

**SCHEME OF THE CASE HISTORY OF THE SURGICAL PATIENT  
POLTAVA STATE MEDICAL UNIVERSITY**

**Department of General Surgery**

The head of the chair: prof. M.A. Ligonenko

Teacher:

**MEDICAL CARD №**

**of the in patient:**

Surname, first name. patronymic

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Clinical diagnosis of a primary disease

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Complication of a primary disease

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Diagnosis of an concomitant disease

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An attending doctor- third year student

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Beginning of treatment (date)

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Completion of treatment (date)

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Mark-

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Teachers; signature-

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Poltava 20

**Passport Data**

1. Surname, first name, patronymic

2. Age

3. Sex

4. Nationality-

5. Education -

6. Profession

7. Place of work

8. Home address

9. Family status \_

10. Date of admission to a hospital

11. Date of discharge\_

**12.** Admission diagnosis.

13. Basic diagnosis.

Clinical diagnosis of a primary disease. Complication of a primary disease —

Diagnosis of an concomitant disease

14. Diagnosis on discharge

15. Result of treatment

### **1. COMPLAINTS of the PATIENT (*QUERELLAE AEGROTI*)**

First of all it is necessary to count the complaints, concerning the disease with which the patient has been hospitalized to a surgical clinic. It is necessary to detail every complaint. After that the secondary complaints, which are caused by other reasons are taken into account.

### **2. ANAMNESIS of a DISEASE (*Anamnesis morbi*)**

In anamnesis it is necessary to write down the development and course of a given disease in a chronological sequence; to pay attention to the basic stages of its development, appearance of new symptoms, methods of diagnostics and treatment which were used before the patient's admission to a hospital.

### **3. ANAMNESIS of LIFE (*Anamnesis vitae*)**

This part of a medical card has a biographic character, which deals with different aspects of the patient's life. It is necessary to start it from the moment of the patient's birth, taking into account the material conditions during his life, conditions of working, family status, health of the wife (husband), children, conditions of family life, mode of life. Time of puberty: in the female gynecologic anamnesis is (time of appearance of menstruations, their course, cyclicity, amount of pregnancies, labors, abortions). The previous diseases (in particular a tuberculosis, Botkin's disease, lues), operations (under which anesthesia they were carried out), use of hormones, serums, albuminous preparations, hemotransfusions, immunodepressants in the treatment, complications during their application. Drug intolerance (due to which drugs), the presence of other kinds of allergies. It is necessary to find a possible connection of a disease with heredity of the patient (diseases of his parents and relatives, the cause of their death), harmful habits (smoking, abuse of alcohol, narcotics, etc.). You must find a possible connection between the received data and the cause of disease.

### **4. GENERAL ANAMNESIS (*Anamnesis communis*)**

The respiratory system. Respiration through the nose natural, labored, impossible the patient (breathes through the mouth). Whether there is the sensation of dryness in the nose.

Excretions from the nose: amount (small, moderate, large), character (thick, liquid, diaphanous, purulent, sanguinolent, with an odor).

Nose - bleeds (the cause of their occurrence, duration, quantity of the blood).

The larynx. Pain during conversation. A voice - sonorous, quiet, hoarse, aphonia.

Pain in the region of the thorax: absent, constant, arises periodically; strengthens during motions, respiration, cough; it can be of acute, dull, colic, shooting character, etc.

Dyspnea (labored breathing): constant, during physical exertion, going upwards, walking; pronounced it and duration.

Cough: if there is any, insignificant, whooping, strong, constant, and attack-like.

Sputum: the quantity whether it depends on the time of excretion and a position of the body of the patient; character (slimy, purulent, slimy-purulent), an odor.

Hemoptysis (expectoration of the blood): time of appearance, intensity (bleeding, blood-stained sputum), the color of the blood (red, dark).

The cardiovascular system. Heartbeating - attacks, constant; its dependence on excitement, physical exertion, a position of the body. Irregularity. A feeling of pulsation in different parts of the body.

Pain in the region of the heart, behind the breastbone - their irradiation, force, duration, dependence on locomotions, physical exertion, excitement.

Edemas (localization, regularity of their appearance).

