First Impression &
General Examination

Waseem Jerjes
First impression

- Patient looks well or ill
- Does the patient need you urgently
As the patient approaches you

- Observe the gait and character (Diseases of nerves, muscles, bones and joints are associated with abnormal gaits and postures)

- Slow shuffling gait and 'pill rolling' tremor of Parkinson's disease
Unsteady broad-based gait of the ataxic patient

Patients with proximal muscle weakness may have difficulty rising from the waiting room chair and their gait may have a waddling appearance

Patients with osteoporosis lose height as the vertebrae progressively collapse, you may be struck by the typically stooped (kyphotic) appearance and 'round shoulders' of these patients
• Unusually short stature may reflect constitutional shortness, a distinct genetic syndrome or the consequence of intra-uterine, childhood or adolescent growth retardation.

• Unusually tall stature is most often constitutional, although hypothalamic tumours in childhood or adolescence may cause excessive growth hormone release, resulting in abnormally rapid linear growth and gigantism. If excess growth hormone release occurs after the bony epiphyses have fused, the body shape changes (acromegaly).
Walking

• Take note if the patient walks with no help or with Stick Crutches Frame Or assisted by another person
Warm handshake serves a number of functions

- Gentle and symbolic introduction to the more intimate physical contact of the examination that follows the history
- Grabbing a prosthesis or deformed hand
- Potentially painful rheumatoid hand or missing fingers.
Myotonia dystrophica

Rare autosomal dominant inherited disease of muscle. A feature of this disease is the abnormally slow relaxation of the grip on completion of the handshake. The syndrome is also characterised by premature frontal balding, testicular atrophy and cataracts.
Hands & Nails

• Warm, well perfused?
  Warm sweaty (hyperthyroidism)
  Cold moist (anxiety)
• Dehydrated, malnourished, swollen
• Nicotine stains
• Clubbing
• Palmar erythema: cirrhosis, pregnancy, polycythaemia
• Pallor
• Pigmentation: Asians, Black, Addison’s
• Dupuytren’s contracture: liver disease, trauma, epilepsy, aging
• Swollen PIP: RA; swollen DIP: OA, gout, psoriasis
Hands & Nails

- **Koilonychia**: IDA, fungal infection, Raynaud’s
- **Onycholysis**: hyperthyroidism, fungal infection, psoriasis
- **Beau lines (furrows)**: severe illness
- **Mees’ lines (single)**: arsenic poisoning, renal failure
- **Muehrcke’s lines (paired)**: hypoalbuminaemia
- **Terry’s nails (2 colours)**: cirrhosis, chronic renal failure
- **Pitting**: psoriasis
- **Splinter haemorrhages**: SBE, trauma, vasculitis
- **Nail-fold infarcts**: vasculitic disorders
- **Chronic paronychia**: local chronic infection
Facies

• Can be very specific in certain diseases.

**Acromegaly:** frontal bossing, transfrontal scar, prognathism, enlarged tongue, papilloedema, angioid streaks, bitemporal hemianopia

**Cushing’s:** moon-like face, plethora, acne, hirsutism, telangiectasia, visual fields defect, optic atrophy, papilloedema, hypertensive and diabetic changes in the eye

**Down:** oblique orbital fissure, conjunctivitis, Brushfield spots on the iris, small simple ears, flat nasal bridge, mouth hanging open, protruding tongue, narrow high arched palate

**Hippocratic (advanced peritonitis):** sunken eyes, collapsed temples, pinched nose, clammy forehead, crusts on the lips

**Marfan’s:** high arched palate, dislocation of lens
Facies

Mitral: rosy cheeks with a bluish tinge

Myopathic: bilateral ptosis after upward gaze in myasthenia gravis

Myotonic: baldness, triangular face, partial ptosis, cataracts, temporalis atrophy in dystrophia myotonica

Myxoedematous (hypothyroidism): the skin but not the sclera may appear yellow due to hypercarotenaemia, thickened skin, alopecia, vitiligo, periorbital oedema, xanthelasma, coolness and dryness of skin and hair, thinning of scalp hair, tongue swelling, slow coarse speech, bilateral nerve deafness

