Observation of Symptoms

OBSERVATION OF SYMPTOMS

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ARRANGED FOR THE USE OF NURSES

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INTRODUCTION

An important part of the work of a trained nurse consists in giving an accurate report of the condition of the patient and in the ability to notice any change or the beginning of any complication. The observation of symptoms, therefore, becomes an important matter. A good nurse must be a good observer of the sick, and this power comes only through training.

The study of symptoms is the study of the patient. Every phenomenon, no matter how slight, may be an expression of the condition of the patient. The nurse should be familiar with all the manifestations of abnormal function in order that she may report the condition of the patient and may note anything unusual; but the combination of symptoms and their interpretation, which constitutes diagnosis, does not come within her province.

First of all, it is necessary to have a thorough understanding of the human organism in health to know the normal standard of healthy function. Then by close observation it may be known in what respect the patient differs from this normal standard of health.

This book endeavors to give the nurse a list of the symptoms which may be recognized by general observation during her care of the patient. Intelligent observation means the use of sight, hearing, touch, and even smell, and their degree of acuteness measures the ability of the observer.

A list of the diseases in which each symptom is likely to be found is given to enable the nurse to fix that symptom in memory. In a general way the more common diseases are placed first on the lists. The lists should be read across the page. All symptoms which require the use of instruments or apparatus for their recognition have been excluded; and with the exception of the use of the clinical thermometer, every symptom mentioned may be recognized by the intelligent use of the senses.

OBSERVATION OF SYMPTOMS

THE functions of the different organs of the body, whose proper action is necessary to life, are controlled by nerve centers in the brain.

The cerebrum is that portion of the brain through which the intellect acts. Impressions which are conveyed to the cerebrum give rise to the mental activities called thought, emotion, and will.

The cerebellum presides over the movements of the voluntary muscles — the coördination of muscles. All the complex movements of the muscles necessary for standing or walking are under the control of this portion of the brain.

The medulla oblongata contains nerve centers which control the vital actions of the body, such as the action of the heart, respiration, etc. From the medulla oblongata and from the under surface of the cerebrum arise the cranial nerves which govern the organs of special sense. Any injury of the medulla oblongata results in death.

The spinal cord, by means of the spinal nerves, conveys impressions from the surface of the body to the brain and conveys back motor impulses to the muscles. The spinal cord also contains nerve centers which control the functions of certain organs of the body.

TEMPERATURE

The functional activity of all the organs and tissues is attended by the giving off of heat, and heat is a necessary condition for the proper performance of the bodily functions. The degree of heat of the body is

influenced only slightly by external conditions of temperature, it being the same in both a warm and a cold atmosphere.

Every tissue of the body produces heat according to its degree of activity. The combustion of the food taken in, every contraction of a muscle, the action of the secreting glands, all give off heat.

Some regulation of the production and dissipation of heat is necessary, because the tissues of the body would soon do themselves harm on account of their over-production of heat during their activity. The body has this power of regulation, and although it is constantly losing heat by radiation and evaporation, it has the power of renewing its heat, of maintaining it at a certain degree, and of preventing its over-production.

This regulation is performed by the brain. In the medulla oblongata is a nerve center, *the heat center*, whose function it is to direct the rapidity of combustion or the development of heat in the body.

Controlling this heat center are two others: (1) the *accelerator* heat center, whose function is to increase the production of heat; and (2) the *inhibitory* heat center, whose function is to prevent too rapid production of heat.

Thus the heat center, with its controlling accelerator and inhibitory centers, maintains the body at a constant temperature.

In conditions of disease this normal mechanism is disturbed; there is no longer the normal action of the heat-producing and heat-regulating centers, an over-production of heat occurs, and the condition is known as *fever*.

Continuous high temperature (pyrexia):

(*a*) *Toxæmia — the circulation in the blood of the*

toxines of certain diseases which poison the nerve centers and interfere with their action:

Cellulitis	Typhoid fever
Influenza	Rheumatism
Contagious diseases	Tetanus

Acute inflammation of any organ of the body

(*b*) *Disturbance of the heat-regulating mechanism by organic or functional disease of the brain or nervous system:*

Injury to spinal cord	Apoplexy
Sunstroke	Insanity
Hydrocephalus	Hysteria
Infantile paralysis	Tetany

Very high temperature (hyper-pyrexia) 105° or over:

Injury to spinal cord	Tumor of brain
Sunstroke	Scarlet fever
Meningitis	Hysteria
Acute rheumatism	Tetanus

Remittent temperature. The difference between morning and evening temperature is considerable (2° or 3°), but the temperature does not reach the normal point:

Phthisis	Septicæmia
Pyæmia	Empyema

Septic endocarditis

Intermittent temperature. The temperature rises to a high point and falls in a few hours to normal:

Malaria	Hysteria

Surface temperature. The surface temperature is taken by a thermometer, the base of which has been flattened, or has been made in the form of a coil, so

as to present as large a surface as possible for contact with the skin:

(*a*) *Elevated.*

Cellulitis in any part of the body
Over areas affected by vaso-motor paralysis

(*b*) *Lowered.*

Over areas of gangrene
Thrombosis of an artery (over parts supplied by this artery)
Paralysis of an extremity
Heart weakness (observed in hands, feet, and nose)

Subnormal temperature. In certain conditions the temperature falls below the normal point. This condition is caused by diminished production of heat on account of injury or disease, and is a more serious symptom than a rise of temperature:

Surgical shock
Heart diseases (later stages)
Cancer
Cholera
Chloral poisoning
Profuse hemorrhage
Acute alcoholism
Spasmodic asthma
Starvation

PULSE

The pulse is the sudden distention of an artery caused by the forcing of a quantity of blood into the artery at each beat of the heart. This distention takes place both in a transverse direction and in a longitudinal direction. The arteries are constantly full of blood, and they must expand to accommodate themselves to the quantity of blood forced in by the heart beat. The pressure originating at each heart beat excites a *pulse wave* which passes from the heart toward the capillaries. It is this pulse wave which is felt by the examining finger. Each pulse wave rep-

resents a heart beat, but not the blood thrown out of the heart at that beat. The stroke given by the heart moves forward the whole column of blood in the arteries.

What makes the heart beat? There are situated in the muscle of the heart certain nerve centers or *ganglia*, and whenever they are stimulated they make the heart muscle contract. The blood which enters the heart acts as a stimulant, and each time a quantity of blood enters the chambers of the heart the ganglia are stimulated and the heart contracts, thus forcing out the blood.

If this were the only way that the heart was made to act, the heart muscle would become more and more irritable, and would soon wear itself out. It needs some controlling action.

There come down fibers from the pneumogastric nerves (tenth cranial nerves), and these act on the heart as *inhibitory nerves;* that is, they prevent the heart from contracting too fast.

So the heart has these two sources of nervous supply: (1) the *ganglia* in the walls of the heart, which cause the heart muscle to contract, and (2) the *inhibitory nerves*, which prevent the heart from contracting too fast and wearing itself out.

Rapid pulse (tachycardia) is caused by (1) irritation or over-sensitiveness of the ganglia in the heart muscle or (2) interference with the action of the inhibitory nerves (the pneumogastrics). In many cases both these conditions act as the cause.

Rapid pulse occurs in acute febrile conditions (except those producing brain pressure, which cause slow pulse):

Heart diseases (some forms) Surgical shock

Profuse hemorrhage
Exophthalmic goiter
Excitement
Violent exercise
Concussion of brain
Sunstroke
Anæmia
Poisoning by certain drugs
Reflex irritation from uterine or ovarian disease
Pressure of a tumor on the pneumogastric nerve
Addison's disease

Slow pulse (bradycardia) is caused by (1) interference with the action of the ganglia in the heart muscle or (2) irritation or over-sensitiveness of the pneumogastric nerves.

Slow pulse occurs in:

Old age
Puerperium
Sclerosis of heart muscle
Convalescence from acute fevers
Conditions causing jaundice
Uræmia
Tumor of brain
General paresis
Spasmodic asthma
Meningitis
Fatty degeneration of heart
Arterio-sclerosis
Chronic gastritis
Emphysema
Apoplexy
Abscess of brain
Melancholia
Poisoning by digitalis, alcohol, tobacco, coffee

Irregular pulse is caused by a disturbance of the normal governing mechanism of the heart. A difference in the regularity of the heart beats, as well as in the rate, may be caused by changes in the heart ganglia or interference with the pneumogastric nerves.

Intermittent pulse consists of the omission of one or more impulses against the examining finger. The absent impulse may be due to weak contraction of the heart at that time, the contraction not being sufficiently strong to send a perceptible wave into the radial artery.

The causes of irregular or intermittent pulse are

(*a*) *Changes in the heart:*

Degenerative changes in the cardiac ganglia
Changes in the muscular walls of the heart caused by
Dilatation of heart
Fatty degeneration of heart
Sclerosis of heart muscle

(*b*) *Pressure on the heart from outside:*

Pleuritic effusion
Pericardial effusion
Tumor of pleura

(*c*) *Cerebral causes:*

Concussion of brain
Profuse hemorrhage
Emotions

(*d*) *Toxic causes:*

Excessive use of tobacco, coffee, or tea

(*e*) *Reflex causes:*

Dyspepsia
Diseases of the lungs, liver, or kidneys

Palpitation is a name given to a rapid, violent pulsation of the heart, of which the patient is conscious.

The causes are

(*a*) *Changes in the heart:*

Myocarditis
Valvular diseases of the heart

(*b*) *Irritation in the stomach:*

Chronic gastritis
Flatulency

(*c*) *Toxic causes:*

Excessive use of tobacco, coffee, or tea

(*d*) *Nervous causes:*

Excitement
Hysteria
Puberty
Climacteric
Menstruation

Blood Pressure. — The walls of the arteries are made up of three coats: (1) an outer coat composed of

elastic tissue; (2) a middle coat composed of elastic and muscular tissue; and (3) an inner coat composed of a thin membrane lined with endothelial cells.

The fibers of the middle or muscular coat encircle the artery, and when they contract the caliber of the artery becomes smaller. These muscular fibers are supplied by nerves coming from the sympathetic nervous system. These nerves are called *vaso-motor nerves.*

The vaso-motor nerves are under the control of, and are governed by, a nerve center situated in the medulla oblongata, the *vaso-motor center.* If this nerve center is irritated, all the vaso-motor nerves which govern the muscular coat of the arteries are stimulated and the caliber of the arteries becomes smaller. This increases the pressure on the blood inside the artery and makes the artery feel *hard* to the examining finger.

The opposite takes place if the vaso-motor center is paralyzed. The muscular coat of the arteries relaxes and the artery feels *soft* to the examining finger.

So a *rise* in blood pressure (high tension) or a *fall* in blood pressure (low tension) is spoken of when examining the pulse. The vaso-motor center is always at work, exerting at different times a constricting or a dilating action upon the arteries.