Organs of digestion. Appetite - good, satisfactory, bad, hyperorexia (bulimia). Disgust to this or that food.

Taste - absent, unpleasant (bitter, acidic, "metal").

Dryness in the mouth, thirst, hypersalivation. The quantity of drunk liquid during 24 hours.

Chewing of food, the presence of a pain during it, tiredness.

Swallowing of solid and liquid foods (meals), causal pass of it into the trachea.

Passage of solid and liquid food along the esophagus (free, labored, impossible, painful).

Dispeptic phenomena. Belching (regurgitation) its frequency, the cause and time of occurrence; character (by air, taken food, stomachic contents); taste (bitter, sweet, acidic); an odor (inodorous, of rotten eggs, fecal).

Heartburn, nausea (intensity, for how long (duration), after which food).

Vomiting - without a cause, on an empty stomach, after a meal, what food causes it? In what period of time does it occur? Vomiting matters (eaten food). The quantity of the vomits, taste (of taken before food, acidic, bitter), an odor (inodorous, of rotten eggs, fecal), color (yellow, bloody, dark-brown), the vomiting of fecal matter (in the presence of gastrocolic fistulas).

Pain in the abdomen, its localization (the epigastric, the right and left sub costal regions, in the region of the umbilicus; the iliac, inguinal regions; along the course of the small intestine, colon; above the pubis).

Irradiation of a pain - into the thorax, the back, loins, etc. Its character - constant, colic, sudden, arises gradually, acute, cutting, shooting, "knife-like", etc. Connected with taking of food, what kind of food, at which, through what time after that? Depends on a position of the body. Agents that alleviate (relieve pain). Night pains.

Passage of flatus - is free, in an excessive amount, retentioned.

Defecation (easy (normal), daily, some times per day; with the help of an enema or purgative drugs), influence of food.

Excrements: formed, solid, liquid, "sheep" feces. Color: usual, clay, dark, coal-tar-like (melena), feces with admixtures of the blood (on a surface, inside), slime (in a small, large quantity), purulent discharges.

Ineffectual impulses: tenesmus and imperative impulses, fecal incontinence. A pain in the region of anal orifice during defecation. Prolapse of the nodes, the mucous membrane, and the rectum.

The urinary system. Pain in the region of the loins - constant, sudden: its duration and intensity, when it strengthens, its irradiation (to the back, iliac regions, fe-

mur, external genitals). Pain above the pubis, its character and reasons factors, which cause, strengthen and reduce it.

Urination - effortless, labored, painless, painful (at the beginning of urination, during urination, at the end of it), at night, involuntary urination, constant drop-like excretion of the urine in men, character of the urinary stream.

Pain in the region of the testicles, its appearance, intensity, irradiation. In women - pain in the region of the external genital organs, excretions from the vagina.

Locomotorium. Pain in muscles, "intermittent claudication". Pain in the joints, bones, column (in a state of rest, in the afternoon, at night, at locomotions). A muscular force, weakening - whether for a long time?

The nervous system and sense organs. Kinds of character: calm, balanced, and irritable. Memory can be: good, weakened, and lost. Dream: deep, quiet (calm), alarming. Sleeplessness (insomnia).

Sight, hearing, smell, touch (changes, for how long, decrease, loss).

## **5. OBJECTIVE EXAMINATION (*Status praesens objectivus*)**

*The patient's status at the moment of examination*

The general condition of the patient: good, satisfactory, moderate severe, difficult, extremely serious, an agony.

Consciousness: clear, mental confusion, clouding of consciousness, without consciousness.

Positions: active, passive, forced.

Expression of the face: usual, mask-like face (Parkinson's face), whether it expresses suffering, boredom, fright, anger, excitement, mixedematous, the Basedow's face, Hippocratic face, etc.

Saddle nose. Corner's sign.

Constitution of the body: normosthenic, asthenic, hypersthenic.

Body height, weight.

Body temperature.

*Examination of the patient by systems*

The skin. Its color: pale-pink, pale, cyanotic, earthy, yellowish, yellow, bronze). The presence of seams, their localization and the size; the presence of eruption, tumors, hemorrhages.

