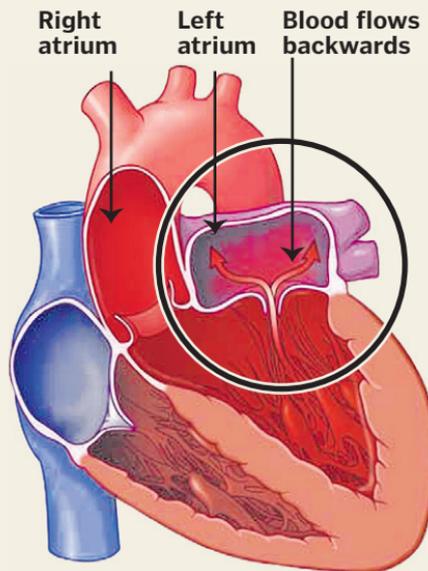


Fixing a leaky valve

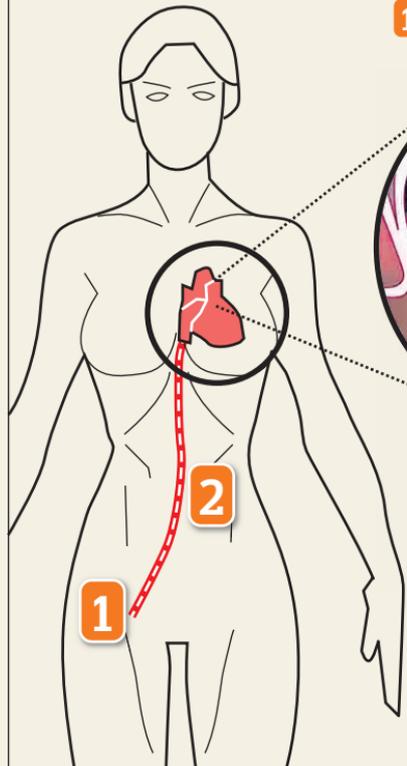
MitraClip, a new minimally invasive heart valve repair procedure, involves implanting a clip in the heart without opening the chest. This is how it is done:

BEFORE

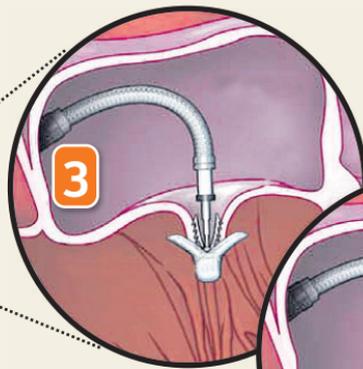
Mitral regurgitation happens when the heart's mitral valve does not close completely, and blood flows backwards into the heart instead of to the rest of the body



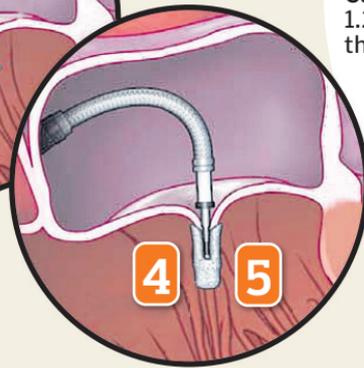
DURING



1 Clip and catheter enter the femoral vein through a 1cm-incision made in the groin



2 Clip is guided by ultrasound echo and X-ray scans and moved upwards through the catheter to the heart



3 Clip enters the right atrium and crosses into the left atrium, above the valve

4 Clip enters the damaged mitral valve, and its two levers clamp the valve shut, reducing backward flow of blood

5 Catheter detaches from the clip and is withdrawn

Catheter
1.2m-long
thin flexible tube

Gripper
works with the Mitraclip
to hold the valve leaflets
in place

MitraClip

0.4cm
2cm

AFTER

With the valve shut, blood can flow to the body