Hard pulse (high tension) is caused by irritation of the vaso-motor center, which produces contraction of the walls of the arteries. In this condition the blood which is passing through the artery is held in a tighter grasp:

General peritonitis	Acute nephritis
Chronic interstitial nephritis	Apoplexy
Fracture of base of skull	Tumor of brain
Chronic lead poisoning	Angina pectoris
Toxic doses of digitalis	

Hardness of the pulse may also be caused by the thickened condition of the walls of the arteries:
Arterio-sclerosis

Soft pulse (low tension) is caused by paralysis of the vaso-motor center, allowing the walls of the artery to relax:

Surgical shock	Profuse hemorrhage
Typhoid fever	All conditions of exhaustion
Dilatation of the heart	Phthisis
Anæmia	

Poisoning by certain drugs (chloral, amyl nitrite)

Dicrotic pulse is a pulse in which two distinct beats are felt for each pulsation of the heart. The first beat is stronger, and is the true pulse beat. The second beat is caused by the closure of the aortic valves, and on account of the low tension of the arteries a recoil wave travels along the blood stream. This kind of pulse occurs only in conditions of low arterial tension.

It is often difficult to distinguish the true beat from the false one, and in these cases the heart beat should be counted by placing the hand on the chest over the apex of the heart.

Dicrotic pulse occurs in:
Conditions causing soft pulse (see soft pulse).

Large pulse refers to the large quantity of blood in the artery as felt under the examining finger. A pulse may be hard and still not be large; for example, in general peritonitis the pulse is hard and small (wiry):

Hypertrophy of heart	Conditions of plethora

Over-action of the heart in acute fevers

Small pulse refers to the small quantity of blood

in the artery. A small pulse may be hard or it may be soft:

General peritonitis	Aortic regurgitation
Mitral stenosis	Aneurism of aorta

Corrigan's pulse (water-hammer pulse). The impulse against the examining finger quickly fades away. This is caused by the defect in the aortic semi-lunar valves by which the column of blood is not held in the aorta but allowed to fall back into the left ventricle: Aortic regurgitation

RESPIRATION

Respiration is the function by which oxygen is taken into the lungs, and from there absorbed into the blood, and carbon dioxide is exhaled from the lungs. It consists of two movements: (1) inspiration, and (2) expiration.

Inspiration is the active process by which the thorax is expanded and air is taken into the lungs.

Inspiration enlarges the chest in all diameters. The vertical diameter is increased by the contraction and descent of the diaphragm. The antero-posterior and the transverse diameters are increased by the elevation and rotation outward of the ribs, which also elevates the sternum.

If there is any impediment to inspiration, then certain auxiliary muscles are brought into play which forcibly increase the capacity of the chest to the utmost limit.

In a full inspiration the diaphragm flattens and its dome is drawn downward. This causes pressure on the intestines, and the anterior abdominal wall is seen to bulge slightly.

Expiration is a passive act. The chest walls descend by their own weight, and there is the recoil of the elastic tissue in the lungs.

The diameters of the chest are all diminished. The vertical diameter is diminished by the ascent of the diaphragm. The antero-posterior diameter is diminished by the depression of the ribs and sternum.

Any impediment to expiration brings into play certain auxiliary muscles which still further diminish the capacity of the thorax.

The movements of respiration, although they are capable of being modified by effort of the will, are largely automatic in character. This is proved by the fact that respiration goes on during sleep and unconsciousness.

The movements of respiration are under the control of a nerve center which is situated in the medulla oblongata, the *respiratory nerve center.* This center is kept alive by the condition of the blood. If the quantity of oxygen in the blood is too small, the nerve center sends out impulses and increases the rate of respiration.

Rapid respiration :

(*a*) *Febrile conditions.* The increased rate is caused by the irritation of the respiratory nerve center by the toxines of disease, and also by the stimulation of the nerve center by warmer blood.

(*b*) *Conditions causing dyspnœa* (*see dyspnœa*).

(*c*) *Reflex irritation, as a result of pain in other organs.*

(*d*) *Deficient quality of the blood :*

Anæmia Leucemia

(*e*) *Certain nervous disorders :*

Hysteria

Slow respiration:

Uræmia	Acute alcoholism
Apoplexy	Fracture of base of skull
Tumor of brain	Abscess of brain

Poisoning by opium, chloral, chloroform, aconite, antimony

Irregular respiration. The breathing may be irregular in time intervals or in depth of respiration.

Conditions causing dyspnœa (see dyspnœa).

Surgical shock	Apoplexy
Meningitis	Tumor of brain

Chorea (involving the respiratory muscles)

Cheyne-Stokes respiration. The respiratory movements gradually decrease both in depth and rapidity until they cease altogether. For several seconds there are no respiratory movements; then there is a feeble respiration, followed by a somewhat stronger one, and respiration gradually returns to normal, after which it again declines in a similar manner.

The cause of this form of respiration is not fully understood, but it is probably due to exhaustion of the respiratory center.

It is noticed in:

Apoplexy	Meningitis
Sunstroke	Uræmia
Arterio-sclerosis	Tumor of brain

Fatty degeneration of the heart

Sighing is an occasional slow, deep inspiration followed by a more rapid expiration. This is nature's method of filling the lungs with air and giving more oxygen to the blood:

Profuse hemorrhage	Surgical shock
Over-distended stomach	Dilatation of heart
Meningitis	Sunstroke

Tumor of brain
Addison's disease
Syncope

Prominent thoracic respiration (normal in women):
Paralysis of the diaphragm
General peritonitis
Pressure on the diaphragm by
Ascites
Tympanites
Abdominal tumor
Pregnancy

Prominent abdominal respiration (normal in men):
Pleurisy with effusion
Empyema
Fractured rib
Paralysis of muscles of respiration
Pleurisy

Unequal expansion of the chest:
Pleurisy with effusion
Empyema
Pneumonia
Tumor of lung or pleura

Bulging of one side of chest:
Pleurisy with effusion
Empyema
Tumor of lung or pleura

Retraction of one side of chest:
Pleuritic adhesions
Phthisis
Curvature of spinal column
Foreign body in bronchus

Stertorous respiration is caused by paralysis of the muscles of the tongue, which allows the base of the tongue to fall back into the pharynx:
Acute alcoholism
Apoplexy
Uræmia
Diabetic coma
Poisoning by narcotic drugs
Paralysis of the soft palate

Forced respiration. In this form the patient uses the auxiliary muscles of respiration both on inspiration and expiration. The air as it passes in and out of the lungs makes a harsh whistling sound.

The causes are

(*a*) *Obstruction in the larynx:*

Diphtheritic membrane	Foreign body in larynx
Œdema of the glottis	Cancer of larynx

(*b*) *Spasm of the muscles of the larynx so that the glottis does not open freely:*

Spasmodic croup	Laryngismus stridulus
Strychnia poisoning	Tetanus

(*c*) *Spasm of the bronchial tubes:*

Asthma (see asthma)

Asthma is a spasmodic contraction of the muscular fibers of the bronchial tubes, thus narrowing the caliber of the tubes. This causes the air to pass in and out of the air vesicles with great difficulty.

This spasmodic contraction of the bronchial tubes is caused by irritation of fibers of the pneumogastric nerves (tenth cranial nerves). The pneumogastric nerves, by their own fibers and by anastomosis with fibers from other nerves, are distributed to the pharynx, the heart, the lungs, the stomach, the intestines, and various glandular organs. Reflex irritation in other organs may also produce an attack of asthma.

The causes are:

Excitement	Nervousness
Nasal polypi	Naso-pharyngitis
Inhalation of dust, pollen of flowers, or irritating vapors	
Heart diseases	Acute indigestion
Kidney diseases	Uterine disturbances

Dyspnœa is difficult or painful respiration.

The causes are

(*a*) *Mechanical hindrance of the entrance of air into the pulmonary air cells:*

Inflammation in the larynx	Inflammation in the trachea

Foreign body in larynx
Diphtheria
Œdema of the glottis
Bronchitis
Pneumonia
Phthisis
Œdema of the lungs
Conditions causing asthma (see asthma)
Spasm of the respiratory muscles in epilepsy, tetanus, or strychnia poisoning

(*b*) *Pressure on the lungs from outside, which prevents their expansion:*

Pleurisy with effusion
Empyema
Pericardial effusion
Tumor of pleura
Ascites
Pregnancy
Tympanites

(*c*) *Pain caused by the act of respiration:*

Pleurisy
Fractured rib
Intercostal neuralgia
Pneumonia
General peritonitis
Diaphragmatic pleurisy
Rheumatism of the respiratory muscles

(*d*) *Disturbance of the circulation of blood in the lungs.* There are two kinds of blood supply to the lungs: (1) the *pulmonary artery supply*, which supplies the blood to be purified in the lungs; and (2) the *bronchial artery supply*, which supplies blood for the nourishment of the lung tissue. Interference with either of these blood supplies will cause dyspnœa:

Dilatation of the heart
Pulmonary embolism

(*e*) *Deficient quality of the blood:*

Anæmia
Chlorosis
Leucæmia

Œdema of the glottis:

Cellulitis of the neck
Fracture of hyoid bone
Irritant poisons (carbolic acid)
Chronic nephritis
Foreign bodies in larynx
Scalds of larynx
Wounds of base of tongue
Cancer of larynx
Anthrax
Erysipelas

Dyspnœa on exertion:

Heart diseases	General debility
Anæmia	Phthisis
Obesity	Chronic bronchitis
Emphysema	

Paroxysmal dyspnœa:

Conditions causing asthma (see asthma)

Spasmodic croup	Angina pectoris
Pressure of a tumor on pneumogastric nerve	

COUGH

The removal of foreign substances from the respiratory passages is effected by the act of coughing. After a deep inspiration the glottis closes. Then the contraction of the auxiliary muscles of expiration increases the pressure in the chest, and suddenly the glottis opens and there results an audible outrush of air which brings with it the substances which form expectoration.

