardial tamponade (bleeding outside the heart and causing compression)
- Stroke (from clot formation or air bubbles)
- Infection
- Mitral valve stenosis (narrowing)
- Myocardial infarction (heart attack)
- Prolonged ventilation

## What needs to be observed after returning home?

- ① Limit strenuous activities for about one month after the procedure.
- ② If there is pain or bleeding around the groin site, please inform your doctor immediately.
- ③ Avoid dental procedures in the first six months after clip insertion. If dental procedures are required, antibiotics should be prescribed before the procedure.

## Location



National University Hospital  
5 Lower Kent Ridge Road, Singapore 119074  
Tel: 6779 5555 Fax: 6779 5678 Website: [www.nuh.com.sg](http://www.nuh.com.sg)

### Contact Information

#### National University Heart Centre, Singapore

1 Main Building of NUH, Angiography Centre, Level 2.

**Opening Hours:** 8.30 am - 5.30 pm (Monday - Friday)

Closed on Weekend & Public Holidays

**Website:** [www.nuhcs.com.sg](http://www.nuhcs.com.sg)

### Getting to NUH

#### Circle Line Kent Ridge MRT Station

Commuters can transit at the Buona Vista MRT Interchange and alight two stops after at the Kent Ridge Station. The station is served by three exit-entry points.

**Exit A:** Right at the doorstep of National University Heart Centre, Singapore.

**Exit B:** Along South Buona Vista Road, which links to Singapore Science Park 1.

**Exit C:** Leads to NUH Medical Centre.

Information in this brochure is given as a guide only and does not replace medical advice from your doctor. Please seek the advice of your doctor if you have any questions related to the surgery, your health or medical condition. Information is correct at time of printing (Jun 2015) and subject to revision without notice. Copyright© is held by the publisher. All rights reserved. Reproduction in whole or in parts without permission is strictly not allowed.



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# MitraClip Therapy for Mitral Regurgitation

**View patient education videos on NUHCS YouTube page!**



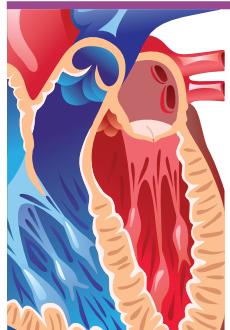
Download a FREE QR Reader on your smartphone and scan the QR code.

The QR code will decode instantly. You'll be brought to [www.youtube.com/user/NUHCS](http://www.youtube.com/user/NUHCS)

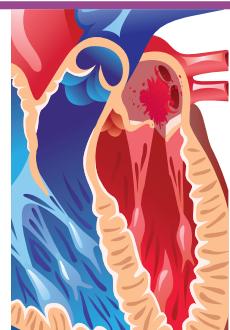


Scan the QR code

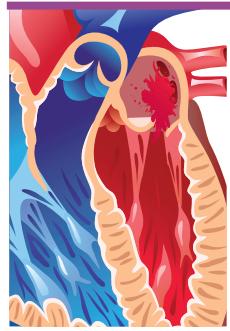
## What is Mitral Regurgitation?



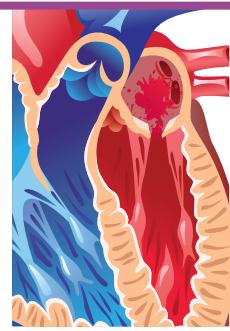
Normal mitral valve



Degenerative MR caused by mitral valve prolapse



Degenerative MR caused by flail leaflet



Functional MR

The mitral valve is located between the two chambers on the left side of the heart which directs blood flow in one direction - from the upper chamber (left atrium) to the lower chamber (left ventricle). When this valve does not close completely, mitral regurgitation (MR) or backflow of blood in the left ventricle occurs. In severe cases, reduced blood flow is pumped out of the heart. This creates excessive workload on the heart leading to dilation of the heart chambers. If left untreated, it can result in heart failure.

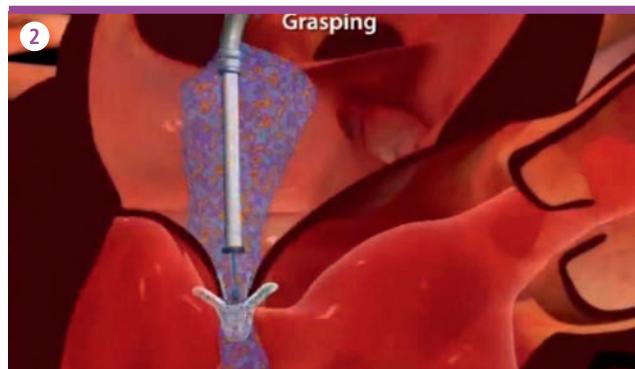
There are currently several options of treatment available for mitral valve regurgitation. These include medical treatment, surgery, or less invasive valve repair such as the MitraClip therapy.

Compared to open-heart surgery, MitraClip is a less-invasive repair method. A 'clip' (the MitraClip device) is attached to your valve to repair your mitral valve, allowing it to close more completely. This would enable normal blood flow through your heart to be restored.

The MitraClip therapy procedure is done under general anesthesia and takes approximately 3 to 4 hours.



A catheter (long thin flexible tube) is guided through the femoral (leg) vein to reach the heart.



The clip is delivered through the catheter to the region of the mitral valve. Upon reaching the mitral valve, it clips the mitral valve to allow it to close better.



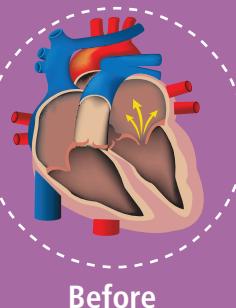
The clip is left on the mitral valve while the rest of the delivery system and the catheter are removed.



Refer to further illustration below.

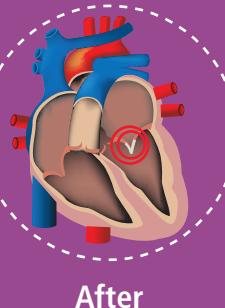
### What can I expect before the procedure?

Some investigations would need to be performed before the procedure. These include but are not limited to a transthoracic and transesophageal echocardiogram (ultrasound test for the heart). These two tests will allow for a more accurate assessment of the mitral valve to determine if MitraClip therapy is suitable. Other tests such as coronary angiograms, electrocardiograms, chest X-rays and blood tests may also be needed prior to the procedure.



### What happens after the procedure?

After MitraClip therapy procedure, you will be transferred to the cardiac monitoring unit for a day. After this, your cardiologist would review you and may transfer you to the regular hospital ward for the next two days before discharge. Additional tests will be performed after the MitraClip therapy procedure. These include a repeat transthoracic echocardiogram, blood tests and a chest X-ray. You may also be given blood thinners such as aspirin and/or clopidogrel for six months.



Catch our video on MitraClip therapy on NUHCS' YouTube page!



[www.youtube.com/user/NUHCS](https://www.youtube.com/user/NUHCS)