

# Initial Investigation and Management of Anaemia

Full blood count confirms haemoglobin (Hb) below normal range:

Male: <135g/L

Female: <120g/L

## Step 1: History and examination

Comprehensive medical history to include:

- Ethnicity (thalassaemia)
- Diet + lifestyle (weight loss, vegetarian/vegan, alcohol intake)
- Gastrointestinal symptoms (malabsorption/dyspepsia/melaena)
- Medications
- Female patient: Obstetric/gynaecologic
- Significant comorbidity (renal/inflammatory)

Clinical examination to include:

- Reticuloendothelial
- Gastrointestinal
- Signs of hypothyroidism

## Step 2: What is the mean cell volume (MCV)?

<80fL

80-95fL

>95fL

### Microcytic anaemia

Consider:

- Iron deficiency
- Thalassaemia

#### Step 3: Suggested tests

- Ferritin
- Reticulocytes
- (Hb electrophoresis if appropriate ethnic group and ferritin normal)

**Ferritin <30 OR  
Ferritin 30-70 and CRP raised**

Yes

No

Refer to GI guideline  
Give oral iron

**Rise in Hb and reticulocytes  
at 2 weeks?**

Yes

No

Continue oral iron  
Ensure blood losing  
malignancy excluded

### Normocytic anaemia

Consider:

- Anaemia of chronic disease
- Renal anaemia
- Haemolysis
- Mixed deficiencies

#### Step 3: Suggested tests

- U+E
- CRP
- LFT
- Ferritin/B12/folate
- Reticulocytes
- Direct antiglobulin test

**Confirmed renal impairment?  
(eGFR <30mL/min)**

No

Yes

Seek renal  
advice as  
appropriate

Consider referral to PBM  
service if clinically indicated

### Macrocytic anaemia

Consider:

- B12/folate deficiency
- Alcohol Liver disease
- Hypothyroid Haemolysis
- Mvelodysplasia Myeloma

#### Step 3: Suggested tests

- B12/folate
- Reticulocytes
- LFT
- TSH
- Direct antiglobulin test
- Protein electrophoresis

**Cause identified?**

No

Yes

Treat  
cause

Request blood film  
Seek haem advice through  
C+B if clinically indicated

**Referral to Patient Blood Management Service for :**

- Diagnostic advice
- Therapeutic Trial of IV iron, Replacement IV iron
- Help with transfusion where necessary
- Refer by C+B to Dr R Noble c/o Haematology Dept, RCHT