Coughing is excited by irritation of branches of the pneumogastric nerves (tenth cranial nerves). (For distribution of pneumogastric nerves, see asthma.) Irritation of any of the organs supplied by these nerves or reflex irritation in other organs may be the means of exciting cough. The causes are

(*a*) *Irritation in the lung tissue:*

Bronchitis	Pneumonia
Phthisis	Abscess of lung
Foreign body in bronchus	Whooping cough
Inhalation of irritating vapors	

(*b*) *Irritation in structures adjacent to the lungs:*

Pleurisy	Pericarditis
Empyema	Fractured rib
Thoracic aneurism	Enlarged bronchial glands
Mediastinal tumor	Cancer of œsophagus

(*c*) *Reflex irritation in other organs:*

Nasal polypi
Adenoids
Enlarged tonsils
Relaxed uvula
Impacted ear-wax
Heart diseases
Chronic gastritis
Cirrhosis of the liver
Gall-stones
Uterine disorders

Dry cough:

Bronchitis (first stage)
Pneumonia (first stage)
Phthisis (first stage)
Foreign body in bronchus
Inhalation of irritating vapors
Any irritation of structures adjacent to the lungs
(See causes of cough, section *b*)
Any reflex irritation in other organs
(See causes of cough, section *c*)

Loose cough:

Bronchitis (later stages)
Pneumonia (later stages)
Phthisis (later stages)
Whooping cough

Hoarse cough:

Diphtheria
Spasmodic croup
Laryngitis
Whooping cough

Brassy cough:

Thoracic aneurism

Paroxysmal cough:

Whooping cough
Bronchitis
Mediastinal tumor
Thoracic aneurism

Painful cough:

Pleurisy
Pneumonia
Fractured rib
General peritonitis
Intercostal neuralgia
Pericarditis
Injury to abdominal wall

Inability to cough:

Paralysis of respiratory muscles
General debility
Diaphragmatic pleurisy
Pressure on diaphragm by ascites, tympanites, or abdominal tumor

Mucous rattle, both on inspiration and expiration:

Extreme exhaustion
Approach of death

Hawking is an effort to clear the upper respiratory passages:

Nasal catarrh
Pharyngitis
Laryngitis

SPUTUM

Sputum consists of the substances expelled from the air passages by the act of coughing. It is composed of the secretions of the mucous membrane of the larynx, the trachea, and bronchi, and from the cavities of the lung tissue. Certain substances from the mouth, the nose, and the throat, such as blood, mucus, remnants of food, etc., also appear in the sputum.

Scanty sputum:

Bronchitis (first stages)
Pneumonia (first stages)
Phthisis (first stages)
Conditions causing asthma

Profuse sputum:

Bronchitis (later stages)
Pneumonia (later stages)
Phthisis (later stages)
Whooping cough

Purulent sputum consists of a mixture of mucus and pus. In some cases pus from the pleural cavity may rupture through the pleura and appear as sputum:

Abscess of the lung
Ruptured empyema
Sputum from phthisical cavity
Bronchiectasis

Serous sputum is of very fluid consistence and is usually frothy on account of the mixture of air bubbles: Œdema of the lungs

Bloody sputum. A slight mixture of blood is seen in the sputum as bloody streaks (rusty sputum):

Pneumonia
Blood from the nose
Scurvy
Blood from the pharynx
Fractured rib (if lung is lacerated)
Hemophilia

Hemoptysis is the expectoration of pure blood:

Phthisis
Ruptured aneurism
Heart diseases
Excessive bodily exertion

Odor of sputum is usually not noticeable. When the sputum is scanty it may be mixed with the secretions of the mouth, and is often offensive. A foul odor is noticed in:

Abscess of the lung
Sputum from phthisical cavity
Gangrene of the lung
Bronchiectasis

Foreign substances in sputum:

Remnants of food
Coal dust causing a grayish black color
Iron dust causing a reddish black color
Portions of lung tissue in abscess of the lung
Sloughing tissue from ulceration in larynx or trachea
Casts of trachea or bronchi in diphtheria

DIGESTIVE SYSTEM

Lips. The mucous membrane of the lips is normally smooth, red, and moist.

(*a*) *Pale color:*

Anæmia
Chlorosis

(*b*) *Blue color:*

Exposure to cold
Conditions causing cyanosis

Tremor of lips:

Old age
Chronic alcoholism
Emotion

Herpes labialis:

Pneumonia
Acute febrile conditions
Trifacial neuralgia
Meningitis
Malaria

Caries of the teeth:

Lack of care
Rickets
Diabetes
Pregnancy
Phosphorous poisoning

Notched teeth:

Hereditary syphilis

Loosened teeth:

Stomatitis
Alveolar abscess
Salivation from mercury
Scurvy
Chronic phosphorous poisoning

Sordes on the teeth:

Typhoid fever

Grinding the teeth (in children):

Intestinal parasites
Intestinal indigestion
Meningitis
Tumor of brain
Hydrocephalus
Epilepsy
Chorea

Gums.

(*a*) *Pale:*

Anæmia
Chlorosis

(*b*) *Red and spongy:*

Stomatitis — Salivation by mercury
General debility — Scurvy

(*c*) *Gray line at border of gums:*

Chronic lead poisoning — Chronic copper poisoning

Tongue. The color of the tongue, its movements, and any enlargements are of importance.

(*a*) *Pale color:*

Anæmia — Chlorosis

(*b*) *Blue color:*

Conditions causing cyanosis

(*c*) *Red color:*

Scarlet fever — Febrile conditions

Coated tongue. The coating on the tongue consists of epithelial cells, micro-organisms, and remnants of food:

Chronic gastritis — Constipation
Typhoid fever — Conditions causing jaundice
Septicæmia — Excessive smoking

Enlarged tongue:

Glossitis — Cancer of tongue
Acromegaly

Circumscribed enlargement:

Cancer of tongue — Syphilitic nodules

Tremor of tongue:

Chronic alcoholism — Typhoid fever
Paralysis agitans — Nervousness

Scars on tongue:

Healed ulcers — Injuries
Bite during epileptic convulsion

Paralysis of tongue:

Apoplexy
Locomotor ataxia (advanced stages)
General paresis
Tumor of brain

Puffing of one cheek on expiration:

Apoplexy
Absence of teeth on one side
Paralysis of facial nerve (seventh cranial)

Inability to open the mouth:

Fissures of lips
Stomatitis
Tetanus
Tonsilitis
Mumps

When the respiratory passages are in normal condition there is no odor to the air which is expired from the lungs. In diseased conditions of the respiratory passages, or in certain constitutional diseases, there is a marked odor present.

Odor of the breath. The causes are

(*a*) *Conditions in the nose:*

Nasal catarrh
Ozæna
Ulcers of nose (tubercular, syphilitic)

(*b*) *Conditions in the mouth:*

Decayed teeth
Stomatitis
Cancrum oris
Retention of food remnants
Alveolar abscess

(*c*) *Conditions in the throat:*

Tonsilitis
Diphtheria
Cancer of pharynx
Pharyngitis
Ulcer of larynx (tubercular, syphilitic)

(*d*) *Conditions in the lungs:*

Phthisis (later stages)
Abscess of lung
Chronic purulent bronchitis
Emphysema

(*e*) *Conditions in the stomach:*

Chronic gastritis Constipation

(*f*) *Constitutional conditions:*

Diabetes produces a fruity odor of the breath

Uræmia produces a urinous odor of the breath

Febrile conditions produce a characteristic odor of the breath

Saliva is the product of all the salivary glands. The secretion is constant, and moistens the mouth for speech and for deglutition.

The secretion of saliva is regulated by a nerve center in the medulla oblongata. Stimuli, which are excited by the presence of food in the mouth, reach this nerve center, and motor impulses are sent out which increase the secretion of the salivary glands. Certain conditions of disease also influence the flow of saliva.

Increased saliva:

Nausea	Dentition
Stomatitis	Glossitis
Facial paralysis	Pregnancy
Salivation by mercury	Hysteria
Hydrophobia	

Certain drugs (potassium iodide, pilocarpine)

Diminished saliva:

Febrile conditions	Fright or excitement
Mouth breathing	Chronic gastritis
Diabetes	Certain drugs (atropine, opium)
Cholera	
Impacted salivary calculus	Prolonged enteritis

Dribbling of saliva:

Facial paralysis	Idiocy

Difficult or painful mastication:

Inflammatory conditions of lips, gums, or tongue
Defective teeth
Paralysis of muscles of mastication

Loss of appetite (anorexia):

Febrile conditions
Excessive fatigue
Depressing emotions
Use of narcotic drugs
Chronic gastritis
Ulcer of stomach
Cancer of stomach
Constipation

Increased appetite (boulimia):

Habit of overeating
Intestinal parasites
Diabetes
Convalescence from fevers
Hysteria
Insanity

Depraved appetite (pica). The patient craves abnormal articles of food, such as chalk, slate pencils, etc.:

Chlorosis
Pregnancy
Idiocy
Insanity
Hysteria

Increased thirst:

Febrile conditions
Diabetes
Chronic gastritis
Cholera
Profuse hemorrhage

Dysphagia is difficulty or pain in the act of swallowing.

It is caused by

(*a*) *Conditions in the mouth:*

Stomatitis
Glossitis
Cancer of tongue

(*b*) *Conditions in the pharynx:*

Tonsilitis
Diphtheria
Scarlet fever
Measles
Mumps
Cancer of pharynx

Retro-pharyngeal abscess — Paralysis of soft palate
Ulcer of pharynx (tubercular, syphilitic)

(*c*) *Conditions in the larynx:*

Laryngitis — Cancer of larynx
Ulcer of larynx (tubercular, syphilitic)

(*d*) *Conditions in œsophagus:*

Inflammation — Stricture
Ulcer — Cancer

(*e*) *Pressure on œsophagus from outside:*

Enlarged thyroid gland — Thoracic aneurism
Enlarged bronchial glands — Mediastinal tumor
Pericardial effusion

(*f*) *Spasm of the pharyngeal muscles (when the patient attempts to swallow):*

Hydrophobia — Tetanus
Strychnia poisoning — Hysteria

NAUSEA AND VOMITING

The act of vomiting is under the control of a nerve center in the medulla oblongata, *the vomiting center.* When this nerve center is irritated it sends out impulses which produce the muscular act of vomiting. Vomiting is preceded by a feeling of nausea, during which there is a copious flow of saliva into the mouth.

The muscular act of vomiting consists of a sudden, deep inspiration. Then the glottis closes and there is a strong contraction of the diaphragm and of the abdominal muscles. At the same time that the diaphragm and abdominal muscles contract, the cardiac opening of the stomach relaxes and the contents of the stomach are forced out. The contraction of the diaphragm and of the abdominal muscles plays the principal part in the act of vomiting, and the contraction of the walls of the stomach plays a very small part.

Irritation of the vomiting center may be caused by

(*a*) *Impulses sent out from the digestive organs:*

Indigestible food	Irritant poisons
Chronic gastritis	Ulcer of stomach
Cancer of stomach	Cirrhosis of liver
Gall-stone colic	Enteritis
General peritonitis	Appendicitis
Cholera infantum	Strangulated hernia
Intestinal obstruction	

(*b*) *Irritation of the brain and surrounding membranes.* Vomiting from this cause occurs independently of taking food or drink, and on account of its particularly violent character is called *projectile* vomiting:

Meningitis	Tumor of brain
Apoplexy	Fracture of skull
Abscess of brain	Thrombus of brain
Concussion of brain	

(*c*) *Certain poisons circulating in the blood which irritate the vomiting nerve center:*

Uræmia	Septicæmia

(*d*) *Reflex irritation:*

Pregnancy	Gall-stone colic
Renal colic	Severe injuries
Floating kidney	Menstrual disorders
Extreme pain in any part of the body	

(*e*) *Deficient blood supply to the brain:*

Syncope	Surgical shock
Profuse hemorrhage	

(*f*) *Mental emotion:*

Disgust	Fear
Excitement	

(*g*) *Disturbance of the sense of equilibrium:*

Vertigo	Seasickness
Ménière's disease	Migraine

(*h*) *Contraction of the abdominal muscles in violent coughing:*

Whooping cough Phthisis

Vomited matter. The appearance of material ejected from the stomach will oftentimes give valuable information.