Paget’s: enlargement of frontal and parietal area, prominent skull veins, bony warmth, systolic bruits over the skull, bronchial breath over the skull, bony swelling, angioid streaks (fundis), optic atrophy, deafness, cranial nerves involvement
Facies

**Parkinson’s:** tremor of hand, absence of blinking, dribbling of saliva, lack of facial expression, glabellar tap (-ve), soft monotonous faint speech, palilalia (repeat end of word), weakness of upward gaze, brow seborrhoea or sweatiness

**Rickets:** frontal bossing, parietal flattening

**Thyrotoxicosis:** exophthalmos, chemosis, conjunctivitis, corneal ulceration, optic atrophy, opthalmoplegia, thyroid stare, lid retraction, ptosis

**Turner’s:** micrognathia, epicanthic folds, ptosis, fish-like mouth, deformed ears, hearing loss

**Virile:** hair distribution over face and midline, hair over beard area
General examination

Overview of the general state of health

Provides an opportunity to examine systems that do not fall neatly into a regional examination
• Three further adjustments will be made in the course of the examination.
• Auscultating the mitral area of the heart it is helpful to roll the patient towards the left lateral position as this brings the apex closer to the stethoscope.
• Examine the neck, posterior chest, back and spine you will ask the patient to sit forward.
• Assessing the abdomen, reposition the patient to lie flat, as this provides optimal access for the abdominal examination.
Basics

• Examine from the right side of the bed.
• Remember four elements:
  Inspection: looking
  Palpation: feeling
  Percussion: tapping
  Auscultation: listening

Fifth element (sometimes): assessment of function
Vital signs

- Related primarily to CVS & RS:
- Temperature
- Heart rate
- Blood pressure
- Respiratory rate
- Partial pressure of oxygen
Quick General Examination

- 3 colours: pallor, jaundice, cyanosis
- 3 swellings: clubbing, lymphadenopathy (axilla, H&N, inguinal), ankle or sarcal oedema
- 3 glands: thyroid, testis, breast
- 3rd World: malnutrition, dehydration, pyrexia
1st colour: Pallor

- Deficiency of haemoglobin (<70mg/dl)
- Sclera
- Palmar creases
- Nail bed

- Racial
- Familial

- Indoor mode of life
Pallor

Anaemia
Shock
Stokes-Adams attack
Vasovagal faint
Hypopituitarism
Myxoedema
Cancer
Albinism
Shock

- Hypovolaemia (external fluid loss, sequestration of body fluids in the abdomen, chest or limbs)
- Cardiac (pump failure, cardiac tamponade, dissecting aortic aneurysm, arrhythmia)
- Massive pulmonary embolus
- Sepsis (endotoxin)
- Anaphylaxis
- Endocrine failure
- Neuropathic (drugs, spinal cord injury)
2nd colour: Jaundice

- Serum bilirubin rises to twice upper limit
- Bilirubin deposit in body tissue especially elastin
- Sclerae become yellow in jaundice only

Circulating bilirubin:
Conjugated (water soluble)
Unconjugated
1. Pre-hepatic jaundice:
Physiological (neonatal), haemolysis, dyserythropoiesis, glucuronyl transferase deficiency..Gilbert’s syndrome, Crigler-Najjar syndrome

2. Hepatocellular jaundice:
Viral (hepatitis), CMV, EBV, drugs, alcoholic hepatitis, cirrhosis, liver metastasis, autoimmune stasis, liver abscess, haemochromatosis, autoimmune hepatitis, septicaemia, leptospirosis, $\alpha_1$ antitrypsin deficiency, Budd-Chiari, Wilson’s, failure to excrete conjugated bilirubin, RHF, toxins

3. Cholestatic (obstructive) jaundice:
Gallstones in CBD, pancreatic cancer, LNs at the porta hepatis, drugs, cholangiocarcinoma, sclerosing cholangitis, primary biliary cirrhosis, choledochal cyst, biliary atresia
3rd colour: Cyanosis

