

- Microbiology and Parasitology(1108)6h(per week)

Topics:

1. General microbiology:
 - The history and scope of microbiology.
 - Classification and nomenclature of microorganism.
 - Identification of bacteria.
 - Types of microorganisms.
 - Morphology of bacteria.
 - Growth of bacteria.
 - Microbial nutrition.
 - Culture media.
 - Sterilization and disinfection.
 - Microbial genetics.
 - Bacterial pathogenicity.
2. Bacteriology
3. Industrial microbiology
4. Hospital – acquired infection

Theory

1. General microbiology:

- The history and scope of microbiology: Definition of microbiology, the microscope, pasteur and the refutation of the theory of spontaneous generation, the germ theory of disease, the importance of pure culture techniques, immunology, virology, the development of chemotherapy, the discovery of microbial effects on organic and inorganic matter, the development of microbiology in this century, the scope of microbiology.
- Classification & nomenclature of microorganisms: Taxonomy, classification, taxon, nomenclature, identification, history of classification, procaryotes and eucaryotes, important characteristics distinguishing procaryotes from eucaryotes, the 5 kingdom of organisms, nomenclature, species, strain.
- Identification of bacteria: Microscopy, cultural characteristics, biochemical characteristics, antibiotic sensitivity test.
- Types of microorganisms: Protozoa, algae, fungi, yeasts, viruses. Definition, types, distribution, nutrition, reproduction, morphology.
- Morphology of bacteria:
 - Shape: spherical, rod, spiral, square.
 - size
 - Bacterial cell structure:
 - Capsule (functions)
 - Cell wall (types, functions)
 - Flagella (general characteristics, distribution)
 - Fimbriae (pilli) (functions)

- Plasma membrane (functions)
 - Internal membrane systems (mesosomes and their function)
 - Cytoplasmic matrix
 - ribosomes
 - inclusion bodies
 - nucleoid
 - Chromosome, plasmids, endospores (characteristics) shape and situation.
- 2. Growth of bacteria:**
- Microbial growth
 - Requirements for growth
 - Physical requirements
 - Chemical requirements
 - Growth factors
 - Microbial metabolism
 - Anabolic reaction
 - Catabolic reaction
- 3. Microbial nutrition:**
- Nutritional types of microorganisms
 - According to carbon sources
 - According to energy sources
 - According to hydrogen sources
 - Major nutritional types of microorganisms
 - Photolithotrophic autotrophy
 - Photoorganotrophic heterotrophy
 - Chemolithotrophic autotrophy
 - Chemoorganotrophic heterotrophy
- 4. Culture media:**
- Chemically defined media
 - Complex media
 - Reducing media
 - Selective & differential media
 - Enriched media
 - Enrichment media
 - Transport media
 - Inoculation of culture media
 - Isolating pure culture
- 5. Sterilization & disinfection**
- Microbial genetics:
 - Source of genetic information
 - Genotype and phenotype
 - Mutation
 - Bacterial pathogenicity:

- Opportunistic pathogens
- Primary pathogens
- Bacteriology:
 - The staphylococci
 - The streptococci
 - Spore forming – gram – positive bacilli
 - Non spore forming – gram – positive bacilli
 - Enteric gram – negative rods
 - Pseudomonas & uncommon gram negative bacteria
 - Vibrios, campylobacters and associated bacteria
 - Haemophilus & Brucella
 - Neisseriae
 - Mycobacteria
 - Spirochetes & other spiral microorganisms
- Industrial microbiology
- Hospital – acquired infection
- Introduction to Parasitology
- definitions, various descriptive names denote special types or functions of parasites and L or hosts, type of host – parasite relations.
- methods of transmission: source (including zoonoses), route, (specific & non specific vector) & portal of entry (immunity of parasitic infection)
- Protozoology
Diagnostic morphology, method of transmission & life cycle, pathogenicity & Clinical manifestation, brief epidemiology, clinical & laboratory diagnosis & treatment.
- Ameobae – intestinal, extra-intestinal & arial ameobae (Rhizopoda) Entamoeba histolytica (amebiasis) E. coli, Endolimax nana, Iodamoeba and Dictyostelium (commercial).
- Ciliate (Intestinal) *Blattidinium coli* (Blattidiasis).
- Flagellates (zoomastigophorea)
intestinal and arial flagellate, *Giardia lamblia* (giardiasis), *Trichomonas vaginalis* (trichomoniasis), *T. hominis* and *Chilomastix masnili* (commercial)
- Blood and tissue flagellates
leishmania
 - *L. donovani*, *L. infantum* (kala-azar)
 - *L. tropica*, *L. major*, *L. mexicana*, (cutaneous leishmaniasis)
 - *L. braziliensis* (mucocutaneous leishmaniasis)
- Trypanosoma
 - african trypanosoma
T. gambiense (chronic sleeping sickness)
T. rhodesiense (acute sleeping sickness)
 - american trypanosoma
T. cruzi (Chagas disease)
- Blood and tissue sporozoa
 - *Plasmodium* sp. (malaria)
P. vivax, *P. malariae*, *P. falciparum*, *P. ovale*.
 - *Toxoplasma gondii* (toxoplasmosis), *Pneumocystis carinii*, *Isospora belli*,