Mucus vomitus:

Chronic gastritis

Mucus from the upper respiratory passages

Watery vomitus:

Chronic alcoholism Hyperchlorhydria

Hysteria

Bilious vomitus:

Long-continued vomiting General peritonitis

Intestinal obstruction

Bloody vomitus:

Ulcer of stomach Cancer of stomach

Irritant poisons Cirrhosis of liver

Chronic nephritis Vicarious menstruation

Scurvy Hemophilia

Blood which has been swallowed from:

Epistaxis Ulcer of larynx

Ulcer of œsophagus Pulmonary hemorrhage

Rupture of aneurism into the œsophagus

Fecal vomitus:

General peritonitis Intestinal obstruction

Purulent vomitus. Rupture of an abscess of an adjacent organ into the stomach, such as:

Hepatic abscess Pancreatic abscess

Intestinal parasites:

Tape-worm	Round-worm
Thread-worm	Trichinæ

CONSTIPATION

The peristaltic action of the intestines by which the contents are pushed toward the rectum is produced by motor nerve centers situated in the walls of the intestines. These motor nerve centers are under the control of the sympathetic nervous system.

Normal peristalsis depends on the healthy condition of the intestinal mucous membrane, on the healthy action of the nervous mechanism, and on adequate stimulation of both by the contents of the intestines.

Constipation, therefore, is caused by (1) a lack of normal secretion of the intestinal mucous membrane, (2), by a lack of normal muscular peristalsis, and (3) by an insufficient amount of waste material to stimulate the intestines.

These causes are:

Improper diet	Deficient quantity of fluids
Neglect of habit	Sedentary occupation
Deficiency of bile	Febrile conditions

Weak abdominal muscles

Lessening of the quantity of fluids in the body (profuse sweating, diabetes)

Conditions preventing normal nervous excitability (anæmia, neurasthenia, malnutrition)

Overuse of purgative medicines

Intestinal obstruction is caused by

Impacted feces	Strangulated hernia
Intussusception	Volvulus
Cancer of intestine	Stricture of intestine

Adhesions between intestine and adjacent organs

Pressure on the intestine by a tumor of an adjacent organ
Gall-stones Enteroliths
Foreign bodies which have been swallowed
Excessive doses of bismuth or magnesia

Tympanites (meteorism) is the accumulation of gas in the intestinal canal:

Intestinal fermentation Typhoid fever
General peritonitis Tubercular peritonitis
Intestinal obstruction Paralysis of intestine
Hysteria

DIARRHŒA

The frequent discharge of liquid feces constitutes diarrhœa. In this condition the food is propelled rapidly through the intestine, allowing no time for the absorption of the fluid portions. It is caused by

(*a*) *The presence of irritating substances in the intestine, which excite the action of the nerve centers and cause rapid peristalsis:*

Indigestible food Irritant poisons
Hardened feces Purgative drugs

(*b*) *An inflamed condition of the mucous membrane of the intestine, which causes over-sensitiveness of the nerve centers and consequently excessive peristalsis:*

Enteritis Cholera
Cholera infantum Appendicitis
Proctitis

(*c*) *An abnormal condition of the nervous mechanism, so that it responds abnormally to stimulation, although the intestinal mucous membrane may be normal:*

Locomotor ataxia Floating kidney
Hysteria Nervousness

Tenesmus is a persistent desire, accompanied by painful and ineffectual efforts to defecate:

Proctitis
Fissure of anus
Hemorrhoids
Hardened feces
Prolapse of rectum
Ulcer of rectum
Cancer of rectum
Lacerated perineum
Prolapse of uterus

FECES

Incontinence of feces. The sphincter ani is a muscle which is normally in a state of tonic contraction. This tonic contraction is under the control of a nerve center which is situated in the lumbar portion of the spinal cord. This nerve center is inhibited by the action of the will, and relaxation of the sphincter ani takes place. In certain conditions of disease the control of the sphincter ani may be lost.

Incontinence may occur

(*a*) *On account of impaired intelligence:*

Idiocy
Typhoid fever
Conditions of coma
Surgical shock

(*b*) *On account of severe enteritis:*

Cholera
Cholera morbus
Cholera infantum

(*c*) *On account of injury or disease of the spinal cord:*

Fracture of spine
Myelitis

(*d*) *On account of excessive stimulation of the nerves governing peristalsis:*

Strychnia poisoning
Tetanus

(*e*) *On account of injury or disease of the rectum:*

Laceration of sphincter ani
Cancer of rectum
Ulcer of rectum (tubercular, syphilitic)

Small caliber stools:

Stricture of rectum
Prolapse of rectum

Flattened stools:

Hemorrhoids	Cancer of rectum
Enlarged prostate gland	Retroversion of uterus

Scybala (rounded masses of hardened feces):
Chronic constipation

Mucous stools:

Entero-colitis	Proctitis
Removal of impacted feces	

Clay-colored stools are caused by a deficiency of bile in the intestines:
Conditions causing jaundice (see jaundice)

Greenish stools:

Fermentation of food	Administration of calomel

Bloody stools. If the blood comes from the upper part of the digestive canal, it is partially digested and is black and tarry in color, unless the quantity is very large, and then it is red. If the blood comes from the large intestine or rectum it is bright red in color.

Bright red stools:

Hemorrhoids	Fissure of anus
Proctitis	Ulcer of rectum
Hardened feces	Abdominal injuries
Rectal polypi	Typhoid fever

Rupture of aneurism into the intestine

Black, tarry stools:
Blood from the nose or throat
Blood from the lungs
Blood from the stomach

Ulcer of duodenum	Cirrhosis of liver
Cancer of liver	Purpura hemorrhagica
Hemophilia	Leucemia

Masses of slough in the stools:

Gangrenous enteritis — Cancer of intestine
Sloughing polypi — Corrosive poisons
Ulceration of intestine (tubercular, syphilitic)

Casts of the intestine:

Membranous enteritis — Proctitis

Pus in the stools.

(*a*) *In small quantity:*

Enteritis — Proctitis
Ulcer of rectum (tubercular, syphilitic)

(*b*) *In large quantity:*

Rupture of an abscess into the intestine, such as pelvic abscess, peri-proctitic abscess, peri-nephritic abscess

Foreign bodies in the stools:

Undigested food — Excess of milk diet
Gall-stones — Enteroliths
Foreign bodies which have been swallowed (cherry stones, grape seeds, grape skins, etc.)

Intestinal parasites:

Tape-worm — Round-worm
Thread-worm

URINE

The excretion of urine goes on constantly. The minute streams are constantly passing along the tubules of the kidneys, and the urine is collected in the pelves of the kidneys and passes through the ureters to the bladder. The passage of urine through the ureters is caused partly by the force of gravity and partly by the peristaltic action of the muscular walls of the ureters.

The bladder is a muscular bag, which when empty

is collapsed and the walls are thrown into folds. The collection of urine distends the bladder.

At the neck of the bladder, where the urethra joins, is a circular muscle, *the sphincter vesicæ muscle*. This muscle is kept in a state of tonic contraction by the action of a nerve center in the lumbar portion of the spinal cord, and it prevents the urine from passing into the urethra.

Another nerve center in the lumbar portion of the spinal cord takes part in the mechanism of urination. This nerve center governs the contraction of the muscular walls of the bladder.

When urination takes place the nerve center governing the sphincter vesicæ muscle is inhibited, and the sphincter relaxes and allows the urine to pass into the urethra. At the same time, the nerve center which governs the contraction of the bladder walls sends out impulses, and the bladder walls contract and force out the urine.

Increased quantity:

Diabetes
Hypertrophy of heart
Nervousness
Administration of diuretics
Chronic interstitial nephritis
Arterio-sclerosis

Diminished quantity:

Febrile conditions
Chronic parenchymatous nephritis
Acute nephritis
Dilatation of heart
Loss of water from the tissues (excessive sweating, severe enteritis)

Painful or difficult urination (dysuria):

Cystitis
Stricture of urethra
Vesical calculus
Enlarged prostate gland

Urethritis
Cancer of uterus
Atony of bladder walls
Certain drugs (cantharides, turpentine)
Prolapse of uterus
Acute metritis

Frequent urination:

Cystitis
Urethritis
Vesical calculus
Enlarged prostate gland
Administration of diuretics
Diabetes
Chronic interstitial nephritis
Renal calculus
Nervousness

Incontinence of urine is caused by conditions which allow relaxation of the sphincter vesicæ muscle:

Conditions of coma
Idiocy
Typhoid fever
Insanity

In certain injuries or diseases of the spinal cord there is paralysis of the nerve center which governs the sphincter vesicæ muscle, but there is also paralysis of the nerve center which causes contraction of the bladder walls. In these conditions the bladder becomes filled with urine and overflows with constant dribbling:

Fracture of spine
Locomotor ataxia
Tumor of spine
Myelitis

Incontinence during muscular exertion (coughing, sneezing, etc.):

Atony of sphincter vesicæ muscle
Cystocele
Lacerated perineum
Fibroids of uterus

Enuresis (involuntary micturition) in children is caused by over-sensitiveness of the nervous mechanism governing urination. Local irritation or general nervous condition may be the cause of this over-sensitiveness:

Cystitis
Contracted meatus
Phimosis
Vesical calculus

Concentrated urine
General nervous condition
Intestinal parasites

Retention of urine. In this condition the urine is excreted and distends the bladder, but cannot be ejected from the bladder:

Stricture of urethra
Injuries or diseases of the spinal cord (see incontinence of urine)
Impacted calculus in urethra
Enlarged prostate gland
Typhoid fever
Tumor of neck of bladder
Conditions of coma
Hysteria
Atony of bladder walls

Suppression of urine (anuria). In this condition no urine is excreted by the kidneys:

Acute nephritis
Typhoid fever
Following the administration of ether
Poisoning by carbolic acid, cantharides, turpentine, or phosphorus

Obstructive suppression:

Pressure on both ureters by an abdominal tumor or aneurism of the abdominal aorta
Cancer of the bladder involving the entrance of the ureters
Impacted calculi in both ureters

Pale urine:

All conditions in which the quantity is increased (see increased urine)

Cloudy urine:

Cystitis
Chyluria
Mixture with mucus, blood, or pus
Increase of indican or urobilin
Normal in specimens which have stood for several hours

Mucus in urine:

Urethritis
Cystitis
Mixture of urine with vaginal discharge

Blood in urine (hematuria) may come from the urethra, the bladder, the ureters, or the kidneys:

Urethritis
Cystitis
Tuberculosis of bladder
Irritation of ureter by calculus
Injury of urethra, bladder, or kidney
Tuberculosis of kidney
Malaria
Enlarged prostate gland
Cancer of bladder
Vesical calculus
Acute nephritis
Scurvy
Leucemia
Mixture with menstrual blood
Hemophilia
Poisoning by carbolic acid, cantharides, etc.