- Presence of deoxygenated Hb in superficial BV
- >50mg/l of deoxy Hb in capillary blood
- At least 5 g/dl of reduced haemoglobin is necessary for cyanosis to appear.
- Doesn’t occur in anaemia hypoxia (total Hb content is low)
- Central cyanosis: abnormal amount of deoxy Hb in arteries of areas of good circulation
- Peripheral cyanosis: blood supply to certain part of body is reduced
Differentiation

Central cyanosis
1. Decrease arterial oxygen saturation (high altitude, COPD with cor pulmonale, massive PE)
2. Polycythaemia
3. Methaemoglobinaemia, sulphaemoglobinaemia
4. R-L shunts

Peripheral cyanosis
1. All central cyanosis
2. Exposure to cold
3. Reduced cardiac output: LVF, shock
4. Arterial or venous obstruction
5. Raynaud's phenomenon
1st swelling: Clubbing

Thickness of the tissue at the bases of fingers and toes

**Cardiac causes**
- Cyanotic congenital heart disease
- Endocarditis
- Atrial myxoma

**Thoracic causes**
- Bronchial carcinoma
- Chronic lung suppuration (empyema, abscess, cystic fibrosis, bronchiectasis)
- Mesothelioma
- Fibrosing alveolitis
GI causes
Inflammatory bowel disease (Crohn’s)
Cirrhosis
GI lymphoma
Malabsorption (coeliac)

Rare causes
Familial
Thyroid acropachy

Unilateral clubbing
Axillary artery aneurysm
Brachial A-V malformations
2nd Swelling: Lymphadenopathy

- The lymphatic system: lymphatic ducts, lymph nodes, spleen, tonsils, adenoids and the thymus gland
- Lymphoid tissue: Peyer's patches (terminal ileum), islands of lymphoid tissue (lungs), hepatic reticulo-endothelial cells (lymphoreticular system)
Primary & secondary Lymphoid tissue

Primary lymphoid organs:
- thymus
- Kupffer’s cells

Secondary lymphoid organs:
- Waldeyer’s ring
- lymph nodes
- tonsils and adenoids
- lymph nodes
- spleen
- mesenteric lymph nodes
- Peyer’s patch
- lymph nodes
- bone marrow

The lymphatic drainage system

- external ring
- right lymphatic duct
- right subclavian vein
- left subclavian vein
- axillary nodes
- mediastinal nodes
- mesenteric and para-aortic nodes
- iliac nodes
- inguinal nodes
- popliteal nodes
- cervical nodes
- thoracic duct
Lymphadenopathy may be caused by proliferation of cells in response to antigen challenge. Abnormal cells may populate the nodes.

Malignant transformation of the lymphoid cells in lymphomas may cause lymphadenopathy.

The glands may become populated by leukaemic cells or metastatic carcinoma.

In the lipid storage diseases, lipid-laden macrophages may infiltrate and enlarge the nodes.
Lower lip (ant), tip of tongue: submental

Lower lip (lat), tip of tongue, mandibular gingivae, upper lip, cheek, FOM, tongue (ant2/3), medial part of frontal region, medial eyelids, skin of nose: submandibular

Scalp (temporal region): superficial parotid

Middle ear, lateral part of the frontal region, lateral eyelids: parotid

Scalp (parietal region): mastoid

Scalp posterior region: occipital

External ear, over angle of mandible: superficial cervical

Maxillary teeth & gingivae, ventral tongue, tongue (post1/3), hard palate, soft palate: deep cervical

Soft palate: retropharyngeal

Tonsil: JD
Left supraclavicular node (Virchow's node)

Right supraclavicular node
Hand and arm: axillary and infraclavicular. The epitrochlear LN is the most distal node in the arm.

Anterior chest wall: internal mammary and to axillary and infraclavicular.

Lung parenchyma and visceral pleura: hilar.

Parietal pleura: axillary.

Lower limb: popliteal then up to the vertical group of superficial inguinal.

Perineum, scrotal skin, penis, lower vagina, vulva, lower trunk and the back below the umbilicus: horizontal group of superficial inguinal.

Testes: para-aortic.