Hair integument: developed according to the "male, a female type", hypertrichosis. Moisture of the skin: usual, increased (in what places). The skin is dry. The skin elasticity. Nails (appearance, color, elasticity).

The mucous membranes of the mouth and eyelids (color, pigmentation, red-denning, eruption, ulcers, leukoplakia). A state of the gingiva (gums): color, density, hemorrhages. The tongue - wet, dry, very dry;

swollen, thickly coated with white, grey, earthy layer; its color - pink, crimson, varnish-like; the presence of fissures, ulcers. The teeth - the dental formula. The tonsils - size, color, edema. Fauces. The high palate. An odor from the mouth: absent, purulent, smells like urine, acetone).

Hypodermic basis: thickness of the subcutaneous fat (the skin fold on the level of the V-VI ribs along the back axillary's line), character of its localization. The presence of edemas, their localization.

The mammary glands. Symmetry, their dimensions, form, a state of the skin. The papilla and peripapillary circle. In a vertical and horizontal position of the patient on palpation of the mammary glands the doctor determines the development of a cellular tissue, character of glandular lobes, the presence of consolidations and tumors, their dimensions, localization on quadrants, mobility, adnation with the surrounding tissues, painfulness. Excretions from the papilla (serous, hemorrhagic, slimy, etc).

Lymph nodes: submental, submaxillary, along the course of the sternocleidomastoid muscle, supraclavicular and subclavial, axillaries, along the external edge of the mammary gland, ulnar, inguinal, femoral. Their size, solidity, adnation with each other with the surrounding tissues, mobility, painfulness.

Muscles. General development: (good, satisfactory, unsatisfactory), tonus: (usual, reduced, increased). The presence of painfulness, consolidations, tumors, atrophies, hypertrophies - may be determined on palpation.

The thyroid gland. Size: is (0,1, II, III, IV, V degree). The form of enlargement: (diffuse, nodal, mixed). Its consistence, surface, painfulness on palpation, shift during swallowing, adnation with the surrounding tissues. The thyroid gland's borders. The presence of sounds on auscultation. Crete's, Mebius, Shtelvag's, Ellinek's, Dalrymple's signs.

Bones. Symmetry of the bones of the limbs, the form of the skull, the presence of deformations of the column, the thorax (kyphosis, lordosis, scoliosis), of the pelvis, of the bones of the extremities (defects of the development due to trauma). Painfulness on palpation, percussion and loading on an axis.

Joints. Changes of configuration: (thickening, edema, the presence of diverticulums, fluctuation). Mobility active, and passive: (usual, limited, excessive). Pain at locomotions, on palpation. Sensation of crunch in the joints at passive locomotions.

Organs of the respiratory system. The form of the thorax: are (conic, barrel-shaped, cylindrical, funnel-shaped, etc.). A position of the scapulae: (if they adjoin to the thorax). Type of respiration: (thoracic, abdominal, mixed).

Participation of both halves of the thorax in the act of respiration.

A respiratory rhythm, frequency per 1 minute, depth. Cheyne-Stokes, Kussmaul, Biot's respiration.

State of the intercostal spaces during deep respiration: (retraction, a diverticulum).

Palpation of the thorax (painful places, an edema, consolidation). Voice trembling: (not changed, weakened, strengthened). Comparative percussion. A sound: (pulmonary, wooden (box), dull, tympanic). Height of localization of the pulmonary apex above the clavicle in the front and relatively to the spinous process of the VII cervical spondyle at the back (Krenig's fields). The inferior border of the lungs along the lines at both sides. Mobility of the pulmonary edge (along what line?).

Comparative auscultation. Respiration: vesicular, bronchial, amphoric, mixed, etc. Rales: are dry or wet, their localization. A pleural friction sound, its character.

Organs of the circulatory system. To determine a pulse comparatively at two sides the arteries: the radial, temporal, carotid, humeral, femoral, popliteal, posterior tibial arteries, the dorsal arteries of the foot. Characteristics of pulse: (rate per 1 minute, rhythm, intensity). Characteristic of the arterial trunks (density of the walls, the presence of the dilatations, a visible pulsation).