cryptosporidium sp .

▪ **MEDICAL HEMINTHOLOGY :**

parasite identification , transmission cycle , pathogenicity and clinical features , epidemiology diagnosis treatment prevention and control

○ Nematodes :

○ Intestinal - ascaris , trichuris , enterobius , hookworms (necator and ancyclostoma) and strongyloides

○ blood and / or tissue nematodes :

▪ Trichinella , dracunculus . larva migrans

▪ Filarial worms ; wuchereria , brugia , loa and onchocerca

▪ **Cestodes:**

○ Intestinal – diphyllbothrium , taenia saginata , T. solium , hymenolopes nana

○ Extra-intestinal larval cestodes:cysticercosis (T.solium) , hydatidosis(echinococcus)

▪ **Trematodes:**

○ Intestinal (heterophyes and fasciolopsis) hepatic(fasciola) and pulmonary (paragonimus) trematodes

○ Blood trematodes – schistosoma haematobium , s .mansoni , and s . japonicum

▪ **Arthropods:**

(5 hrs)

It includes entomology and other arthropods of medical importance , which are directly injurious to man or are involved in disease transmission .

○ vector and vector – borne diseases

○ class I :insecta(mosquitoes , flies , bugs , fleas and lice)

○ class II : Arachnida (ticks , mites and scorpions)

○ class III : crustacea (cyclops)

Beside: diagnostic morphology , life cycle , habits and distribution of arthropods are studied in relation to pathogenesis , disease transmission and control .

Practical Microbiology

▪ **Lab . regulations :**

○ Equipment and aids in microbiology labs .

▪ **Use of the microscope :**

○ Examination of stained smears

○ Examination of wet preparations (hanging drop)

▪ **Culture media :**

○ Basic , enriched , enrichment , selective , and differential media

○ Agars and broths

○ Aerobic and anaerobic cultures

▪ **Bacteriological subculture techniques , purification of**

▪ **Microbiological stains I :**

○ Preparation of smears

○ Simple stain

○ Negative stain

▪ **Microbiological stains II**

○ Gram stain

○ Demonstrations of acid fast , alberts and spore – stains

- Sterilization and disinfection :
 - Effect of physical and chemical agents
 - Sterility testing
 - Ridael – walker co – effeciet
- Antiseptic solutions (comparative studies)
- Antibiotic susceptibility tests
 - Disc diffusion methods
 - M.i.c and mbc
- Identification methods of a pure culture
- Systematic bacteriology
 - Micro – organisms of medical importance
 - Morphology and staining
 - Cultural characteristics
 - Biochemical and spacial test of
 - Gram + ve and gram-ve cocci
 - Gram + ve bacili and others
 - Gram_ ve bacili (including enterobacteria)
- Study of various fungi
- Serological reactions :
 - precipitation and agglutination , cft ,and ,blood grouping - pre ‘
 - agar diffusion tests , and others , immunization procedure,
- Virology – demonstrations