Female genitalia: pelvic, intra-abdominal and para-aortic.
• (Lymphadenitis) overlying skin may be red and inflamed

• (Lymphangitis) the channels can be seen as thin red streaks leading from a more distal site of inflammation

• Normal nodes are not palpable. If you feel nodes, assess their size (length and width), consistency (soft, firm, rubbery, hard or craggy), tenderness and mobility to surrounding nodes and tissues

Painful, tender nodes: infected source that may be hidden from obvious view

Malignant lymph nodes (either primary or secondary) are not usually tender. Malignant nodes vary in size from tiny barely palpable structures to large glands 3-4 cm in size. Malignant lymph nodes may feel unusually firm (often described as 'rubbery') or hard and irregular. Fixation to surrounding tissue is highly suspicious of malignancy.
3rd swelling: Ankle & sacral oedema

- Pitting bilateral lower limb oedema:
  Cardiac: congestive HF, RVF, constrictive pericarditis
  Hepatic: cirrhosis causing hypoalbuminaemia
  Renal: nephrotic syndrome causing hypoalbuminaemia
  GI: malabsorption, starvation, protein-losing enteropathy causing hypoalbuminaemia
  Beri Beri
  Cyclical oedema

- Pitting unilateral lower limb oedema
  DVT
  Compression of large veins by tumour or lymphnodes

- Non-pitting lower limb oedema
  Hypothyroidism
  Lymphoedema
1st Gland: Thyroid

- The normal thyroid gland is neither visible nor palpable.
- An enlarged thyroid (known as a goitre) is seen as a fullness on either side of the trachea below the cricoid cartilage or as a distinct, enlarged, nodular organ with one or both lobes easily visible. If the lobes are visible, determine whether they look symmetrical or irregular.
- Ask the patient to sip a little water and hold it in the mouth. When you give the instruction to swallow, watch for the characteristic upward movement of the goitre as the pharyngeal muscles contract. This test is helpful in distinguishing a thyroid mass from other neck masses (enlarged lymph nodes which hardly move with swallowing).
- The midline remnant of the thyroid (thyroglossal cysts or thyroid remnants) also moves with swallowing.
• Assess the texture (hard or soft, single or multiple nodules), symmetry and extent of the goitre. A soft, smooth goitre may be more easily seen than felt. It is unusual for the goitre to be tender unless the enlargement is caused by acute inflammatory thyroiditis.

• Complete the palpation by feeling for the carotids which may be encased by a malignant thyroid gland.

• The thyroid gland may also enlarge in a downward direction behind the manubrium sterni. This retrosternal goitre may extend deeply into the superior mediastinum and may even cause compression symptoms (breathlessness and dysphagia). Normally, this area resonates, yet when there is retrosternal enlargement the percussion note is dull.

• Auscultate the gland for bruits by applying the diaphragm of the stethoscope to each lobe in turn. Ask the patient to stop breathing for a moment while you listen on either side for a bruit. A soft bruit is characteristic of the smooth symmetrical hyperthyroid goitre of Graves' disease.
• Goitre
Questions to ask
Hyperthyroidism

- Have you lost weight recently?
- Has your appetite changed (e.g. increased)?
- Have you noticed a change in bowel habit (e.g. increased)?
- Have you noticed a recent change in heat tolerance?
- Do you suffer from excessive sweating?
- Does your heart race or palpitate?
- Have you noticed a change in mood?

Summary
Clinical features of hyperthyroidism

- Weight loss, increased appetite
- Recent onset of heat intolerance
- Agitation, nervousness
- Hot, sweaty palms
- Fine peripheral tremor
- Bounding peripheral pulses
- Tachycardia, atrial fibrillation
- Lid retraction and lid lag
- Goitre, with or without overlying bruit
- Brisk tendon reflexes

Summary
Clinical features of Graves’ disease and toxic nodular goitre

<table>
<thead>
<tr>
<th>Graves’ disease</th>
<th>Nodular goitre</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td>Female (\gg) Men</td>
</tr>
<tr>
<td><strong>Eye signs</strong></td>
<td>very common, exophthalmos</td>
</tr>
<tr>
<td><strong>Goitre</strong></td>
<td>diffuse, overlying bruit</td>
</tr>
<tr>
<td><strong>Heart</strong></td>
<td>tachycardia, atrial fibrillation</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>may lose weight</td>
</tr>
</tbody>
</table>

