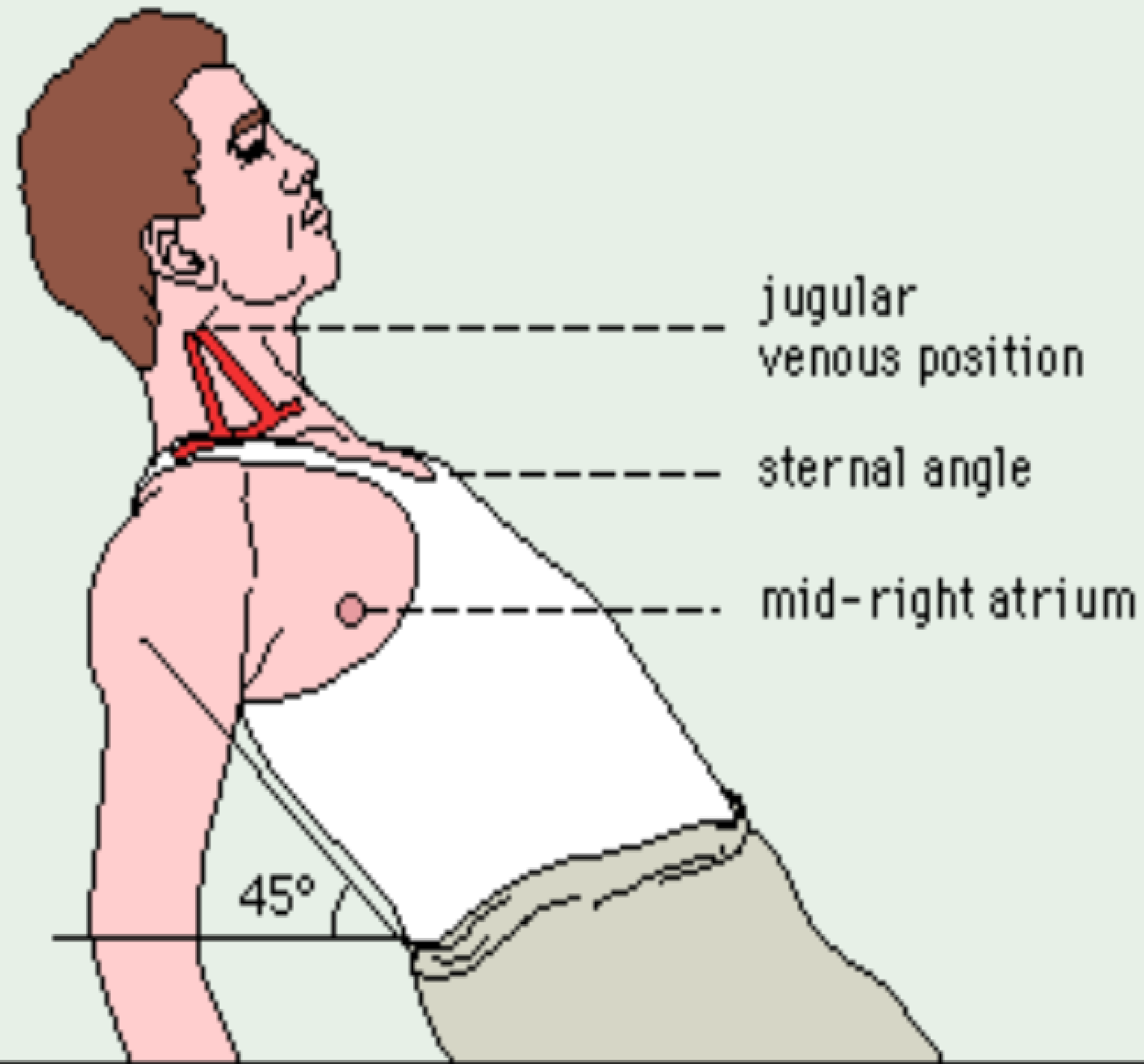


## Measuring the height of the jugular venous pulse





## Summary

### **Distinction between jugular venous and carotid pulses**

#### **Venous**

- Most rapid movement inward
- Two peaks per cycle (in sinus rhythm)
- Affected by compressing abdomen
- May displace earlobes (if venous pressure raised)