Practical Parasitology

- Demonstration slides of trophozpites and cyst of entamoeba histolytica , e. coli e. fragilis , e. nana and t. butschilli . section of large iniestine showing lesions caused by invasove e. histolytica
- Demonstration caused by intestinal and atrial and flagellates : balantidium coli , giardia lamblia , trichomonas Vaginalis , t. hominis , chilomastrix mesili .
- Stool examination
 - macroscopic appearance
 - wet preparation in saline and iodine soiution
 - demonstration of living t. muris from mouse intestine
 - a) Leishmania:
 - demonstration slides of bone marow and spleen smear and section showing amastigote l. donovani
 - promastigote stage of leishmania from the cult
 - b) trpanosomes
 - blood smear showing typomastigote stages and ding stages of t gambiense and modesiense .
 - t. cruzi in blood and amastigotes in heart muscle
- Boold Examination
 - Preparation of thin and and thick boold film
 - Staining of blood film with , giemsg or leishmam stains
- Plasmodium (malarial parasites)
 - life cycle , demonstration slides of pro- live schizonts ,all slages of
 - p. vivax , oxflagellation , of in seaion of and sporozoites
- Diagnostic morphology of the blood stages of
 - p. vivax , p. malariae p. ovale

p. falciparum infection of brain : section showing and pigment in capillaries
demonstration slides of toxoplasma gondi (smear of csf) and section of sarcocystis

- Insecta
 - Flies :
 - mosquitoes :- anopheles (eggs , mouth parts and adult)
 - culex (eggs , mouth parts and adult)
 - aedes (eggs , mouth parts and adult)
 - Sandflies :
 - phlebotomus and lutzomia
 - housefly:
 - musia domestica
 - myiasis :
 - dermatobia
- bugs : cimex triatoma
- fleas : xenopsylla
- lice : pediculus and phthirus
- ticks : - hard ticks: Ixodes
 - soft ticks : ornithodoras
- mites : sarcoptes
- spiders : latrodectus
- scorpions : buthus
- snakes : naja
- Crustacea : copepod (cyclops)
- Demonstration of intestinal nematodes
ascaris , trichuris , strongyloides , enterobius , ancylostoma
- Blood and tissue nematodes :
trichinella spiralis (section of the muscle showing encapsulated larva) microfilariae of w. bancrofti and brugia malayi section of onchoceria nodule
- Demonstration slides of intestinal cestodes : mature segments, scolices and ova of taenia solium t. saginata , d , latum , h . nana and d . caninum
- Adults of larva of echinococcus granulosus , hydatid send , hydatid cyst in infected sheep liver Isolated cysticercus larva , cysticercus in beef
- Demonstration slides of intestinal , hepatic , pulmonary trematodes , adults , ova and some larval stages of heterophyes fasciolosis fasciola , paragonimus and their snail hosts
- Demonstration slides of ova of schistosoma haematobium , s. mansoni and s jap general morphology of male and female and infective stage (cercaria) of snail hosts .

- Physiology (1107) 2h(per week)

THEORETICAL

1. General physiology
2. Blood
3. Cardiovascular system
4. Respiration
5. Gastro-intestinal physiology
6. Endocrine physiology
7. Endocrine physiology
8. Reproductive
9. Body Temperature Regulation
10. Nervous System
11. Special Senses

• **GENERAL PHYSIOLOGY**

- introduction to human physiology, concept of homeostasis, body fluid compartments (volume and composition)
- modes of transport of substances across the biological membrane: diffusion, carrier mediated transport, facilitated diffusion, active transport, osmosis.
- Membrane potentials, action potentials. types of excitable tissues.
- conduction along the nerve fiber, strength duration (curve) relationship. Transmission of impulses across the neuromuscular junction.
- structural and functional characteristics of different types of muscle fibers. Types of muscle contraction
- sliding filament theory of muscle contraction, excitation contraction coupling.

• **BLOOD**

- General aspect: blood, plasma, serum, hematocrit, important constituents of blood, functions of blood and plasma.
- Erythrocytes (R.B.C): Structure, normal counts, hemoglobin, functions, regulations, of erythropoiesis, life-span, anemia types and causes.
- Leukocytes (M.B.C): structure, normal counts. Comparative functions of neutrophils, eosinophils, basophils, monocytes, lymphocytes and platelets.
- Blood groups: types, genotype, and determination of various blood groups

• **CARDIOVASCULAR SYSTEM .**

- Gross anatomy of heart, structure of cardiac muscle, electrophysiology of cardiac muscle.
- Properties of cardiac muscle. Mechanism of rhythmic excitation of heart.
- Transmission of cardiac impulse, mechanical events of cardiac cycle, heart sounds.
- Normal electrocardiogram. significance of various waves, intervals and segments.
- Cardiac output, hemodynamics - pressure, flow and resistance, their inter-relationship. Arterial pulse.
- Arterial blood pressure, factors determining arterial blood pressure.
- Control of arterial blood pressure - vasomotor control, role of baroreceptors and chemoreceptors, role of kidneys and renin-angiotensin-aldosterone mechanism.
- Tissue fluid formation: pulmonary circulation, coronary and cerebral blood flow.