Pus in urine may come from the urethra, the bladder, the ureters, or the kidneys:

Urethritis
Cystitis
Infection of lining membrane of ureters
Tuberculosis of kidney
Abscess of prostate gland
Pyelitis
Peri-nephritic abscess

Calculi in urine:

Vesical calculi
Renal calculi

Shreds of tissue in urine:

Urethritis
Tuberculosis of bladder
Cancer of bladder
Echinococcus cyst

SKIN

The skin acts as a protective to the sensitive nerve endings. It is richly supplied with blood vessels.

The color of the skin, its degree of moisture, and any eruption give information of great value.

Redness of the skin:

Febrile conditions — Sunburn
Hypertrophy of heart
Poisoning by alcohol, belladonna, hyoscyamus, etc.

Temporary redness:

Emotion (blushing) — Severe muscular exertion
Excitement — Administration of amyl nitrite

Redness of the cheeks:

Febrile conditions — Phthisis
Excitement

Redness of one cheek:

Pneumonia — Migraine

Pallor of the skin is noticed, especially on the mucous membrane of the lips and conjunctiva. It is caused by

(*a*) *Weakening of the heart's action:*

Heart diseases — Surgical shock
Syncope

(*b*) *Contraction of the arterioles by the action of the vaso-motor nerves:*

Fright — Nausea
During a chill — Nervousness

(*c*) *Anæmia.* The deficient quality of the blood which constitutes anæmia may be caused by:

Insufficient food — Poor hygiene
Chronic gastritis — Tuberculosis
Malaria — Syphilis
Cancer (a yellowish color)
Chronic nephritis (a waxy color)
Intestinal parasites — Diseases of the spleen
Prolonged lactation — Chronic enteritis

Long-continued suppuration
Chronic poisoning by arsenic, lead, or mercury
Recurrent hemorrhages from the lungs, from the stomach, from the uterus, or from hemorrhoids

Cyanosis. The blue color of the skin depends upon a diminished amount of oxygen in the blood and an increased amount of carbon dioxide. It is best observed on the lips, the ends of the fingers, and the lobes of the ears. It is caused by conditions causing dyspnœa (see dyspnœa).

Jaundice is a yellowish discoloration of the skin. It is best observed on the mucous membrane of the conjunctiva.

(*a*) *Causes inside the liver:*

Cirrhosis of liver
Abscess of liver
Administration of chloroform
Cancer of liver
Yellow atrophy of liver
Pyæmia
Acute febrile conditions
Certain poisons (phosphorus, arsenic)

(*b*) *Causes outside the liver:*

Gastro-duodenal catarrh
Impacted gall-stone
Impacted intestinal parasites
Stricture of common bile duct
Pressure on common bile duct by ascites, tumor of stomach or omentum

(*c*) *Constitutional diseases:*

Yellow fever
Typhus fever

Bronze color of skin:

Addison's disease

Gray color of skin:

Long-continued administration of silver nitrate

Local discoloration of skin:

Bruises
Cellulitis
Erysipelas

Red spots under the skin which disappear on pressure, showing that they are not true hemorrhages:

Typhoid fever
Certain skin diseases

Hemorrhage under the skin:

Bruises
Purpura hemorrhagica
Pyæmia
Flea bites
Smallpox
Scurvy
Phosphorous poisoning
Yellow atrophy of liver

Eruption on the skin.

(*a*) *Exanthemata:*

Measles
Chickenpox
German measles
Scarlet fever
Smallpox
Vaccinia

(*b*) *Non-contagious diseases:*

Skin diseases
Typhoid fever
Meningitis
Septicæmia
Purpura hemorrhagica
Scurvy
Hemophilia

Drug rashes. Certain drugs given in medicinal doses, by their action on the nervous supply of the skin, may produce an eruption:

Iodides
Bromides
Opium
Belladonna
Salicylates
Chloral
Quinine
Coal-tar products
Sulphur
Copper
Lead
Mercury
Cubebs
Santonin
Arsenic
Tartar emetic
Cannabis indica
Copaiba

PERSPIRATION

Perspiration is secreted by the sudoriparous or sweat-producing glands, which consist of coiled tubes situated in the true skin and in the subcutaneous tissue, and opening on the epidermis.

The elimination of perspiration is continuous. It takes place so gradually that as fast as it is formed it passes off by evaporation as *insensible perspiration.* When a person is exposed to great heat or exercises violently the evaporation is not sufficiently rapid, and it appears as *sensible perspiration.*

The secretion of perspiration is regulated by the nervous system. Two sets of nerves are concerned: (1) the *vaso-motor nerves*, which regulate the blood supply to the sweat glands; and (2) the *secretory nerves*, which stimulate the activities of the glands themselves. Usually the two conditions exist together, namely, increased blood flow and increased glandular action; that is, when the skin is red the secretion of sweat increases.

In some conditions, such as surgical shock, there is profuse clammy perspiration with diminished blood flow (pale skin).

Increased perspiration:

Nausea	Malaria (third stage)
Surgical shock	Acute rheumatism
Pyæmia	Conditions causing dyspnœa
Rickets	General debility
Severe pain	Crisis of pneumonia
Diaphoretic drugs	

Diminished perspiration:

Febrile conditions	Diabetes
Severe enteritis	Chronic skin diseases

Night sweats:

Phthisis	General debility
Convalescence from fevers	

Œdema. The cause of œdema is a disturbance of the relation between the amount of fluid which transudes from the capillaries and the amount which is absorbed and carried away by the lymphatics. If the lymphatics are obstructed, or if for any reason the capillaries allow more fluid to transude from them than can be removed, this excess of fluid will accumulate in the connective tissue spaces and lymph radicles.

The causes are

(*a*) *Obstruction of the return of venous blood to the heart:*

Heart diseases	Kidney diseases
Liver diseases	Thrombosis of a vein
Pressure of a tumor on a vein	

(*b*) *Alteration in the walls of the blood vessels due to weakness:*

Tuberculosis (last stages)	Pernicious anæmia
Last stages of wasting diseases	

(*c*) *Inflammation of the tissues* (*local œdema*)*:*

Cellulitis

Ascites is a collection of fluid in the peritoneal cavity:

Heart diseases	Cancer of omentum
Cirrhosis of the liver	Kidney diseases
	Cancer of the liver
Tubercular peritonitis	Phthisis (last stages)

Pruritus (itching) is caused by irritation of the terminal nerve endings in the skin.

(*a*) *General itching:*

Skin diseases	Conditions causing jaundice

Desquamation after eruptive fevers
Gout
Administration of opium

(*b*) *Of external genitals:*

Diabetes
Leucorrhœa
Hysteria

(*c*) *Of anal region:*

Hemorrhoids
Intestinal parasites
Fissure anus

GENERAL OBSERVATION OF THE PATIENT

Position in bed. The patient naturally takes the position which is most comfortable and causes the least movement of an inflamed region.

(*a*) *On the back:*

Acute rheumatism
Typhoid fever

(*b*) *On the back with knees drawn up:*

General peritonitis
Appendicitis
Pelvic peritonitis

(*c*) *On the affected side:*

Pleurisy
Pneumonia
Fractured rib
Intercostal neuralgia

(*d*) *On the side with knees drawn up:*

Intestinal colic
Gall-stone colic
Renal colic

(*e*) *Retraction of the head:*

Meningitis
Uræmia
Strychnia poisoning
Tetanus
Hysteria

(*f*) *Sitting up in bed:*

Conditions causing dyspnœa

Increased body weight:

Excess of nourishment
Convalescence from fevers

Chronic alcoholism	Dementia
Myxœdema	Cretinism

Diminished body weight:

Typhoid fever	Tuberculosis
Chronic enteritis	Marasmus
Cancer	Diabetes

All conditions interfering with digestion (stricture of œsophagus, chronic gastritis, ulcer of stomach, etc.).

Expression of the face is often characteristic of the disease from which the patient is suffering.

(*a*) *Color of the face:*

(See color of the skin)

(*b*) *Vacant expression:*

Typhoid fever	Surgical shock
Extreme weakness	Idiocy

(*c*) *Anxious expression:*

General peritonitis	Pneumonia
Pleurisy	Angina pectoris
Septicæmia	Following profuse hemorrhage
Conditions causing dyspnœa	Some forms of insanity

Risus sardonicus is caused by a spasm of the facial muscles which draws back the angles of the mouth and gives to the face the expression of smiling.

It is noticed in:

Tetanus	Strychnia poisoning

Mouth breathing:

Adenoids	Enlarged tonsils
Habit	Influenza
Nasal polypi	Deviated septum

Enlarged upper portion of head:

Hydrocephalus	Rickets

Cretinism	Idiocy
Acromegaly	Myxœdema

Fontanelles in infants.