#### **Arterial**

- Most rapid movement outward
- One peak per cycle
- Not affected by compressing abdomen
- Never displaces earlobes



Disorders

## **Causes of raised jugular venous pressure**

- Congestive or right-sided heart failure
- Tricuspid reflux
- Pericardial tamponade
- Pulmonary embolism
- Iatrogenic fluid overload
- Superior vena cava obstruction



## Summary

### **New York Heart Association classification of heart failure**

#### **Grade**

- I** No symptoms at rest, dyspnoea only on vigorous exertion
- II** No symptoms at rest, dyspnoea on moderate exertion
- III** May be mild symptoms at rest, dyspnoea on mild exertion, severe dyspnoea on moderate exertion
- IV** Significant dyspnoea at rest, severe dyspnoea even on very mild exertion. Patient often bed bound

# Atrial Fibrillation

Definition – disorganized electrical activity of the atria resulting in an irregular heartbeat

Increases risk of stroke and VTE

Alcohol

IHD/hypertension

Thyroid disease

Mitral stenosis

Post Cardiac surgery (30%)

Idiopathic & increasing age

## Management

Investigate – TFTS, U & Es, ECG, ECHO

Risk stratification – CHA2DS2VASC

Beta-blockers used for rate control

DOACS now generally used (NICE, 2019)

Warfarin now used only for higher risk patients

In surgical environments think about anticoagulation management

# CHA<sub>2</sub>DS<sub>2</sub>-VASc

Co-Morbid Conditions	CHA <sub>2</sub> DS <sub>2</sub> -VASc
Congestive Cardiac Failure	1
Hypertension	1
Age > or = 75 years	2
Diabetes Mellitus	1
Stroke/TIA history	2
Vascular disease	1
Sex category (i.e. female sex)	1
Maximum score	9

# Case Histories

## Case 1

85 year old lady for breast surgery for Ca

HTN (controlled on meds)

AF

CVA 5 years ago

CCF

Drug history – warfarin, ramipril, furosemide, simvastatin, Exenatide

## Case 2

87 year old female patient for pelvic clearance . Found to have AF at Preop.

PMH – AF, HTN, Arthritis, Diabetes.

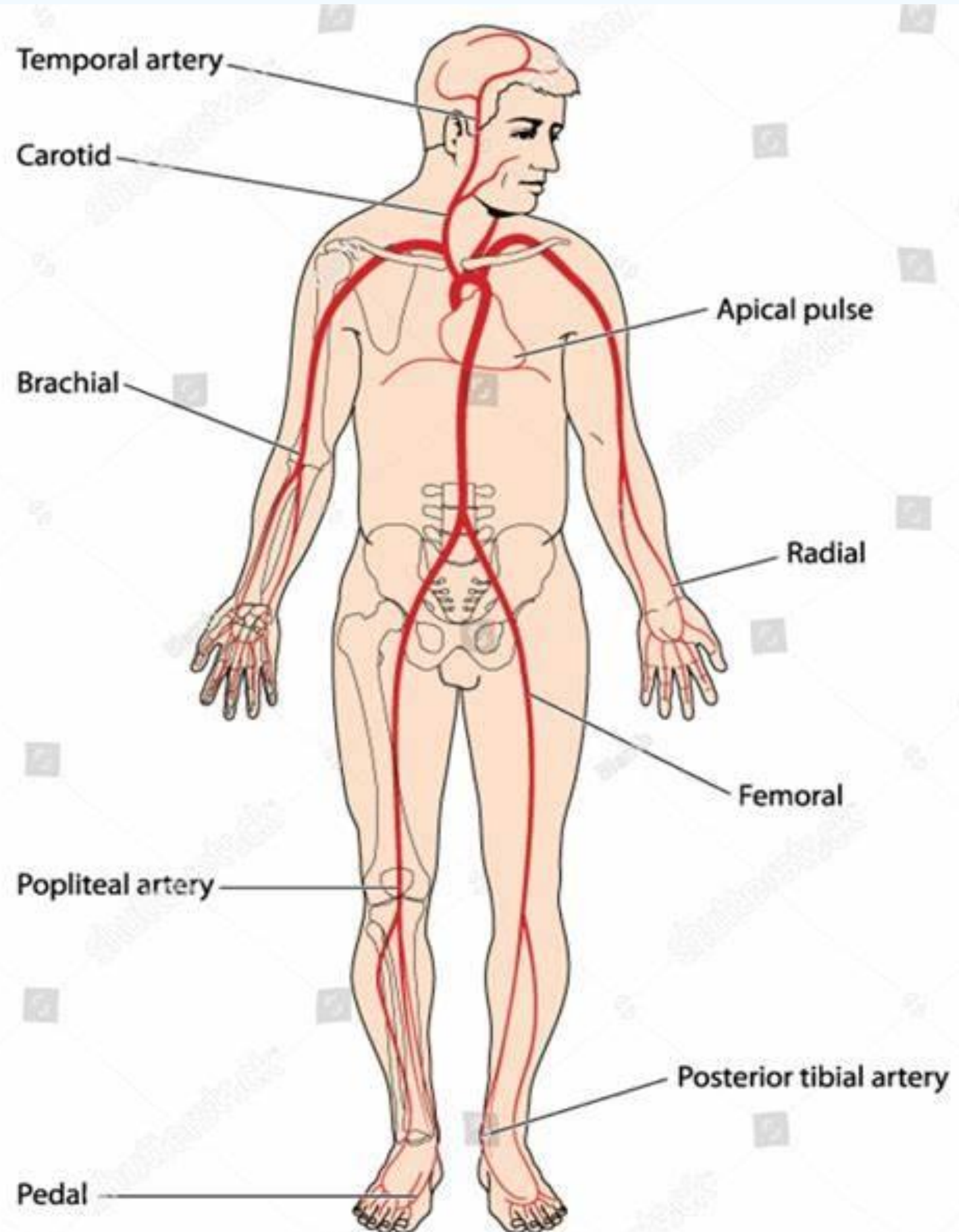
Drug History – Amlodipine, Pioglitazone, Furosemide, Paracetamol, lactulose

