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# Ischaemia: Normal Example

## Clinical Case Portal

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**Topics:** Echocardiography (Non-invasive imaging)  
Non-invasive imaging: Echocardiography, MR/CT, Nuclear

### Authors:

Benoy Shah, Roxy Senior

## Abstract

Case from the [Contrast Echo Box](#)  
[Detection of Ischaemia](#)

## Introduction

Rest exam: A 66year old lady with progressively increasing breathlessness. Resting study normal. Unable to perform exercise, then patient was referred for pharmacological stress echocardiography. Normal perfusion at rest in all territories (as expected given normal wall motion)

Stress exam: Repeat imaging performed after dobutamine intravenous infusion. Heart rate 130-140bpm, so full replenishment expected in 3-4beats (see [Chapter on practice](#)). Note the rapid replenishment indicating normal perfusion in all walls.

## Case Report

### Normal Example - REST

#### Real-time low MI perfusion imaging (fig 1-3)

Note:

- Low MI imaging (0.10 L) in top right corner with a high MI (0.65 F) for the 'flash' to destroy microbubbles
- Bright images (gain usually >60%, often almost 70%).
- Normal replenishment within 5 cardiac cycles of bubble destruction by flash impulses.

#### Triggered low MI perfusion imaging (fig 4-6)

Note:

- Low MI imaging (0.10 L) in top right corner with high MI (0.65 F) 'flash'
- The red triangle on the ECG above each T wave, as there is end-systolic triggering of images
- Normal replenishment within 5 cardiac cycles of bubble destruction

### Normal Example - STRESS

#### Real-time perfusion assessment following dobutamine (HR 130-140bpm) (fig 7-9)

Note:

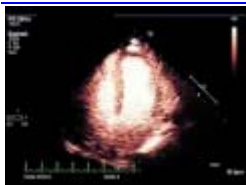
- Rapid replenishment of microbubbles in all walls within 2-3cycles of flash

#### Triggered imaging perfusion assessment following dobutamine (HR >130bpm) (fig 10-12)

Note:

- Rapid replenishment of microbubbles in all walls within 2-3cycles of flash

Video 1 :  
[Normal Rest AP4C](#)



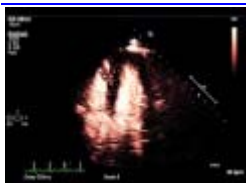
Video 2 :  
[Normal Rest AP2C](#)



Video 3 :  
[Normal Rest AP3C](#)



Video 4 :  
[Normal Rest AP4C - triggered](#)

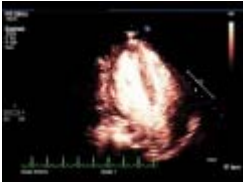


Video 5 :  
[Normal Rest AP2C - triggered](#)



Video 6 :

Normal Rest AP3C - triggered



Video 7 :  
Normal Stress AP4C



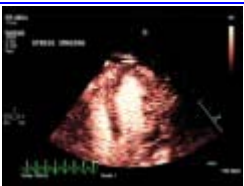
Video 8 :  
Normal Stress AP2C



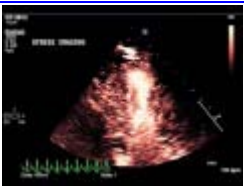
Video 9 :  
Normal Stress AP3C



Video 10 :  
Normal Stress AP4C - triggered



Video 11 :  
Normal Stress AP2C - triggered



Video 12 :

Normal Stress AP3C - triggered