(*a*) *Bulging:*

Hydrocephalus	Meningitis
Acute febrile conditions	

(*b*) *Sunken:*

Cholera infantum	Malnutrition
Tuberculosis	

Inability to move the head:

Conditions causing torticollis (see torticollis)

Swelling of the face:

Abscess of cheek	Alveolar abscess
Mumps	Sarcoma
Anthrax	

Twitching of facial muscles:

Chorea	Hysteria
Toxic doses of strychnia	Tetanus
Premonitory of uræmia	

Uni-lateral facial paralysis:

Apoplexy	Tumor of brain
Fracture of skull	Neuritis of facial nerve

Bi-lateral facial paralysis:

Pressure at base of brain	Multiple neuritis

Torticollis (stiff-neck). In this deformity the head is held in a distorted position by the spasm of certain of the neck muscles:

Congenital condition	Injuries at birth
Rheumatism of cervical muscles	Cellulitis of neck
	Carbuncles
Boils	Following eruptive fevers

Pott's disease (cervical)
Inflammatory conditions in the throat (tonsilitis, retro-pharyngeal abscess, etc.)
Hysteria
Pressure of sarcoma on sterno-cleido-mastoid muscle
Compensatory to lateral curvature of dorsal spine

Enlarged lymphatic glands in neck:

Enlarged septic tonsils	Pediculi of scalp
Tuberculosis	Diphtheria
Scarlet fever	Measles
Erysipelas	Syphilis
Leucemia	Glanders

Abnormal pulsation of carotid arteries:

Hypertrophy of heart	Excitement
Aneurism of carotid artery	Exophthalmic goiter

Small, depressed scars on the skin:

Lacerated wounds	Subcutaneous tumors removed

Broken-down glands (in cervical or axillary regions)

Pits or depressions:

Acne	Boils
Carbuncles	Chickenpox
Smallpox	

Smooth, irregular scars:

Burns	Cellulitis

Destruction of the skin by chemical agents
Healed ulcers

Thick abdominal wall:

Obesity	Œdema of abdominal wall

Lax abdominal wall:

Old age	Wasting diseases

Following pregnancy
Following the removal of ascites or abdominal tumor

Rigid abdominal walls:

General peritonitis — Intestinal colic
Pneumonia — Pleurisy

Rigid right rectus muscle:

Appendicitis

Distention of abdomen:

Obesity — Tympanites
Ascites

Localized distention of abdomen:

Distended bladder — Pregnant uterus
Abdominal tumor — Impacted feces
Enlarged liver — Phantom tumor

Retraction of abdomen:

Old age — Wasting diseases
Cholera infantum — Lead colic

Linea scars on abdomen (from over-stretching of the skin):

Pregnancy — Ascites
Large abdominal tumors

Dilated superficial veins of abdomen:

Cirrhosis of liver — Cancer of liver
Heart weakness — Pressure of tumor on vena cava

Umbilicus retracted:

Obesity

Umbilicus projecting:

Pregnancy — Ventral hernia
Ascites — Cirrhosis of liver
Cancer of liver

Swelling in the groin:

Tubercular adenitis
Gonorrhœal adenitis
Syphilitic adenitis
Leucemia
Undescended testicle
Inguinal hernia
Femoral hernia
Psoas abscess
Aneurism of femoral artery

Vaginal discharge:

Leucorrhœa
Gonorrhœa
Cancer

Hemorrhage from vagina:

Menstruation
Miscarriage
Beginning labor
Injury
Endometritis
Subinvolution of uterus
Retained secundines
Uterine polypi
Uterine fibroids

Swelling on the back:

Spina bifida
Pott's disease
Lipoma
Carbuncle
Peri-nephritic abscess
Cancer of kidney

Stiffness of the back:

Long confinement in bed
Lumbago
Sprain of muscles
Arthritis deformans
Pott's disease
Paralysis agitans

Posterior curvature of spine (kyphosis)

Pott's disease
Rickets
Injury to spinal column

Lateral curvature of spine (scoliosis):

Pott's disease
Rickets
Habitual one-sided position of the body
Obliquity of the pelvis from shortening of one leg
Atrophy of the muscles on one side
Over-use of the muscles on one side

Spasm of the muscles on one side from disease of the central nervous system
Healed empyema of one side, contracting the chest wall
Injury of the sacro-iliac articulations

Anterior curvature of spine (lordosis):

Pott's disease	Rickets
Congenital dislocation of hip	

Bow-legs (genu varum):

Over-use in early life	Rickets
Cretinism	

Knock-knees (genu valgum):

Rickets	Traumatism
Arthritis	Infantile paralysis
Flatfoot	

Anchylosis of joint:

Fracture into the joint	Tuberculosis of joint
Dislocation of joint	Septic infection of joint
Chronic rheumatism	

Arthritis, following typhoid fever, gonorrhœa, syphilis, gout, scarlet fever, measles, or smallpox

Shortening of one leg:

Fracture of neck of femur	Fracture of shaft of femur
Congenital dislocation of hip	Unreduced dislocation of hip
Former hip-joint disease	Infantile paralysis

Swelling of one leg:

Psoas abscess	Phlebitis
Embolism	

Swelling of ball of great toe:

Gout	Cellulitis
Rheumatism	Pressure of tight shoe

Varicose veins are permanent dilatation of veins:

Long-continued standing	Constipation
Pregnancy	Abdominal tumors

Ulcers are areas of loss of continuity upon the surface of the body which show no tendency to heal.

They are caused by:

Injury	Varicose veins
Syphilis	Tuberculosis
Cancer	Embolism

Coldness of feet and hands:

During a chill	Conditions causing
Chronic gastritis	cyanosis
Rheumatism	Anæmia
Tuberculosis	Heart weakness
Profuse hemorrhage	Surgical shock

Sweating of feet and hands:

Nervousness	Bromidrosis

Odor of feet:

Lack of cleanliness	Bromidrosis

Gangrene is the death of the soft tissues in greater or smaller masses.

The causes are

(*a*) *Obstruction of the blood vessels:*

Ligation	Arterio-sclerosis

Over-tight plaster of Paris bandage

Embolism following typhoid fever or scarlet fever

(*b*) *Mechanical crushing of the blood vessels:*

Injuries

(*c*) *Obstruction of the blood supply by the exudation resulting from inflammation:*

Frostbite	Burns

Scalds

(*d*) *Continued pressure on the tissues:*
Bed-sores Splint sores
(*e*) *Disturbance of the trophic nerve supply:*
Injury to spinal cord Raynaud's disease
(*f*) *Constitutional diseases:*
Diabetes

PAIN

STIMULI transmitted along sensory nerves from any part of the body to the brain produce sensations. These sensations are acted upon by the brain, and the proper movement takes place.

If the stimuli along the sensory nerves become stronger the sensations in the brain become unpleasant, and if stronger still the sensations become painful. Pain, therefore, is caused by over-stimulation of sensory nerves.

Kinds of pain.

(*a*) *Sharp pain:*
Acute inflammation
(*b*) *Dull ache:*
Chronic inflammation Bruises
Necrosis of bone Lumbago
(*c*) *Darting pain:*
Acute rheumatism Neuralgia
Locomotor ataxia Hysteria
Trichiniasis
(*d*) *Boring pain:*
Necrosis of vertebra Thoracic aneurism
Cancer of stomach
(*e*) *Burning pain:*
Irritative skin diseases
(*f*) *Cramps* (involuntary muscular contractions):
Acute gastritis Intestinal colic

Gall-stone colic — Renal colic
Writer's cramp — Muscular cramps

(*g*) *Pain increased by motion*:

Acute inflammation — Rheumatism
Sprains — Injury or disease of joints

(*h*) *Pain relieved by pressure:*

Intestinal colic — Hysteria

Headache. The pain in the head is usually accompanied by mental irritability and loss of intellectual power.

The causes are

(*a*) *Irritation in the digestive canal:*

Acute gastritis — Chronic gastritis
Constipation — Enteritis
Conditions causing jaundice

(*b*) *Certain poisons circulating in the blood:*

Impure air — Uræmia
Toxins of fevers — Lithæmia
Syphilis — Gout

(*c*) *Congestion of the cerebral blood vessels:*

Hypertrophy of heart
Administration of amyl nitrite, quinine, etc.

(*d*) *Deficient quantity of blood sent to the brain:*

Dilatation of heart — Surgical shock
Arterio-sclerosis — Syncope

(*e*) *Deficient quality of blood sent to the brain:*

Anæmia — Chlorosis

(*f*) *Inflammation of or pressure on the brain:*

Meningitis — Fracture of skull
Tumor of brain — Abscess of brain

(*g*) *Poisoning by certain drugs:*

Alcohol — Opium
Tobacco — Lead
Mercury

(*h*) *Diseases of the nervous system:*

Epilepsy
Migraine
Hysteria

(*i*) *Irritation in other parts of the body (reflex headache):*

Eye strain
Adenoids
Diseases of the nose
Impacted ear-wax
Uterine disorders

(*j*) *General physical condition:*

Excessive fatigue
Nervous strain

(*k*) *Irritation on the outside of the cranium:*

Injury of the scalp
Rheumatism of the scalp
Periostitis of the cranial bones
Mastoiditis
Necrosis of the cranial bones

Location of headache.

(*a*) *Uni-lateral headache:*

Migraine
Trifacial neuralgia
Ear diseases
Mastoiditis
Toothache
Necrosis of bone

(*b*) *Frontal headache:*

Nasal catarrh
Adenoids
Gastritis
Constipation
Eye strain
Anæmia

(*c*) *Occipital headache:*

Uræmia
Meningitis
Diseases of spinal cord
Diseases of cervical vertebræ
Hysteria

(*d*) *Vertex headache:*

Menstrual disorders
Rheumatism of scalp
Pelvic inflammation
Hysteria

Neuralgia is pain which follows the distribution of a nerve. It may be due to inflammation of the nerve

sheath (neuritis), to irritation at any point along the course of the nerve, or to certain poisons circulating in the blood.

The causes are

(*a*) *Inflammation of the nerve sheath:*

Injury
Exposure to cold

(*b*) *Mechanical pressure on the nerve:*

Tumor
Aneurism
Periostitis

(*c*) *Constitutional diseases:*

Syphilis
Rheumatism
Malaria
Gout
Diabetes

(*d*) *Toxic drugs:*

Alcohol
Lead
Mercury
Arsenic

(*e*) *Deficient quality of the blood:*

Anæmia
Phthisis

Pain in the face:

Injury
Toothache
Alveolar abscess
Salivary calculus
Neuralgia (see neuralgia)

Pain in the throat (sore throat):

Tonsilitis
Pharyngitis
Foreign body in throat
Diphtheria
Scarlet fever
Measles
Irritant poison
Retro-pharyngeal abscess
Tubercular ulcer
Cancer
Syphilitic ulcer

Pain in the neck (see torticollis):

Pain in side of chest:

Pleurisy
Pneumonia
Intercostal neuralgia
Fractured rib

Pain in præcordium:

Bronchitis	Pericarditis
Endocarditis	Angina pectoris
Thoracic aneurism	Mediastinal tumor
Foreign body in bronchus	Enlarged bronchial glands
Necrosis of sternum	

Pain in mammary gland:

Mastitis	Cracked nipple
Pregnancy	Hysteria
Cancer	Uterine disorders

Pain in abdomen. The abdomen is divided by certain imaginary lines into nine regions. One line encircles the body on a level with the costal cartilages of the tenth ribs. Another line encircles the body on a level with the anterior-superior spines of the ilia.

Two vertical lines intersect these horizontal lines. They are drawn on either side through the ilio-pectineal eminences and end on the first mentioned horizontal line which connects the costal cartilages of the tenth ribs.

The three highest regions are bounded above by the diaphragm. The three lowest regions are bounded below by the brim of the true pelvis.

These nine regions are as follows:

1. **Right hypochondriac region** contains the right lobe of the liver, the gall-bladder, the upper part of the right kidney, and the right supra-renal capsule.

Pain in right hypochondrium:

Gall-stones	Cirrhosis of liver
Cancer of liver	Abscess of liver
Colitis	Floating right kidney
Pyelitis	Sub-phrenic abscess

2. **Epigastric region** contains part of the stomach and left lobe of the liver, the cœliac axis, the solar plexus, the pancreas, and parts of the aorta, inferior vena cava, venæ azygos, and thoracic duct.