# Peripheral Vascular Examination & the Elderly

Peripheral Vascular Examination	Oedema	The Elderly	The Elderly
Aorta	Unilateral	CVD much more common	Cardiac Arrhythmias much more e.g. AF
Femoral Pulse	Bilateral	MI may be silent	Dizziness very common
Dorsalis Pedis	Systemic causes ?	Ankle swelling common	Polypharmacy
Posterior Tibialis	Local causes ?	Aortic Stenosis much more common	Iatrogenic disease
Oedema			
Hair loss lower legs			



# Peripheral Vascular System



Check for oedema

Unilateral or Bi-lateral

Hair loss on lower legs

Palpate radial pulse as part of your general assessment

Check lower limbs if clinical indicated

Check for carotid bruits or radiating murmurs if history and examination indicate



## Review

### Framework for routine examination of the cardiovascular system

1. While taking the history, watch the patient's face for features of anxiety, distress, breathlessness or features of specific diseases.
2. Take the patient's hand and assess warmth, sweating and peripheral cyanosis; examine the nails for clubbing or splinter haemorrhages.
3. Palpate the radial pulse and assess the rate and rhythm.
4. Locate and palpate the brachial pulse and assess its character. Measure the blood pressure. If there is any suspicion of a problem with the aortic arch, compare pulses in both arms.
5. With the patient lying supine at 45°, assess the jugular venous pressure and the jugular venous pulse form.
6. Take an opportunity for a closer look at the face, the conjunctivae, the tongue and the inside of the mouth.
7. Palpate the carotid pulse and assess its character.
8. With the patient's chest exposed, inspect the precordium and assess the breathing pattern and the presence of any abnormal pulsation.
9. Palpate the precordium, locate the apex beat and assess its character. Assess the feel of the rest of the precordium and the presence of any abnormal vibrations or thrills.
10. Listen with the stethoscope and assess heart sounds and murmurs. If appropriate, listen over the carotid artery for radiating murmurs or bruits.
11. Percuss and auscultate the chest both front and back looking for pleural effusions. Listen for crepitations at the lung bases.
12. Lie the patient flat and palpate the abdomen, feeling in particular for the liver and any dilatation of the abdominal aorta.
13. Assess the femoral pulses and the popliteal and foot pulses. Look for ankle or sacral oedema.
14. If appropriate, assess the patient's exercise tolerance by taking the patient for a short walk.
15. Test the urine.