The arterial pressure (maximal (systolic), minimal (diastolic), pulse). The presence of the varicose distended veins on the thorax, forward abdominal wall, extremities. The degree of distension. Trojanov-Tredeleburg's, Delbe Pertes', Mayo - Pratt's signs.

Examination of the region of the heart. The presence of a diverticulum in the region of the heart. The apex beat, its force, localization.

On palpation of the region of the heart the place of the apex beat and its force (not strengthened, strengthened, shaking, rising) should be also determined.

Pulsation in the epigastric region (the heart, aorta, liver), in the jugular fossa (the aorta, carotid arteries, veins).

By percussion the borders of relative and absolute cardiac dullness (the right, upper and left) are determined.

Auscultation. Cardiac sounds (clear, dull, stressed, splitting, doubling, dropping - out). Cardiac murmurs, their attitude to a phase of the cardiac activity (systolic, diastolic, presystolic). Their force (sharp, weak), duration (long, short). Change of the character of murmur in a postural change of the body. A friction murmur of the pericardium.

Functional tests: orthostatic, with physical exertion, retention of respiration (Stange's test).

The gastrointestinal tract. The form of the abdomen (spherical, oval, retracted, even distended, diverticula of separate regions, the "frog" belly). Visible peristalsis. Participation of the anterior abdominal wall in the act of respiration, a pain during respiration or cough.

Superficial comparative palpation. Muscle's protection (defense musculaire), partial on palpation, whether constant ("board-like abdomen"), painfulness, the presence of Shchotkin- Blumberg symptom.

State of the umbilical, inguinal, and femoral rings. Divarication of the rectus muscles (diastasis recti), cough impulse symptom. Penetrating, methodical, sliding palpation according to V.P.Obraztsov,

M.O.Strazhesko method.

The sigmoid colon: its localization, form, consistence, mobility, painfulness, and murmur.

The caecum, the same data. Vermiform appendix.

The ascending, descending transverse colon (dimensions, painfulness, mobility, consistence, and murmur. The presence of tumors.

The stomach (ventriculus). Its inferior border determined (by palpation, percussion, percussion-auscultative, splashing sound sign). Painfulness (circumscribed, unlimited), visible peristalsis on palpation.

The liver. Peculiarities of the liver margin: (acute, blunt, rounded, solid, soft, tuberous, even). Its borders: the upper is determined by percussion, the inferior - by palpation.

The gallbladder - whether it is palpable. Painfulness in Ker's point. The gallbladder - is palpated, is localized, its size, mobility, consistence, painfulness.

The pancreas (painfulness, the presence of infiltrate, cyst, tumor).

The lien. Its size, borders, consistence (soft, dense), its surface (even, tuberous), painfulness. Determining of its borders by percussion.

Determining the presence of fluid in the abdominal cavity on percussion. On percussion - we can determine dullness in the presence of tumors, fluids; tympanitis - in the presence free gas in the abdominal cavity, in distended loops of the intestines.

Auscultation helps to determine the presence of the intestinal murmurs (sounds) (amount, localization, intensity), colonic, small intestinal.

The rectum and anus. The presence of the external hemorrhoid nodes, prolapse of the mucous membrane, condylomas, fistulas, fissures are seen on examination. Digital palpation (tone of a sphincter, the presence of the thrombosed hemorrhoid nodes, infiltrate, tumors, accumulation of feces).

The urinary system. The kidneys: size, localization, mobility, surface (even, tuberous), painfulness. Pasternatsky's sign.

Palpation of the urinary bladder. Digital palpation of the prostatic gland through a rectum, its size, consistence, the presence of consolidations, fluctuation.

The nervous system. Pupillary, corneal, knee, Achilles tendon, cremasteric reflexes, muscular rigidity of the back of the head, Kernig's sign.

Sensitivity to a pain, tactile, temperature sensitiveness. Hypo-esthesia, hyperesthesia. Paresis, paralysis, hyperkinesia.

Dermographism (red, white, when does it appear and disappear?).

## **6. LOCATION of DISEASE (*Locus morbi*)**

Carrying out detailed inspection of the place of the main surgical disease it is necessary to adhere to the same sequence, as during examination of the patient taking into account anatomical localization (the locomotorium, endocrine system, etc.); the examination, palpation, percussion, auscultation. If necessary special methods of examination can be used.