- **RESPIRATION.**
 - Anatomical consideration - mechanism of respiration . basic mechanism of lung expansion and contraction . muscles of respiration .
 - Lung volumes and capacities. Lung function tests .
 - Transport of oxygen , and carbon dioxide, dissociation curves .
 - Control of breathing : chemoreceptors(central and peripheral) nervous regulation .
 - Hypoxia , periodic breathing .
- **GASTROINTESTINAL SYSTEM .**
 - Introduction-functional anatomy (gross and microscopic).basic functions, absorption, digestion secretion , motility and storage .
 - Saliva . physiology of mastication and digestion. gastric glands mechanism and their secretions control and functions .
 - Bile. Pancreatic juice. Secretion control composition and functions .
 - Absorption in small intestines - absorptions of the end products of digestion motility of small and large intestines - different types of movements present defecation .
- **RENAL PHYSIOLOGY AND ACID-BASE REGULATION.**
 - Kidney functions.functional anatomy of kidney : nephron structure, juxta-glomerular .
 - Renal blood flow. Basic. Processes involved in urine formation. Glomerular filtration forces.glomerular filtration rate(GFR),factors regulating GFR .
 - Tubular reabsorption. Reabsorptions of glucose. Amino acid, uric , urea , and proteins .
 - Sodium, potassium and water reabsorption in different segments of nephron . factors influencing na and k excretion in the urine .
 - Dilution and concentration of urine:urine concentration (counter current)mechanism. Factors affecting urinary concentration ability.
 - Acid-base regulation: general concept of acid , base buffer , defense against changes in fluid ph.buffer systems in the body, respiratory and renal regulation of body fluid ph .
- **ENDOCRINE PHYSIOLOGY .**
 - Male reproductive system:physiology anatomy. gametogenesis.hormonal regulation of spermatogenesis .
 - Female reproductive system:the sexual cycles(ovarian,uterine and vaginal.ovulation and its indicators .
- **BODY TEMPERATURE REGULATION .**
 - Normal body temp.reactions of body during exposure to: cold,heat and comfortable temperature(24 - 32C)
- **NERVOUS SYSTEM .**
 - Structural and functional - organization of nervous system .
 - General properties of synapses .
 - Receptors- classification and general properties of receptors .
 - Ascending (sensory pathways)tracts,origin course and destination .
 - Motor pathways. Origin , course and destination of pyramidal and extrapyramidal tracts. internal capsule
 - Basal ganglia -functional considerations and disorders .
 - Cerebellum -its role in maintenance of equilibrium and coordination of movements. Cerebellar disorders .

- Autonomic nervous system .
- Hypothalamus and limbic system .
- **SPECIL SENSES .**
 - Principles of optics,structure of the eye .
 - Errors of refraction,visual acuity and binocular vision. Pupillary light reflexes,near responses
 - Colour vision visual pathways and visual cortex .
 - Anatomy of ear,middle ear structure and function . determination of pitch and frequency,deafness.

PRACTICAL :

- Osmotic behavior of red cell membrane and osmotic fragility of red cells.
- Hematological methods(hemoglobin, PCV,ESR ,bleeding and coagulation time,red cell indices) .
- Electrocardiography .
- Arterial blood pressure in man .
- Spirometry and vitalography .
- Examination of sensory system .
- Study of reflexes in man .
- Experiments on the physiology of eye (field of vision , acuity of vision , blind spot and colour vision) .

- Histology And Anatomy(1102) 2h(per week)

THAORETICAL:

• **HISTOLOGY:**

- Cytology(revision)
- Tissue of the body (revision : including cartilage connective tissue and bone) muscular and nervous tissues .
- Blood
- Blood vessels
- Lymphatic system.
- Digestive system.
- Endocrine system.
- Urinary system.
- Male reproductive system.
- Female reproductive system.
- Respiratory system.
- Skin.