Pain in epigastrium:

Gastritis	Flatulency
Ulcer of stomach	Cancer of stomach
Irritant poisons	Colitis
Inflammation of left lobe of liver	Uræmia
	Cancer of pancreas
Diaphragmatic pleurisy	
Necrosis of dorsal vertebræ	

3. **Left hypochondriac region** contains the greater part of the stomach, the spleen, the splenic flexure of the colon, the greater omentum, the upper part of the left kidney, and the left supra-renal capsule.

Pain in left hypochondrium:

Gastritis	Ulcer of stomach
Colitis	Impacted feces in colon
Cancer of stomach	Floating left kidney
Enlarged spleen from typhoid fever, malaria, or leucemia	
Pyelitis	Sub-phrenic abscess

4. **Right lumbar region** contains part of the right kidney, the small intestine, and the ascending colon.

Pain in right lumbar region:

Colitis	Floating right kidney
Pyelitis	Sub-phrenic abscess

5. **Umbilical region** contains the transverse colon, the greater omentum, the small intestines, and the mesentery.

Pain in umbilical region:

Ventral hernia	Cancer of omentum

6. **Left lumbar region** contains part of the left kidney, the small intestines, and the descending colon.

Pain in left lumbar region:

Colitis	Floating left kidney
Pyelitis	Sub-phrenic abscess

7. **Right iliac region** contains the cæcum, the vermiform appendix, the right ureter, and the right spermatic vessels.

Pain in right iliac region:

Appendicitis	Enteritis
Typhoid fever	Renal colic
Right inguinal hernia	Varicocele

8. **Pubic region** contains the bladder, part of the small intestines, and the uterus during pregnancy.

Pain in pubic region:

Cystitis	Tuberculosis of bladder
Cancer of bladder	Vesical calculus
Menstruation	Diseases of uterus and ovaries

9. **Left iliac region** contains part of the sigmoid flexure, the left ureter, and the left spermatic vessels.

Pain in left iliac region:

Impacted feces in sigmoid flexure	Enteritis
Proctitis	Renal colic
Left inguinal hernia	Varicocele

General abdominal pain:

General peritonitis	Intestinal colic

Onset of appendicitis
Tubercular peritonitis
Enteritis
Hysteria
Crisis of locomotor ataxia
Intestinal obstruction
Irritant poisons
Rheumatism of abdominal muscles
Strain of recti muscles from violent vomiting or coughing

Pain in perineum:

Hemorrhoids
Enlarged prostate gland
Proctitis
Fissure ani
Uterine diseases
Cystitis
Ischio-rectal abscess
Fistula in ano
Vesical calculus

Pain in back:

Onset of acute disease
La grippe
Gastritis
Labor pains
Psoas abscess
Meningitis
Rickets
Peri-nephritic abscess
Hysteria
Prolonged standing position
Lumbago
Uterine diseases
Lacerated perineum
Necrosis of vertebræ
Tumor of spinal cord
Pyelitis
Curvature of spine

Pain in arm:

Over-exertion
Neuritis
Progressive muscular atrophy
Rheumatism
Occupation neurosis
Trichiniasis

Pain in hand:

Rheumatism
Teno-synovitis
Occupation neurosis
Arthritis deformans
Gout

Pain in thigh:

Rheumatism
La grippe

Hip-joint disease (on the inside of the thigh)
Sciatica
Chronic lead poisoning
Sarcoma of femur
Locomotor ataxia
Phlebitis
Hysteria
Pressure on the anterior crural nerve caused by:
Pregnancy
Impacted feces
Cancer of rectum
Pelvic tumor
Psoas abscess

Pain in leg:
Rheumatism
Varicose veins
Phlebitis
Gout
Rickets
Chronic lead poisoning
La grippe
Ulcer
Periostitis of tibia
Alcoholic neuritis
Locomotor ataxia

Pain in foot:
Rheumatism
Sprain
Bunion
Gout
Flatfoot
Chilblains
Cellulitis

Pain in joints:
Rheumatism
Rickets
Gonorrhœal arthritis
Pyæmia
Syphilis
Hysteria
Sprain
Floating cartilage (in knee joint)
Tubercular arthritis
Arthritis deformans
Gout

Referred pain. Irritation of a nerve at any point along its course is referred to the end of the nerve.

Pressure of a cicatrix causes pain referred to amputated fingers or toes.

A blow on the ulnar nerve at the elbow causes pain in the little finger and one-half the ring finger.

Pressure on the posterior tibial nerve causes numbness of the foot (foot asleep).

Necrosis of vertebræ causes pain in the side and front of the chest.

Pneumonia sometimes causes pain which is referred to the abdomen.

Hip-joint disease causes pain on the inside of the thigh and knee.

Pressure on the anterior crural nerve by a pelvic tumor causes pain down the front of the thigh.

Pressure on nerves from an unreduced dislocation of the shoulder causes pain in the arm.

Enclosure of the anterior tibial nerve in the callus after a fracture of the tibia causes pain along the dorsal surface of the foot.

NERVOUS SYSTEM

THE mental condition of the patient changes according to the disease.

Mental excitement:

Acute fevers
Mania
Acute alcoholism
Administration of ether

Mental depression:

Chronic gastritis
Conditions causing jaundice
La grippe
Melancholia

Change of disposition:

Pregnancy
Tumor of brain
Insanity
Epilepsy
Typhoid fever

Mental instability:

Hysteria
Anæmia
Insanity
Menopause

Dullness of mind:

Typhoid fever — Tumor of brain
Abscess of brain — Embolus of brain
Onset of coma

Loss of memory:

Old age — Bromism
Epilepsy — Insanity

Delusions, illusions, and hallucinations:

Injury of head — Insanity
Certain drugs (opium, belladonna, cannabis indica)
Administration of ether or chloroform
Conditions causing delirium (see delirium)

Delirium is a condition of mental agitation. It is caused by

(*a*) *Irritation of the nerve centers in the brain by the toxins of disease:*

Typhoid fever — Pneumonia
Septicæmia — Uræmia

(*b*) *Action of certain drugs on the brain:*

Opium — Belladonna
Cocaine — Cannabis indica

(*c*) *Irritation of the brain by injury or disease:*

Fracture of skull — Apoplexy
Tumor of brain — Abscess of brain
Meningitis

(*d*) *Deficient blood supply to the brain:*

Heart diseases (late stages)

(*e*) *Exhaustion of the nerve centers in the brain:*

Surgical shock — Post-operative delirium
Following epileptic convulsion

Sleep is a periodic condition of the nervous system in which the activities of the higher nerve centers partially or completely cease.

Insomnia.

The causes are

(*a*) *Irritative conditions:*

Severe pain	Inflammatory processes
Indigestion	Pruritus
Intestinal parasites	Asthma

(*b*) *Psychic conditions:*

Worry	Grief
Responsibility	Habit of wakefulness

(*c*) *Toxic conditions:*

Acute fevers	Nephritis
Chronic alcoholism	Use of cocaine

Excessive use of coffee or tea

(*d*) *Degenerative conditions:*

Senility	Diseases of the brain

Somnolence.

The causes are:

Over-eating	Chronic gastritis
Uræmia	Use of narcotic drugs

Diseases of the brain and meninges

Coma is a condition of unconsciousness from which the patient cannot be aroused.

It is caused by

(*a*) *Inflammation of or pressure on the brain:*

Meningitis	Apoplexy
Fracture of skull	Tumor of brain
Abscess of brain	Embolus of brain

(*b*) *Certain poisons circulating in the blood:*

Uræmia	Typhoid fever
Pyæmia	Poisoning by coal gas

Poisoning by certain drugs such as:

Alcohol	Opium
Chloral	Ether

Chloroform

(*c*) *Constitutional diseases:*

Diabetes	Epilepsy
Sunstroke	Hysteria

Coma vigil is a condition in which the patient lies with his eyes open, but is not conscious of his surroundings:

Typhoid fever

Syncope (fainting) is caused by deficient blood supply to the brain:

Heart diseases	Profuse hemorrhage
Nervous emotion	Severe pain
Anæmia	Pregnancy

Vertigo is a subjective sensation of movement or rotation of surrounding objects:

Chronic gastritis	Constipation
Ear diseases	Impacted ear-wax
Eye strain	Heart diseases
Arterio-sclerosis	Thoracic aneurism
Chronic nephritis	Locomotor ataxia
Tumor of brain	Abscess of brain
Hysteria	Anæmia

Petit mal

Premonitory of apoplexy or uræmia

COÖRDINATION OF MUSCLES

The action of every muscle in the body is governed by a nerve, and only by the coördination of groups of muscles are the complicated movements of the body carried out. The coördination of muscles is governed by nerve centers situated in the cerebellum.

Standing is a position in which a line drawn through the center of gravity falls between the feet. This posi-

tion is maintained by the action of the muscles at the back of the neck, which firmly fix the head, and by making the vertebral column rigid. The rigid vertebral column is maintained by the action of the muscles of the back.

Walking is a complicated act involving nearly all of the voluntary muscles of the body. These muscles act either for the purpose of progression or for balancing the head and trunk.

Incoördination of muscles:

Acute alcoholism
Locomotor ataxia
Tumor of cerebellum
Ménière's disease

Numbness, noted especially in the fingers and toes:

Premonitory of apoplexy
Tumor of brain
Poisoning by aconite
Locomotor ataxia
Myelitis
Local application of carbolic acid
Pressure on or injury of nerves supplying fingers and toes

Paralysis is a condition in which the muscle cannot be made to contract by the action of the will.

(*a*) *Hemi-plegia is paralysis of one-half of the body:*

Apoplexy
Tumor of brain
Embolus of brain
Fracture of skull
Abscess of brain

(*b*) *Para-plegia is paralysis of the lower part of the body:*

Degeneration of spinal cord
Tumor of spinal cord
Fracture of spinal column
Hemorrhage into spinal cord

Paralysis of one nerve or group of nerves:

Pressure on nerve by tumor or aneurism

Neuritis caused by:

Injury	Exposure to cold
Rheumatism	Syphilis
Alcohol	Lead
Mercury	Arsenic

Dragging one foot:

Hemi-plegia from apoplexy, tumor of brain, etc.
Peripheral neuritis

Limping:

Partial paralysis of one leg	Rheumatism
Sciatica	Gout

Bunion or corn
Injury or disease of ankle, knee, or hip-joint

Atrophy of muscles from non-use:

Non-use of an arm or leg from fracture or other injury
Atrophy of stump following amputations
Atrophy following anchylosis of a joint

Atrophy of degeneration:

All diseases causing pressure on or degeneration of the spinal cord. Degeneration of the spinal cord causes changes in the trophic nerve supply to the muscles.