## **7. INITIAL DIAGNOSIS (*Diagnosis prueliminaris*)**

Making of initial diagnosis is based on the main data of the patient's complaints, determining of anamnesis and objective inspection, at this stage 2-3 diagnoses may be made. Except for it, it is necessary to specify the character of disease (acute, chronic, recurrent).

In order to specify a diagnosis it is necessary to generalize typical attributes of the disease.

*Example.* On the basis of:

- Complaints of the patient (of a peculiar, constant pain, the presence of tumor-like formations in the region of the right mammary gland, elevation of body temperature up to 38°C, rigor, general weakness);

- The data of the case history (is ill during one week, sudden onset, since appearance of painful consolidation in the region of the right mammary gland, elevation of body temperature up to 38°C;

- Self - treatment of the patient: use of analgesics, aspirin, doing massage of the mamma, applying of hot compresses);

- The data of anamnesis of life (three weeks ago she gave birth to a healthy, mature infant, the period of pregnancy was complicated by anemia, labor was complicated by bleeding);

- The data of objective inspection (temperature - 38,6°C, the presence of sharply painful infiltrate 10x8 cm of dimensions in the region of the upper - lateral quadrant of the right mammary gland, the skin in the region of consolidation is hyperemic, edematous, adhesion with the surrounding tissues. The retracted nipple, a fissure 0,7x0,3 cm dimensions in the center, coated with fibrinopurulent layers. By palpation - is fluctuation determined in the center of infiltrate.

It is possible to make an initial diagnosis - of acute suppurative right-hand lactational mastitis.

### **8. PLAN of EXAMINATION**

Making an initial (previous) diagnosis the doctor should prove the correctness of his conclusions by use of modern methods of diagnostics, from common to complex.

It is necessary to begin examination of every patient from the obligatory program, which includes:

1. General blood test.
2. General test of the urine.
3. Examination of feces for eggs of intestinal parasites.
4. Analysis of the urine for sugar (in the quantity of the urine, excreted per 24 hours).

5. Blood test for sugar.

6. Wassermann's test.

7. Photoroentgenography (fluorography).

8. Blood group and rhesus - distinguishing. Special methods of examination should be prescribed taking into account the initial (previous) diagnosis by way of direct examination of the organ or system, or diagnosis by exclusion (diagnostic search). A student must show all his knowledge concerning the question, not being limited to the methods, which were given (stated) in the hospital medical card.

### **9. X-RAY EXAMINATION**

Multi-axial roentgenoscopy of the chest, X-ray of the chest in two standard projections, roentgenography of the heart in two slanting positions, roentgenokymography, bronchography, pneumomediastino-graphy, tomography, diagnostic pneumothorax, pneumopericardiography, esophagography, contrast study of the gastrointestinal tract, parietography, retrograde contrast study of colon (the irrigoscopy), pneumoperitoneum, retroperitoneum, cholecystocholangiography, urography (general, excretory), cystography, phlebography, aorto-graphy, lymphography, fistulography.

### **10. INSTRUMENTAL EXAMINATION**

Catheterization of the bladder, urethras, cystoscopy, chromocystos-copy, bronchoscopy, esophagogastros-copy, abdominal paracentesis, laparoscopy (peritoneoscopy), bronchoscopy, thoracoscopy, rectoromano-scopy, fibro colonoscopy, endoscopic biopsy and others.

### ***11. APPARATUS INSPECTION***

Ultrasonic examination of the thyroid gland, heart, liver and biliary ducts, the kidneys, uterus and adnexa uteri, computer tomography, nuclear-magnetic-resonance and others.

### ***12. LABORATORY RESEARCHES***

It is necessary to have general notions concerning the purposes of clinical, biochemical, and bacteriological, serologic, pathomorphologic and isotope laboratories. You should remember, that laboratory analyses should be accompanied by clinical thinking (intellection), as results of laboratory tests do not provide exact, ready diagnosis. Finally, while prescribing analyses it is necessary to take into account not only their diagnostic value. Laboratory tests - are methods of examination of the vital organs and systems in a surgical clinic, when the determined data are necessary for correction of the disorders, which occur in patients in the preoperative period, during operation, and at the postoperative stage.