• **ANATOMY:**

• **GENERAL ANATOMY**

- Anatomical terms
- Bones Types(spongy,compact),classification (long,short),classification
- Skeleton.
 - Upper and lower limb.
 - Vertebral column
 - 4-Joints.
 - 5-Muscles of limbs and classification of muscles

• **SYSTEMIC ANATOMY**

- G.I.T
- C.V.S.
- Respiratory system
- UrinarySystem.
- Genital System.
- Nervous System .
- Endocrine System.
- EYE.
- EAR.
- REVISION

PRACTICAL :

• **HISTOLOGY**

- Cytology
- Tissues of the body (Revision)
- Blood+Blood vessels
- Lymphatic system

- Digestive system
 - Endocrine system
 - Urinary system
 - Male reproductive system
 - Female reproductive system
 - Respiratory system and skin.
 - Revision
-
- **ANATOMY**
 - Bones(vertebrae,upper limb,lower limb)
 - Muscles
 - Gastrointestinal tract
 - Cardiovascular system
 - Respiratory system
 - Urinary system
 - Male and female genital systems
 - Nervous system and endocrines
 - Eye
 - Ear
 - Revision

- Biochemistry(1104) 2h(per week)

THEORETICAL

*** PROTEIN STRUCTURE AND FUNCTIONS**

structure of amino acid : peptide bonds : different levels of structure of protein primary, secondary, tertiary, quaternary structure : haemoglobin and myoglobin
-structural characteristics and functions: structure of immunoglobulins : serum proteins and blood coagulation proteins .

*** NUCLEIC ACID**

chemical composition : DNA and RNA - structure and properties: genetic material: replication transcription: genetic code and translation : inhibitors of transcription and translation .
mutation DNA damage and repair .

*** VITAMINS**

fat and water soluble vitamins : chemical nature and properties : sources, daily requirements : biological functions : deficiency symptoms .

*** ENZYMES**

chemical nature : coenzyme and cofactors : classification : nomenclature , specificities : units : effect of substrate concentration : temperature and pH on enzymatic reactions : Michaelis-Menten equation and determination K_m and V_{max} : enzyme types with examples .

*** MINERAL METABOLISM**

sodium , potassium and water regulation : calcium and phosphorus - absorption , trace elements in biochemical system , e.g. , iron , copper , etc .

*** CARBOHYDRATE METABOLISM**

chemistry : digestion and absorption glycolysis TCA cycle and oxidative phosphorylation : HMP shunt glycogenolysis : glycogenesis : gluconeogenesis hexose interconversion : maintenance of blood glucose level : metabolic disorders

*** LIPID METABOLISM**

chemistry : digestion and absorption : β -oxidation : fatty acid synthesis : lipogenesis and lipolysis , phospholipids, lipoprotein and cholesterol , prostaglandins , and thromboxanes .

*** AMINO ACID METABOLISM**

protein digestion and amino acid absorption , transamination : deamination and decarboxylation : ammonia metabolism : urea cycle : production of important molecules from amino acid metabolism : glycogenic and ketogenic amino acids , genetic disorders , (e.g. : phenylketonuria, Hartnup's disease . maple syrup urine disease , alkaptonuria , metabolic integration) .

*** PURINE - PYRIMIDINE METABOLISM**

structure : breakdown and synthesis of purine and pyrimidine bases : salvage pathway : defects in metabolism .

PRACTICAL

- 1-Introduction and calculation .
- 2-spectrophotometry and determination of v_{max} .
- 3-determination of A / D RATIO .
- 4-effect of substrate , PH and temperature on alkaline phosphatase .
- 5-activatory and inhibitory effects on ALF .
- 6-separation of sugars , amino acids and lipids by TLC .
- 7-urea estimation from blood sample .
- 8-estimation of serum creatinine levels .
- 9-lactate estimation in blood .
- 10-estimation of blood glucose levels .

- مقرر مادة علم الاجتماع (ساعتان في الأسبوع)

أولاً: المقدمة:

- 1- مقدمة في علم الاجتماع
- 2- علم الاجتماع وعلاقته بالعلوم الأخرى
- 3- الطبيعية والإنسانية
- 4- ميادين علم الاجتماع

ثانياً : التجمعات الإنسانية :

- 1- المجتمع
- 2- المجتمع الصغير (المحلى)
- 3- الحشد
- 4- الرابطة
- 5- الجماعة

ثالثاً: البناء الاجتماعي :

- 1- التنظيم الاجتماعي
- 2- النسق الاجتماعي
- 3- الأسرة والقرابة
- 4- النسق الصحي

رابعاً : الظاهرة الاجتماعية :

- 1- مفهوم الظاهرة الاجتماعية
- 2- خصائص الظاهرة الاجتماعية .