Summary
Clinical features of Graves’ disease (autoimmune hyperthyroidism)

- Diffuse goitre with audible bruit
- Pretibial myxoedema, finger clubbing
- Onycholysis (Plummer’s nails)
- Lid retraction, lid lag
- Proptosis, exophthalmos
- Conjunctival oedema (chemosis)
• The faces in Graves' disease is dominated by a staring appearance caused by retraction of the upper eyelid.

• In Graves' disease, autonomic overactivity causes increased tone and spasm of levator palpebrae superioris. This causes retraction of the upper lid which exposes most, if not all, of the iris, exposing sclera above the iris and creating the typical staring appearance. Spasm of the muscles supplying the upper lid also results in an abnormal following reflex.

The movement of the upper lid lags well behind the pupil called 'lid lag'
• In progressive Graves' disease, abnormal connective tissue is deposited in the orbit and external ocular muscles. The globes are pushed forward, resulting first in proptosis and in the more severe form, exophthalmos (>18 mm protrusion). To examine for exophthalmos, seat the patient in a chair and inspect the globes from above by looking over the forehead or from the side of the profile. Other eye signs of Graves' disease include ophthalmoplegia caused by weakness and infiltration of the external ophthalmic muscles. These patients complain of diplopia and on examination there is a loss of gaze symmetry. Conjunctival oedema (chemosis) may also occur. The eye signs can be either bilateral or unilateral.
Questions to ask Hypothyroidism

- Has your weight changed?
- Has your bowel habit changed (e.g. constipation)?
- Is your hair falling out?
- Have you noticed a change in weather preference (e.g. cold intolerance)?
- Has there been a change in your voice (e.g. hoarse)?
- Do you suffer from pain in your hands (e.g. carpal tunnel syndrome)?

Summary Clinical features of hypothyroidism

- Constipation, weight gain
- Hair loss
- Angina pectoris
- Hoarse, croaky voice
- Dry flaky skin
- Balding and loss of eyebrows (beginning laterally)
- Bradycardia
- Xanthelasmas (hyperlipidaemia)
- Goitre (especially with iodine deficiency)
- Effusions (pericardial or pleural)
- Delayed relaxation phase of tendon reflexes
- Carpal tunnel syndrome

Disorders Causes of hypothyroidism

Congenital
- Congenital absence
- Inborn errors of thyroxine metabolism

Acquired
- Iodine deficiency (endemic goitre)
- Autoimmune thyroiditis (Hashimoto’s disease)
- Postradiotherapy for hyperthyroidism
- Postsurgical thyroidectomy
- Antithyroid drugs (e.g. carbimazole)
- Pituitary tumours and granulomas
• Hypothyroidism presents insidiously; the diagnosis may be readily apparent on general examination.

• The disorder may occur at any age, although it is most common in elderly individuals. On first sight you may notice the characteristic puffy facial appearance, the pale 'waxy' skin and diffuse hair loss from the scalp and eyebrows. Look for other signs to confirm your clinical suspicion of myxoedema. The delayed relaxation phase of the Achilles tendon jerk is especially helpful.
Malnutrition

- Improper balance between what an individual eats and what he requires to maintain health.

- Nutritional status may be an important marker of disease and the progression or regression of a disorder.

- The clinical assessment of nutritional status includes overall appearance, weight, height, muscle and fat bulk, vitamin, mineral and haematocritic status.
Weight

- BMI
- >30 frank obesity
- <20 cachexia
• Weight loss and 'wasting' are suggested by drawing of the cheeks and unusual prominence of the cheekbones, head of humerus and major joints, the rib cage and bony landmarks of the pelvis. Muscle wasting may exaggerate the skeletal prominence. Atrophy of the deltoid muscles may be particularly striking.