### ***13. FUNCTIONAL EXAMINATIONS***

There are: electrocardiography, phonocardiography, ballistocardiography, cardiac catheterization, measuring of central venous pressure by Valdman's apparatus, examination of external respiration, broncho-spirometry, capillaroscopy, encephalography, rheovasography, plethysmography, determining of the regional blood flow, volume of the circulatory blood and others.

\*Note. Data of a special examination of the given patient are to be written down after the plan of examination with obligatory interpreting of norm and pathology in the corresponding sequence. To show their diagnostic value concerning the disease, which is studied.

### ***14. CLINICAL DIAGNOSIS (DIAGNOSIS CLINICA)***

The clinical diagnosis should be described distinctly, shortly and convincingly, on the basis of synthesis of the received data (on the basis of the previous diagnosis and ...), including additional methods of examination. The concomitant diseases and complication, which were revealed **in** the given patient should be mentioned and described here.

### ***15. ETIOLOGY and the PATHOGENESIS of DETERMINED DISEASE***

Modern concepts about etiology and pathogenesis are briefly mentioned. It is necessary to show connection of the views, which exist concerning etiology and pathogenesis of the given patient. What data confirm or object the standard notions about the determined disease.

### ***16. TREATMENT***

To show modern methods of treatment concerning the given disease:

- a) Conservative treatment (specific, pathogenetic, symptomatic);
- b) Surgical (indications, a preparation for an operation, choice of the method of anesthesia, the description of the operation, the characteristic of macro-preparation).

It is necessary to describe the general principles of treatment of the given pathology, and then to detail all the methods concerning the given patient.

### **17. The DAIRY**

Date	Course of a disease	Prescription (treatment of the given patient)
	1. General state of the patient, dream, appetite. The state of the cardiovascular, respiratory systems and organs of the gastroenteric tract. Physiologic evacuation. 2. A dressing: state of a bandage, quantity and character of the discharges from a wound. State of the wound (the presence of the necrotic tissues, granulations, etc.). The procedures, that were done during dressing: inserting or getting out of the drainages, tampons with antiseptic preparations, hypertonic salt solution, ointment and others. 3. Transfusion of the blood and plasmasubstitutes.	1. Regimen of exercise. 2. Dietary regimen. 3. Prescriptions of medicinal preparations (give some prescriptions). 4. Physiotherapeutic procedures. Additional examinations, etc. (on the day of examination).

The signature of the attending doctor

**18. GRAPHIC REPRESENTATION of the TEMPERATURE CURVE, PULSE, ARTERIAL PRESSURE (enclosed on a separate sheet)**

**19. PROPHYLAXIS of DISEASES**

**20. PROGNOSIS CONCERNING:**

- life (prognosis quo ad vitam);
- health (prognosis quo ad valitudinem);
- working capacities (ability to work) (prognosis quo ad laborem);

The record should be written in brief (favorable, unfavorable, doubtful).

**21. The CONDUCT, the REGIMEN, and DIET, WHICH are RECOMMENDED to the PATIENT on DISCHARGE FROM a HOSPITAL**

**22. EPICRISIS (Epicrisis)**

The patient's surname, name, patronymic, his age. Time and cause of hospitalization. A diagnosis. Data of the objective examination, which helped to make a diagnosis. Special methods of examinations. The course course of disease. Treatment (conservative, operative). Date and type of the operation. Anesthesia. The postoperative diagnosis. Pathohistologic conclusion. The course of the postoperative period , complications. Healing of the postoperative wound. Advices for further treatment in a place of residence, life and work.

Dispensary observation.

Prognosis, prophylaxis.