Hypertrophy of muscles:

Over-use (when the other arm or leg is paralyzed)
Acromegaly

Flaccid muscles:

Conditions causing paralysis	Conditions causing atrophy

Rigid muscles:

Meningitis	Spastic paralysis
Hysteria	Tetanus
Strychnia poisoning	

Contracture of muscles:
Paralysis of the opposing muscles
Changes in the muscular tissue
Abnormal nervous impulses (neuropathic contracture)

Tremor of muscles is noticed especially when the hand is held out and is unsupported:

Old age	Nervousness
Chronic alcoholism	Paralysis agitans
Multiple neuritis	
Excessive use of opium, tobacco, or coffee	

Twitching of muscles:

Chorea	Nervousness
Typhoid fever (subsultus tendinum)	Toxic doses of strychnia
Premonitory of uræmic convulsion	

Chill. A chill is caused by contraction of the arterioles under the influence of the vaso-motor nerves. This causes the feeling of coldness:

Onset of acute disease	Nervousness
Malaria	Pyæmia

Chilly feelings felt up and down the back:

La grippe	Tonsilitis
Beginning typhoid fever	Rheumatism
Tuberculosis	

Convulsions. A convulsion is a violent involuntary contraction of all the muscles of the body. Convulsions are usually followed by coma.

They are caused by

(*a*) *Inflammation of or pressure on the brain:*

Meningitis	Fracture of skull
Tumor of brain	Abscess of brain
Embolus of brain	

(*b*) *Certain toxins of disease which irritate the nerve centers in the brain:*

Uræmia
Tetanus
Hydrophobia

(*c*) *Certain drugs which irritate the nerve centers in the brain:*

Strychnia poisoning

(*d*) *Constitutional conditions:*

Epilepsy
Hysteria

Consciousness preserved in convulsions caused by:

Tetanus
Strychnia poisoning
Hydrophobia
Hysteria

Convulsions in infants. Since the nervous system of infants is more sensitive than in adults, convulsions are much more common:

Indigestible food
Intestinal parasites
Onset of acute disease (pneumonia, scarlet fever, measles, etc.)
Phimosis
Rickets
Epilepsy
Ear diseases
General debility
Injuries at birth
Infantile paralysis

Night terrors in infants:

Adenoids
Enlarged tonsils
Indigestible food
Fright
Intestinal parasites
Dentition

Jacksonian epilepsy is characterized by epileptiform convulsions, which are limited to the muscles of an extremity or to the facial muscles of one side.

The cause is injury or disease of that portion of the brain which governs these muscles.

Tonic spasm of muscles. When a stimulus is applied to a muscle through a motor nerve, the muscle

contracts. If the stimuli follow one another rapidly, the muscle does not have time to relax in the intervals; the contractions become fused together, and the muscle remains in a state of continuous or *tonic* contraction:

Meningitis — Epilepsy (first stage)
Tetanus — Strychnia poisoning

Hiccough (singultus) is an intermittent, sudden contraction of the diaphragm. It is caused by irritation of the phrenic nerve and certain fibers of the pneumogastric nerve. This irritation may come from organs in the abdominal cavity or it may originate in the brain itself.

The causes are

(*a*) *Irritation in the stomach:*

Indigestible food — Swallowing hot liquids
Flatulency

(*b*) *Inflammatory conditions:*

General peritonitis — Intestinal obstruction
Appendicitis — Strangulated hernia

(*c*) *Irritation in the brain:*

Tumor of brain — Abscess of brain

(*d*) *Constitutional conditions:*

Chronic nephritis — Diabetes
Gout

(*e*) *Nervous conditions:*

Surgical shock — Hysteria

Kernig's sign. The patient lies upon the back, and the thigh is placed at a right angle to the body. An attempt is then made to extend the leg and bring it in line with the thigh. If the patient is suffering from meningitis it will be impossible to straighten the extremity on account of contracture of the muscles which flex the leg. It is noticed in:

Meningitis

Babinski reflex. This consists of the deliberate extension of the toes, and especially of the great toe, followed by dorsi-flexion of the ankle joint, when the sole of the foot is gently stroked.

Normally when the sole of the foot is stroked, the toes flex.

It is noticed in conditions causing spinal paralysis.

EYE

Swelling under the eyes:

Œdema of nephritis
Chronic poisoning by arsenic

Ecchymosis under the eye:

Bruise
Fracture of skull into the orbit

Drooping of the upper eyelid (ptosis):

Paralysis of the motor oculi nerve (third cranial nerve)

Redness of the conjunctiva:

Foreign body in eye
Cold wind
Influenza
Alcoholism
Gonorrhœal infection
Septic infection
Administration of iodides
Measles
Whooping cough
Trifacial neuralgia
Asthma

Moisture of eye increased:

All conditions causing redness of conjunctiva

Moisture of eye diminished:

Typhoid fever
Surgical shock

Prominence of eye-ball:

Exophthalmic goiter
Tumor of orbit
Hemorrhage into the orbit

Sinking in of the eye-ball:

Typhoid fever — Cholera infantum
Marasmus — Tuberculosis

Pain in the eye-ball:

Glaucoma — Migraine
Trifacial neuralgia — Coryza

Sensitiveness to light:

Inflammatory diseases of the eye — Meningitis
Measles — Influenza
Whooping cough — Hysteria

Internal strabismus:

Diseases at the base of the brain
Action of certain poisons
Paralysis of certain ocular muscles caused by:
Syphilis — Rheumatism
Diphtheria

External strabismus:

Epileptic convulsion — Hysteria

Nystagmus is a condition in which there are continuous oscillatory movements of the eye-ball which cannot be controlled by the patient:

Abnormal conditions of the ocular muscles
Meningitis — Locomotor ataxia
Hydrocephalus

Pupil. The iris is a circular curtain which regulates the amount of light entering the eye. The opening in this curtain is the pupil.

The iris contains two sets of muscular fibers: (1) *circular fibers*, which contract the pupil, and (2) *radiating fibers*, which dilate the pupil.

Dilated pupil:

When a small amount of light falls on the retina
When the eye is adjusted for far objects
During violent muscular exertion
In conditions causing dyspnœa
Under the influence of emotions

It is also noticed in:

Surgical shock	Nausea
Syncope	Mania
Exophthalmic goiter	General debility
Anæmia	Nervousness

Over-dose of ether or chloroform
Administration of certain drugs (atropine, cocaine)

Contracted pupil:

In normal sleep
When an intense light falls on the retina
When the retina or optic nerve is inflamed
When accommodation takes place for far objects
When the eye-ball is turned inward

It is also noticed in:

Uræmia	Meningitis
Certain diseases of the brain	Locomotor ataxia

Administration of certain drugs (opium, physostigma)

Argyll-Robertson pupil reacts to accommodation but not to light:

Locomotor ataxia	Paretic dementia
Atrophy of brain	Syphilis of brain
Hydrocephalus	

Unequal pupils show that there is irritation in one hemisphere of the brain or paralysis of the third cranial nerve on one side:

Apoplexy	Fracture of skull

Tumor of brain — Abscess of brain
Embolus of brain
Paralysis of the motor oculi nerve (third cranial nerve), which supplies the circular fibers of the iris

Double vision:
Action of certain drugs (atropine, alcohol, gelsemium)
Defective action of the ocular muscles caused by:
Tumor of brain — Hemorrhage of brain

Spots or flashes before the eyes:
Chronic gastritis — Constipation
Anæmia — Migraine
Premonitory of uræmia — Hypertrophy of heart
Hysteria

Amaurosis is blindness which comes on more or less suddenly:
Uræmia — Following profuse hemorrhage
Migraine — Embolus in blood vessel of retina
Optic neuritis — Excessive use of tobacco
Diabetes — Hysteria
Excessive doses of quinine
Atrophy of optic nerve from poisoning by wood alcohol

Cataract is a cloudiness of the crystalline lens or its capsule.
It is caused by:
Old age (senile cataract) — Injury (traumatic cataract)
Diabetes (diabetic cataract)

EAR

Pain in the ear:
Inflammation of auditory canal — Foreign body in ear
Toothache

Mastoiditis
Alveolar abscess
Trifacial neuralgia
Cancer of maxilla

Discharge from the ear:
Abscess of external meatus
Diseases of the middle ear
Irritation of a foreign body

Bleeding from the ear:
Injury to meatus
Fracture of base of skull
Hemophilia
Rupture of tympanic membrane

Tinnitus aurium is a subjective sensation of ringing or buzzing noises in the ear:
Ear diseases
Anæmia
Over-dose of certain drugs (quinine, salicylates)
Impacted ear-wax

Deafness:
Diseases of the ear
Adenoids
Tumor of brain
Meningitis
Mumps
Hysteria
Typhoid fever
Impacted ear-wax
Abscess of brain
Ruptured tympanic membrane
Following scarlet fever

Subjective sounds:
Delirium
Hyperæmia of brain
Insanity
Certain diseases of the brain

NOSE

Red color of nose:
Acne rosacea
Chronic alcoholism
Erysipelas
Chronic gastritis
Menstrual disorders

Blue color of nose:

Conditions causing cyanosis
Exposure to cold

Pain in the nose:

Ulcer in nose
Foreign body
Coryza
Nasal catarrh

Sneezing:

Influenza
Whooping cough
Measles
Administration of iodides
Inhalation of dust or irritating vapor

Dilating alæ nasæ:

Excitement
Conditions causing dyspnœa
Pneumonia

Regurgitation of food through the nose:

Cleft palate
Post-diphtheritic paralysis

Nasal voice:

Habit
Enlarged tonsils
Post-diphtheritic paralysis
Influenza
Retro-pharyngeal abscess
Adenoids
Nasal polypi
Deviated septum
Diphtheria

Discharge from the nose:

Influenza
Diphtheria
Nasal catarrh
Measles

Nosebleed (epistaxis).

(*a*) *Local causes:*

Injury
Nasal polypi
Nasal catarrh
Ulcer in nose
Foreign body

(*b*) *Constitutional causes:*

Typhoid fever
Puberty

Anæmia
Hypertrophy of heart
Scurvy
Vicarious menstruation
Chronic nephritis
Purpura hemorrhagica
Hemophilia

Loss of sense of smell:

Influenza
Nasal polypi
Necrosis of nasal bones
Administration of certain drugs (opium, atropine)

Subjective odors:

Atrophic rhinitis
Insanity
Hysteria

VOICE

Indistinct speech:

Alcoholism
Facial paralysis
Certain diseases of the brain
Absence of teeth
Bromism

Aphonia is the loss of speech from causes arising in the larynx:

Excessive use of voice
Ulcer of larynx (tubercular or syphilitic)
Pericardial effusion
Pressure of tumor on the vocal cords
Acute laryngitis
Diphtheria
Hysteria

Aphasia is the loss of speech from causes arising in the brain. There is inability to use the right words in their proper order.

The cause is:

Disease of that portion of the brain which governs the function of speech

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