• Hypoalbuminaemia may cause white nails (leukonychia) and loss of capillary osmotic pressure results in pedal oedema. Iron deficiency may cause spooning of the nails (koilonychia). Other features of nutritional deficiency include inflammation and cracks at the angle of the mouth (angular stomatitis), a smooth tongue lacking in papillae (atrophic glossitis) and skin rashes (pellagra).
Muscle and fat status

• Estimate of muscle and fat status. The standard position for measurement is the midpoint between the tip of the olecranon and acromial process. The patient's arm should be relaxed and flexed to a right angle.

• The measurement is itself a useful baseline measure for follow-up purposes.
Muscle and fat status

Triceps muscle can be lifted and subcutaneous tissue can be distinguished from the underlying muscle bulk. This fold of skin is an indirect assessment of fat stores.
• >25% weight loss = severe
• >33% weight loss = fatal

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triceps skin fold (mm)</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Arm muscle circumference (mm)</td>
<td>270</td>
<td>213</td>
</tr>
</tbody>
</table>
Common medical problems predispose to malnutrition

- Liver disease
- Renal failure
- Inflammatory bowel disease
- Neoplastic disease
- Chemotherapy
- AIDS
Biochemical and immunological markers of malnutrition

- Haemoglobin (iron, B$_{12}$, folate deficiency)
- Low serum albumin
- Low serum transferrin
- Reduced creatinine (reflects reduced muscle bulk)
- Creatinine Height Index (CHI)
- Reduced white cell count
- Immunologic testing (cell-mediated immunity, allergy)
Deficiency of fat soluble vitamins

A: dry eyes and skin, night blindness, corneal thinning (keratomalacia)

D: proximal muscle weakness, bone pain, osteomalacia

K: easy bleeding and bruising
Deficiency of water soluble vitamins

$B_1$ (thiamine):
Wet beri beri (peripheral vasodilatation, high output cardiac failure, oedema)
Dry beri beri (sensory and motor peripheral neuropathy)
Wernicke’s encephalopathy (ataxia, nystagmus, lateral rectus palsy, altered mental state)
Korsakoff’s psychosis (retrograde amnesia impaired learning, confabulation)

$B_2$ (riboflavin): inflamed oral mucous membrane, angular stomatitis, glossitis, normocytic anaemia

$B_3$ (Niacin): pellagra, dermatitis (photosensitive), diarrhoea, dementia
Deficiency of water soluble vitamins

B<sub>6</sub> (pyridoxine): peripheral neuropathy, sideroblastic anaemia

B<sub>12</sub>: megaloblastic anaemia, glossitis, subacute combined degeneration of the cord

Folic acid: megaloblastic anaemia, glossitis

C:
Scurvy (perifollicular haemorrhage, bleeding gums, skin purpura, bleeding into muscles and joints)
Anaemia
Osteoporosis
2nd third world: Dehydration

- Loss or deficiency of water in body tissues
- Dehydration can occur if there is a mismatch between fluid intake and loss.
- Severe dehydration…ARF
- Over hydrated (high JVP)…pulmonary oedema
- Touching the tongue may help you assess its moistness. Look at the eyes which should have a glistening, shiny appearance, this sparkle is lost as dehydration develops
• Occurs in sweating, vomiting, diarrhoea
• Body weight: accurate measure for fluid deficiency if done repeatedly and recorded accurately day-to-day basis
• 300-500g loss/day indicate dehydration secondary to decrease fluid intake or reduced water loss

• Monitor: urine output, BP, HR
Dehydration

- Dehydration
- Mild: <5% (2.5L): mild thirst, dry mucous membrane, concentrated urine
- Moderate: 4L: moderate thirst, tachycardia, reduced skin turgor
- Severe: 6L: great thirst, collapsed veins, sunken eye, postural hypotension
- Very severe: >6L: signs of shock, coma
3rd third world: Pyrexia

- Temperature may be measured by placing a thermometer under the tongue, in the rectum or under the axilla. Temperature depends on the site of measurement.

- The mouth, rectum and axilla are common sites. 'Normal' oral temperature is usually considered to be 37°C. Rectal temperature is 0.5°C higher than the mouth and the axilla 0.5°C lower.