### 23. REFERENCES

### 24. DATE: SIGNATURE of the ATTENDING DOCTOR

## ENUMERATION OF NORMAL VALUES OF THE BASIC LABORATORY UNITS

### *General blood test*

<b>Index</b>	<b>Norm</b>
Erythrocytes	Men: 4,0-5,0 x 10 <sup>12</sup> /l, Women: 3,9-4,7 x 10 <sup>12</sup> /l
Hemoglobin (Hb)	Men 135 - 180 g/l. Women: 120- 140 g/l
Color index (CI)	0,85-1,15
Reticulocytes	2-10%
Thrombocytes	180,0-320,0 x 10 <sup>12</sup> /l
Leucocytes	4,0-9,0 x 10 <sup>9</sup> /l
Basophils	0-0,065 x 10 <sup>12</sup> /l(0-1%)
Eosinophils	0,02-0,30 x 10 <sup>9</sup> /l (0,5-5,0%)
Band neutrophils	0,04-0,30 x 10 <sup>9</sup> /l(1-6%)
Segmented neutrophils	2,0-5,50 x 10 <sup>9</sup> /l (47-72%)
Monocytes	0,09-0,60 x 10 <sup>9</sup> /l(3-11%)
Lymphocytes	1,2-3,0 x 10 <sup>9</sup> /l (19-37%)
Erythrocytesedimentation rate (ESR)	Men: 2—10 mm/h, W omen: 2—15 mm/h
Hematocrit (Hct)	Men: 40-48%, Women: 36-42%

### *Biochemical blood test*

Total blood protein (TP)	65- 85 g/l
Serum albumins (SA)	35- 50 g/l (52-65%)
Serum globulins (SG)	23- 35 g/l (35-48%)
Albumen-globulin ratio	1,2-2,0
Immunoglobulins:	
IgD	0-0,15 g/l
IgG	50-112,5 Mol/l
IgM	0,6-2,5 μMol/l

IgA	5,6-28,1 $\mu\text{Mol/l}$
IgE	0,3-30nMol/l
Total blood bilirubin (TB)	8,5 - 20.5 $\mu\text{Mol/l}$
Free (indirect, non-conjugated) bilirubin	1,7—17,11 $\mu\text{Mol/l}$
Combined (direct, conjugated) bilirubin	0,85 —5,1 $\mu\text{Mol/l}$

Blood lipids (the general contents)	5-7g/l
Serum triglycerides	0.59-1.77 mMol/l
Total cholesterol	2.97 - 8.79 mMol/l
Lipoproteins:	
Very low density (pre beta lipoproteins)	1.5 - 2.0 g/l (0.63-0.69 mMol/l)
Low density (beta lipoproteins)	3-4.5 g/l (3.06-3.14 mMol/l)
High-density (alpha - lipoproteins)	1.25-6.5 g/l (1.13-1.15 mMol/l)
Chylomicrons	0.05 g/l (0-0.1 mMol/l)

Blood glucose	3.3 - 5.5 mMol/l
Glycosylated hemoglobin	4 - 7 %

Blood serum iron	8.53-28.06 uMol/l
Serum potassium	3.8-5.2 mMol/l
Serum sodium	138-217 mMol/l
Serum calcium	0.75 - 2.5 mMol/l
Serum magnesium	0.78-0.91 mMol/l
Serum phosphorus (inorganic)	0.646-1.292 mMol/l
Blood chlorides	97-108 mMol/l

Blood urea nitrogen (not)	14.28 -25 mMol/l
Serum urea	3.33-8.32 mMol/l
Blood creatinine	53-106.1 uMol/l
Creatine	Men: 15,25-45,75 uMol/l; Women: 45,75 - 76,25 uMol/l
Blood uric acid	Men: 0,12-0,38 uMol/l; Women: 0,12-0,46 uMol/l

Lactate dehydrogenase (LDG)	< 7 mMol/(hour/l)
Aldolase	0.2-1.2mMol/(hour/l)
Blood alpha amylase (diastase)	12-32g/(hour/l)
Aspartate aminotransferase (AST)	0.1-0.45 mMol/(hour/l)
Alanine aminotransferase (ALT)	0.1-0.68 mMol/(hour/l)
Cholinesterase	160-340mMol/(hour/l)
Alkaline phosphatase	0.5-1.3 u.Mol/(hour/l)
Creatine kinase	0.152-0.305 mMol/(hour/l)
Serum creatine phosphokinase	Upto 1.2mMol
Lipase	0.4 - 30 mMol/(hour/l)
Creatine	Men: 15,25-45,75 uMol/l; Women: 45,75 - 76,25 uMol/l
Blood uric acid	Men: 0,12-0,38 uMol/l; Women: 0,12-0,46-Mol/l