خامساً :العمليات الاجتماعية :

- 1- مفهوم العمليات الاجتماعية
- 2- التعاون وعمليات الصراع
- 3- التكيف والمماثلة .
- 4- عمليات المزج الاجتماعي .

سادساً : التنشئة الاجتماعية:

- 1- مفهوم التنشئة الاجتماعية
- 2- وظيفة التراث الاجتماعي
- 3- عمليات التنشئة الاجتماعية

سابعاً مفاهيم عامة :

الحقيقة الاجتماعية ، الأمراض الاجتماعية ، المشكلات الاجتماعية ، المسافة الاجتماعية ، التغير الاجتماعي ، التنمية الاجتماعية ، السياسة الاجتماعية ، الرعاية الاجتماعية، الخدمة الاجتماعية .

- Social science (1103) 2h(per week)

Topics

- I. An introduction to sociology of medicine.
- II. The concept of health.
 - a- The biological perspective.
 - b- The cultural perspective.
 - c- The social perspective.
 - d- The societal perspective.
 - e- The socio – psychological perspective.
- III. Sociology of illness.
 - a- The social definition of illness.
 - b- Illness behaviour.
 - c- The social role of “patient”.
 - d- The family response to illness.
- IV. Culture subculture and health and illness.
 - a- Diet and social strata.
 - b- The social interaction and health and illness.
 - c- Social change and health care
 - d- Norms, values and attitudes to health care.
- V. Community and family.
 - a- The concept of community and family.
 - b- The life career and family.
 - c- The social construction of childhood adolescence, and the old age.
 - d- Motivations for seeking medical care.
- VI. The sociology of the hospital.
 - a- Formal and informal system.
 - b- Perspectives on the doctor – Nurse – patient relationship.
- VII. Methodological perspective.

2h(per week) (1106)principle of public healh –

– مبادئ الصحة العامة (1106)(ساعتان في الأسبوع)

1- مقدمة عامة

2- تعريفات:

المبادئ – الصحة العامة

3- الانسان والصحة:

تطور المعرفة عن الصحة – التاريخ والصحة

4- الصحة والمرض:

– ماهية الصحة وماهية المرض

– كيف يحدث المرض

5- العوامل المؤدية الي اعتلال الصحة (المرض):

– عوامل كيميائية

– عوامل فيزيائية

– عوامل حيوية

– عوامل اجتماعية

– عوامل تغذوية

– عوامل وراثية

– عوامل الجغرافيا والمناخ

6- البيئة وحدوث المرض:

– البيئة المادية

– البيئة الاجتماعية

– بيئة العمل

7- حالات الصحة:

– ممتازة

– جيدة

– عادية

– سيئة

– سيئة جدا -- مفقودة

8- الانشطة من أجل الصحة:

- تعزيز الصحة
- الدفاع والحماية
- الوقاية
- استعادة الصحة
- تعويض الصحة المفقودة
- الوفاة
- 9- عوامل تعزيز وتحسين الصحة:
- أسلوب الحياة
- التعليم
- الاقتصاد والاجتماع

الصحة العامة ك تخصص:

- 10- الخدمات الصحية:
- الوقائية - العلاجية - اعادة التأهيل - خدمات الصحة العامة.
- 11- علوم الصحة العامة:
- العلوم الاساسية
- الاحصاء
- العلوم الاجتماعية
- 12- وسائل الصحة العامة:
- الوقاية
- التغذية
- اصحاب البيئة
- التربية الصحية
- البحوث والدراسات
- الادارة والتخطيط الصحي (الادارة الصحية في ليبيا)
- 13- ممارسة الصحة العامة:
- تقييم الوضع الصحي (الوضع الصحي في ليبيا)
- النظام الصحي (البنية الصحية)
- الحالات والاحتياجات الصحية الخاصة
- المشاكل الصحية السائدة التي تمثل مشاكل الصحة العامة