- Remember that 'normal' temperature is not set at a precise level and there are small variations between individuals. There is also a distinct diurnal variation. In menstruating women, ovulation is accompanied by a 0.5°C increase in body temperature.

- Abnormally high body temperature is an important physical sign. Pathological temperatures often show an exaggerated diurnal pattern with evening high points and the lowest temperatures in the early morning.
Fever may be caused by microbes, immunological reactions, hormones (T4 and progesterone), inability to lose heat (absence of sweat glands and scaling of the skin), drugs (penicillin and quinidine) and malignancy (Hodgkin's disease and hypernephroma)

<table>
<thead>
<tr>
<th>Type</th>
<th>Character</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continued</td>
<td>Does not remit</td>
<td>Typhoid, typhus, drug fever, malignant hyperthermia</td>
</tr>
<tr>
<td>Intermittent</td>
<td>Temperature falls to normal each day</td>
<td>Pyogenic infections, lymphomas, miliary TB</td>
</tr>
<tr>
<td>Remittent</td>
<td>Daily fluctuations &gt;2°C, temp doesn’t return to normal</td>
<td>Not characteristic of any particular disease</td>
</tr>
<tr>
<td>Relapsing</td>
<td>Temp returns to normal for days before rising again</td>
<td>Malaria, lymphoma, pyogenic infection</td>
</tr>
<tr>
<td>Spiking</td>
<td></td>
<td>Abscess and collections of pus</td>
</tr>
</tbody>
</table>
High fever may be accompanied by a subjective sensation of chill which may be accompanied by goose pimples, shivering and chattering of the teeth.

**Causes of rigors**

**Biliary sepsis** (jaundice, R hypochondrial pain and tenderness)
**Pyelonephritis**
**Visceral abscesses** (liver, lung, paracolic)
**Malaria**
Down’s syndrome

- Face: oblique orbital fissures, epicanthic folds, small ears, flat nasal bridge, protruding tongue, Brushfield’s spots on iris
- Short stature
- Hands: single palmar crease, curved little finger, short hands
- Heart disease
- Gap between 1st and 2nd toes
- Educationally subnormal
Turner’s syndrome

- Failure of sexual development
- Short stature
- Face: micrognathia, low set ears, fish-like mouth, epicanthic folds
- Short webbed neck with low hair line, widely spaced nipples
- Heart disease
- Short 4th metacarpal or metatarsal
- Abnormal wide carrying angle of elbow
Marfan’s syndrome

- Armspan greater than height
- Long slender finger
- Hyperextensible joints
- Kyphoscoliosis
- Ant chest wall deformity
- High-arched palate
- Aortic incompetence and
- Dissecting aortic aneurysm
- Sublaxation or dislocation of lens
Tuberous sclerosis

- Epilepsy
- Mental deficiency
- Skin lesions (facial adenoma sebaceum, Shagreen patch, fibromas near toenails and eyebrows)
- Flecks of white hair
- Retinal haemorrhages
Oculocutaneous albinism

- Hypermelanosis or amelanosis
- White hair
- Photophobia, nystagmus
- Hypopigmented fundus and translucent iris
Peutz-Jeghers syndrome

- Pigmented macules (1-5cm dia); lips, buccal mucosa and fingers
- Gastric, small intestine and colonic hamartomatous polyps; sometimes give rise to abdominal pain, bleeding and tussusception
Waardenberg’s syndrome

• Cochlear deafness
• Frontal white lock of hair
• Wide set eyes
• Different coloured irises
• White eyelashes
• Piebaldism
familial hypercholesterolaemia

- Xanthelasmas, skin xanthomas, tendon xanthomas
- Arcus senilis
- Atherosclerosis, IHD, peripheral VD
References

- Epstein “Clinical Examination”
- Kumar & Clark “Saunders’ Pocket Essentials of Clinical Medicine”
- Kumar & Clark “Clinical Medicine”
- Oxford Handbook of Clinical Medicine
- Oxford Handbook of Clinical Dentistry
- Clinician’s Manual of Oral & Maxillofacial Surgery
- Scully “Oral & Maxillofacial Medicine”
- Talley & O’Connor “Clinical Examination”