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Alanine aminotransferase (ALT)	0.1-0.68 mMol/(hour/l)
Cholinesterase	160-340mMol/(hour/l)
Alkaline phosphatase	0.5-1.3 u.Mol/(hour/l)
Creatine kinase	0.152-0.305 mMol/(hour/l)
Serum creatine phosphokinase	Upto 1.2mMol
Lipase	0.4 - 30 mMol/(hour/l)

### **Coagulogram**

Prothrombin index	80-100%
Time of serum recalcification	60-120 sec.
Thrombotest	IV-- V degree
Fibrinogen	5.9-H.7u.Iv10l/1
Fibrinogen B	Negative
Fibrinolytic activity	183— 263 minutes.
Serum tolerance to heparin	3-6 (7-11) minutes.
Coagulation time of blood by Li-Uait	5-10 minutes.
Bleeding duration by Diuk	Up to 4 minutes.
Retraction of blood clot	44 - 65 % (retraction index 0,3-0,5)

### **Indexes of an acid-base balance**

pH, the arterial blood	7.4
pH, the venous blood	7.35
Strain of carbon dioxide, pCO <sub>2</sub> :	
Arterial blood	40 mm Hg.
Venous blood	46 mm Hg.
Strain of oxygen, pO <sub>2</sub> , the arterial blood	75-105 mm Hg.
Surplus (deficiency) of bases	±2,3 mMol/l
The general buffer bases of blood	45 - 50 mMol/l
Standard bicarbonate (B):	
Arterial blood	24 mMol/l
Venous blood	26 mMol/l
Original bicarbonate	27 mMol/l

### **Other blood units**

Serum hydrocortisone	230-750nMol/l
Serum parathyroid hormone	42.6±9.31pMol/l
Somatotrophic hormone	0-118pMol/l
Thyroid-stimulating hormone, serum or plasma	128±28nMol/l
Thyroxine (T <sub>4</sub> ). Serum	65-155 nMol/l
Triiodothyronine (T <sub>3</sub> ). Serum	1.77-2.43nMol/l.
Ferritin, Serum	Men45,5: 96 ± 7,63 ug/l; Women: ± 4,58 ug/l
A <sub>1</sub> — seromuroid	12.47-31.75 uMol/l
Thymol (turbidity) test	Upto 5 Units
Sialine test	550- 790 mg/l
C - reactive protein (C-RP)	Negative
Antistreptolysin-0 (ASL-0)	250Units
Antistreptohyaluronidase (ASH)	250Units
Osmolarity, Serum	275- 295 mosMol/kg

***Urine units***

Relative density of the urine	1,016-1,022
Formed elements of the urine:	
According to Nechiporenko	
Leucocytes	Up to $4 \times 10^6/l$
Erythrocytes	Up to $1 \times 10^6/l$
Protein, general	45,0 - 75,0 mg/per 24 hours
Potassium	38-77 mMol/per 24 hours
Calcium	2,5 - 7,5 mMol/per 24 hours
Creatinine clearance	Men: 97 — 137 ml/minute. Women: 88 - 128 ml/minute.
Uric acid	1,48-4,43 $\mu$ Mol/l
Sodium	Changes depending on a diet
Oxalates	90-445 $\mu$ Mol/l
Chlorides	4,1 - 13,7 $\mu$ Mol/per 24 hours
17-ketosteroids	Men: 27,7-79,7 $\mu$ Mol/per 24 hours; Women: 17,4—55 $\mu$ Mol/per 24 hours
17-oxycorticosteroids	0,11 - 0,77 $\mu$ Mol/per 24 hours
Urinary alpha-amylase (diastase)	28-160 g (hour/l)
Urinary creatinine	Men: 6,8- 17,6 mMol/per 24 hours; Women: 7,1 - 15,9 mMol/per 24 hours
Urinary sediment examination according to Kakovskv-Addis	
Leucocytes	Up to $2 \times 10^6/V$ per 24 hours
Ervthrocytes	Up to $1 \times 10^6$ /per 24 hours
Cylinders	Up to $2 \times 10^4$ /per 24 hours